TEACHING STYLE PREFERENCES AND EDUCATIONAL PHILOSOPHY OF TEACHER EDUCATION FACULTY AT A STATE UNIVERSITY

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CHAPTER I

INTRODUCTION

Introduction

Critical to an advancing society is the need for teachers to recognize and utilize best teaching practices. Teaching requires knowledge of the subject matter and the skills to effectively engage learners. The best educators conceptualize teaching as anything that might promote student learning. Therefore, the teacher is the engineer of the learning environment (Bain, 2004). Many educators believe that learning is the purpose of all education, however educators differ substantially in how they engineer the learning environment through their classroom teaching styles and educational philosophies.

Some educators consider the role of the teacher that of transmitting knowledge through a teacher-centered approach, while others consider the role of the teacher that of leading the student to construct knowledge through a learner-centered approach (McCarthy & Anderson, 2000). The teacher's role in the learning process is often defined by educational philosophy. The manner in which they view their role in the classroom, how they view the student-teacher relationship and the method of instruction, all reflect their philosophy and beliefs about education (Petress, 2003; Youngs, 1979).

Educational Philosophy

At the most basic level, philosophy is a quest for wisdom and understanding (Ozmon & Carver, 2007). It "…raises questions about what we do and why we do it" (Elias & Merrium, 1995, p. 5). A philosophy of education is "…a set of ideas and beliefs that guides teachers'

actions and provides a framework for thinking about educational issues" (Kauchak & Eggen, 2011, p. 197). Educational philosophy is the basis that shapes the structure and goals of the relationship between the faculty and the student. "When considering the inter-relationship of philosophy and activity it is clear that philosophy inspires one's activities and gives direction to practice" (Elias & Merrium, 1995, p. 5). Faculty beliefs about the purpose of education, expectations in the student-teacher relationship, the teaching-learning process and what methods of instruction to use, are all guided by their educational philosophy (Kauchak & Eggen, 2005; Petress, 2003).

A clear understanding of philosophy provides a solid foundation for effective analysis of educational practices and professional growth (Conti, 2007; Elias & Merrium, 1995). The five traditional western philosophies, which form the structure of most educational practices, are idealism, realism, pragmatism, existentialism, and reconstructionism. These western philosophies serve as a foundation and perspective for analysis of educational practices (Ozmon & Craver, 2007). There are five educational philosophies which were identified as having roots in traditional schools of western philosophy which form the structure of most educational practices. The five educational philosophies are: liberal, behaviorist, progressive, humanistic, and radical (Zinn, 2004). Professional educators are likely to be influenced in their actions by one or more of these five philosophies. Regardless of teachers' awareness of their educational philosophy, their beliefs are reflected in their behavior (Youngs, 1979). "True professionals know not only what they are to do, but are also aware of the principles and reasons for so acting" (Elias & Merriam, 1995, p. 9). What teachers believe and practice in the classroom is related to educational philosophy and to teaching style.

Teaching Style

The five educational philosophies have each been categorized as influencing either teacher-centered or learner-centered teaching styles (Conti, 2007; Johnson, Musial, Hall & Gollnick, 2011; Zinn, 2001). Conti (1998) describes teaching style as the qualities and behaviors displayed by a teacher which are consistent from situation to situation regardless of curriculum content. Teacher-centered teaching styles are consistent with traditional philosophies of idealism and realism, and the educational philosophies of liberal and behavioralism (Conti, 2007; Zinn, 2004). Learner-centered styles are consistent with traditional philosophies of pragmatism, existentialism and reconstructionism, and the educational philosophies of progressivism, humanism and realism (Conti, 2007; Zinn, 2004). Teacher-centered style is defined as a formal, controlled, and autocratic instructional style which assumes the learners are passive (Conti, 2004). Learner-centered style is defined as a pattern of instruction that is responsive, problem-centered, democratic and employs a collaborative learning environment (Dupin-Bryant, 2004). Regardless of an educators' teaching styles, their beliefs should be evident in their teaching (Heimlich & Norland, 1994). Teaching style is the application of an educator's philosophy demonstrated in classroom practices. Teaching style includes the "implementation of philosophy; it contains evidence of beliefs about, values related to, and attitudes toward all the elements of the teaching-learner exchange" (Heimlich & Norland, 1994, p. 40).

College of Education Teacher Education Program

Teacher education programs are expected to refer to the mission and goals of their colleges in defining excellence in teaching for their own program, course development and teaching styles (National Council for Accreditation of Teacher Education, 2008). This study investigated a comprehensive university in the Midwestern part of the United States of America.

For the purposes of this study the university was given the fictitious name of Newton State Univeristy (NSU). The long history of the teacher education programs at NSU was reflected in the growth of the size and scope of its educational programs and the number of its graduates. The influence of professional national and state accrediting bodies, such as the National Council for Accreditation of Teacher Education (NCATE) and Oklahoma Commission for Teacher Preparation (OCTP), was evidenced by the university's College of Education (COE) having a well-defined conceptual framework and educational philosophy.

The Philosophy of the Unit statement, the COE Conceptual Framework, and other documents, informed the field of educational ideology for the college. Through an inspection of the language and expressed expectations contained in these documents, it was apparent to the researcher that the COE advocated an educational philosophy and a teaching style preference consistent with learner-centered teaching style and humanistic and progressive educational philosophy.

Problem Statement

Although the College of Education advocated a learner-centered approach, the teacher education faculty may be like many other higher education faculty and may not believe in such classroom practices and philosophies (Labaree, 2005). This potential dichotomy of beliefs between the teacher education faculty and the COE could be a possible source of conflict. What was not known was whether this was typical of the teacher education faculty at this Midwestern state university. For those colleges with clearly defined mission statement, like that of the COE, it is necessary that any fissure between the faculty and college be made apparent.

Based on the COE mission statement, Philosophy of the Unit statement, the Conceptual Framework and the rubric criteria, it was implied that the teacher education faculty use

compatible teaching approaches to instruct their teacher candidates. However, it was unknown whether the teacher education faculty themselves preferred to conduct their classrooms utilizing learner-centered approaches. Through an assessment of the faculty beliefs, their teaching style preferences may be made apparent. Such a discovery would ascertain whether the philosophy and teaching style preferences of the teacher education faculty were congruent with the ideology of the COE. The mission statement of a university provides the vision and foundation for its employees and stake holders (Velcoff & Ferrari, 2006). If there is tension or conflict between the beliefs and values of COE and the teacher education faculty the foundation of the university could become ambiguous and unstable (Andreescu, L. 2009). There was no information about the educational philosophy and teaching style preferences of the teacher education faculty at this Midwestern state university. A survey of the teacher education faculty would ascertain the degree of alignment between the philosophy and teaching style preferences held by the teacher education faculty and those professed by the College of Education.

Purpose

The purpose of the study was to describe the educational philosophies and teaching style preferences the teacher education faculty members at this Midwestern state university and to determine the extent to which these matched with the university's College of Education educational philosophy and preferred teaching style.

Research Questions

1. What are the education philosophies and teaching styles of the teacher education faculty?
2. What are the relationships of the education philosophies and the demographic variables of the teacher education faculty?

3. What are the relationships of teaching styles and the demographic variables of teacher education faculty?
4. What are the relationships between the education philosophies and teaching styles of the teacher education faculty?
5. To what degree are the education philosophy and teaching styles of the teacher education faculty similar to the stated education philosophy and preferred teaching style of the College of Education?

Theoretical Framework

The theoretical framework constructed for this study was underpinned by two theoretical constructs: philosophy and teaching styles. There were five educational philosophies; liberal, behavioral, progressivism, humanism and radical. These five educational philosophies were adapted by Zinn (2004) from the writings of Ellias and Merriam (1995). The educational philosophies each have a basis in five traditional western philosophies (Ellias and Merriam ,1995). The concepts of teaching styles include teacher-centered and learner-centered teaching (Conti, 1989; Kauchak & Eggen, 2008). The theoretical constructs of andragogy is influential in this study due to the nature of the relationship of the teacher education faculty and their adult learners who are pre-service teacher candidates (Muirhead, 2007). One of the central objectives of the teacher educators and the COE in this study is to teach pedagogical concepts to the pre-service teacher candidates. For these reasons, andragogy and pedagogy are conceptually relevant to this study and are a part of the theoretical framework; however they are beyond the scope of the study's research questions. The theoretical constructs and the theoretical framework will be addressed further in chapter two.

Methodology

The participants responded to an e-mail which provided a link to an on-line survey. All full-time and part-time graduate and undergraduate teacher education faculty were asked to participate in the study; however all did not choose to participate. The on-line survey contained the Philosophy of Adult Education Inventory (PAEI), the Principles of Adult Learning Scale (PALS) and a demographic questionnaire. The concept of educational philosophy was measured with PAEI. The concept of teaching style was measured with PALS. Descriptive statistical methods were used to establish the profiles for each instrument and demographic variables. Frequency distributions were used to construct the educational philosophy and teaching style profiles for the participants. Analysis of variance was used to examine the relationship among the demographic variables and the educational philosophies and among the demographics and the teaching styles. Chi Square analysis was used to examine the relationship between educational philosophies and teaching styles. Frequency distributions were used to describe the degree to which the teacher education faculty and the COE were congruent in educational philosophy and teaching style preferences. Table 1 lists the data analysis techniques related to the research questions of this study.

Table *1 Summary of Research Questions, Data Sources and Procedures*

Question	Data Source	Procedure
1.Education philosophies profile	PAEI	Frequency distributions
Teaching styles profile	PALS	Frequency distributions
2. Education philosophies and demographic variables	PAEI & demographics	ANOVA
3. Teaching styles and demographic variables	PALS & Demographics	ANOVA
4. Relationship between	*PAEI & PALS*	Chi-Square

Education Philosophy & Teaching Styles		
5. Teacher education faculty Philosophy & teaching Style and COE	PAEI & PALS	Frequency distributions

Significance of the Study

This research has the potential to benefit both teacher educator faculty and teacher education programs by helping them understand the importance of relationship of educational philosophy and teaching style. This study focuses on previously unknown information about the NSU teacher education faculty and the previously unidentified level of congruence between the educational philosophy and teaching styles of the COE and the NSU teacher education faculty. Therefore, this study's significance lies in the findings, conclusion and recommendations of the research that will help improve professional development and practice of the teacher education faculty and the COE at this university. A strengthening of awareness of how congruence of beliefs and behaviors relate to teaching and learning is central to the study's significance. Resolution of the dissonance between the teaching style preferences of COE and teacher education faculty has potential to enhance the NSU teacher education program and provide professional growth.

Key Terms

Philosophy: Belief about reality, the nature of knowledge epistemology, what is good and valuable in the world and the logic of reasoning. The five western philosophies (a.k.a. traditional philosophies) are idealism, realism, pragmatism, existentialism, and reconstructionism.

Educational Philosophy: Ideas and beliefs that guide teachers' actions and provides a framework for thinking about educational issues (Kauchak & Eggen, 2005). The educational

philosophies are based on five western philosophies. The five educational philosophies: liberal, behaviorist, progressive, humanistic, and radical.

Teaching Style: Distinct overt application of teacher beliefs that is persistent from situation to situation regardless of the content (Conti, 1998).

Learner-Centered: An interactive learning process in which the learners are actively engaged in experiences and role of the teacher is to serve as a facilitator who is focused on the students' abilities and needs. Learner-centered style is consistent with the western philosophies of pragmatism, existentialism, reconstructionism, and the educational philosophies of progressivism, humanism and realism (Elias & Merriam, 1995; Conti, 2007).

Teacher-Centered: A formal, controlled, and autocratic instructional style which assumes the learners are passive. Teacher-centered teaching styles are consistent with the western philosophies of idealism, realism, and the educational philosophies of liberal and behavioralism (Elias & Merriam, 1995; Conti, 2007).

Newton State University (NSU): A fictitious name given to the Midwestern state university where the study was conducted.

Andragogy: The art and science of teaching adult learners (Knowles, Holton, Swanson, 1998).

Pedagogy: The art and science of teaching children (Ozuah, 2005).

CHAPTER II

REVIEW OF THE LITERATURE

Philosophy

René Descartes' famous declaration, "Cogito ergo sum," "I think therefore I am," (Yaldir, 2009, Tweyman, S. 2005) could be the way that some teachers describe their unmindful connection between their teaching and their philosophy of education. A philosophy provides a foundation for understanding and guiding professional practice (Kauchak & Eggen, 2002). All professions have philosophies which help guide actions and beliefs within their vocation. A common organizational practice is to have a philosophy statement that reflects the beliefs and philosophical priorities which guides the institutional leadership (Graham & Havlick, 2005). Philosophy can exert a powerful influence on professions, such as architecture, medicine and in education (Kauchak & Eggen, 2002). It is a professional practice for educators to develop and profess their philosophy statement (Kauchak & Eggen, 2002). Whether or not they are aware of their philosophy, a teacher's beliefs and behavior are guided by their educational philosophy (Kauchak & Eggen, 2002; Petress, 2003).

The teaching-learning process, expectations of the role of the student and what method of instruction to use, are examples of actions guided by a teacher's educational philosophy (Conti, 1982; Elias & Merium, 1995; Kauchak & Eggen, 2002; Zinn, 1983, 2004). A philosophical orientation to education allows for comparison with beliefs versus practices. A clear understanding of philosophy provides a solid foundation for effective analysis of teaching and

institutional educational practices (Conti, 2007; Elias & Merrium, 1995; Graham & Havlick, 2005).

Traditional Schools of Philosophy

Philosophers have developed answers to questions about reality, the nature of knowledge epistemology, what is good and valuable in the world and the logic of reasoning (Kauchak & Eggen, 2005). These efforts have manifested in five philosophies, considered by many to be the traditional western philosophies which are the pillars for most educators (Conti, 2007; Kauchak & Eggen, 2005; Ozmon & Craver, 2007). The five traditional philosophies, which form the structure of most educational practices, are idealism, realism, pragmatism, existentialism, and reconstructionism.

Idealism. Idealism is one of the oldest Western philosophical views. It was established in ancient Greece by Plato (Harwood, 2010). Idealists hold the view that the world does not exist independent of the human mind and that the true nature of reality is based upon ideas. The constant change that occurs in the physical world strengthens the idealists' conviction that ideas are the only reliable form of reality (p. 34). Teachers using curriculum based on idealism focus on content which emphasizes teacher-led instruction on time-honored ideas and works of literature, history, art, and music (p. 211).

It was established in ancient Greece by Plato, and was brought into modern history by idealists such as Kant and Hegel (Harwood, 2010). Mortimer Adler's book (1988), *Reforming Education: The Opening of the American Mind,* advocated a curriculum based on these time-honored subjects. Adler placed more emphasis on the ultimate goal of developing intellectual skills which leads to higher order thinking and awareness, and less on promoting students' understanding of content. Teachers serve an essential role for idealists. "To idealists, ultimate

reality exists in the world of ideas, so they believe that teaching and learning should focus on ideas" (Kauchak & Eggen, 2005, p. 211). With this ultimate reality, which exists in the world of ideas, teachers lead their students to become rational, logical thinkers and to develop values through classic, enduring ideas (Ozmon & Craver, 2007).

Realism. Realism is also a historic philosophy, having roots to Aristotle, Francis Bacon and John Locke (Ozmon & Carver, 2007). Realists center their beliefs on the constancy of the physical universe and argue that the "features of the universe exist whether or not a human being is there to perceive them" (Kauchak & Eggen, 2002, p. 211). Realists claim important ideas and facts can only be taught and learned through studying the material world.

The universe and the essence of all things exist objectively and thus they are not an extension of the mind (Harwood, 2010). The learning environment includes emphasis on order, lecture, practice and high levels of time on task (Kauchak & Eggen, 2005). "Curriculum consistent with realism emphasizes essentials, such as math, science, reading and writing, because they are tools to help us understand our world" (Kauchak & Eggen, 2005, p. 211). Teachers who use educational practices based in realism set goals for their students to use observation, experimentation, and critical reasoning in order to learn and understand logical and natural laws. Realism is noted for the scientific method as the central idea of instruction (p. 211).

Pragmatism. Pragmatism is considered a more modern philosophy. American educator, John Dewey, was one of its central proponents (Kauchak & Eggen, 2005). Pragmatism rejects the "…idea of absolute, unchanging truth, instead asserting that truth is what works" (p. 212). Pragmatists contend truth is relative to the experience of the individual. Because experiences change, the perception of truth changes and the methods for dealing with these also change.

Pragmatists accept the methods of science for understanding the human person and solving problems (Elias & Merriam, 1995).

Pragmatism philosophy places an emphasis on collaborative learning and problem-solving skills in a self-regulated learning environment (Elias & Merriam, 1995; Kauchak & Eggen, 2005). The process involved in learning is as important as the content in a pragmatist's classroom (Kauchak & Eggen, 2005). Teacher practices based upon pragmatist philosophy "doesn't de-emphasize the importance of knowledge, but instead attempts to connect it to children's interests" (p. 212). As a result, emphasis is placed on the tools of problem-based learning, subject integration, and direct hands-on experiences, which focus on individual accountability and development (p. 212).

Existentialism. Existentialism holds a strong view concerning freedom of choice. Existentialists assert all people possess total freedom of choice and thus are personally responsible for all aspects of their lives and society (Elias & Merriam, 1995). "Existentialists stress awareness, consciousness, perception and the total meaning-structure of the individual, his vision and death, his word choices and other aspects of his relating life" (p. 111). Influential existential writers such as Jean-Paul Sartre, Carl Rogers, and Abraham Maslow believed humans become a construct of ourselves, which requires total commitment to a self-determined destiny (Harwood, 2010; Kauchak & Eggen, 2005). Empathy and unconditional caring are more important to learning than student attainment of content objectives (Harwood, 2010; Kauchak & Eggen, 2005). The existential teacher views education as "an individual's search for understanding" (Kauchak & Eggen, 2005, p. 214).

Reconstructionists. In the philosophy of reconstructionism, the societal function of education is a central premise (Ozmon & Craver, 2007). There are two major principles of this

philosophy. The first is society is in constant need of reconstruction or change. The second principle is that social change involves both reconstruction of education as well as the use of education in reconstructing society (Ozmon & Craver, 2007). Reconstructionists declare that schools and teachers should serve as agents to both address social inequities and to enact the ideals of democracy (Kauchak & Eggen, 2005).

An American educator, Theodore Brameld and Brazilian educator, Paulo Freire, were both influential social reconstructionists who strongly promoted that teachers and schools should serve as agents for marginalized people and advocates for a more just and equitable society. Teachers encourage students to become an actively involved force for social change. Teachers influenced by reconstructionist philosophy place emphasis on teaching students to expose hidden bias and on inspiring students to influence the world today as well as in the future (Kauchak & Eggen, 2011, 2005).

Philosophies of Education

From Aristotle and Plato to Dewey, Rogers and Freire, the traditional schools of philosophy have served as a foundation to educational schools of thought. Although they have useful implications for the field of education, the traditional philosophies were not developed as philosophies of education. "A philosophy of education is a conceptual framework embodying certain values and principles that renders the educational process meaningful (Merriam & Brockett, 2007, p. 28)." An educational philosophy typically includes, "terms, aims and objectives, and curricula, methods and the teaching-learning transaction, the role of society, and the roles of student and teacher (p. 28)." Zinn (2004) adapted Elias and Merriam six educational philosophies liberal, behavioral, progressive, humanistic, and radical, which were identified as having roots in traditional schools of philosophy (Elias and Merriam, 1995; Zinn, 2004). The

differences in these philosophies centers upon the concept of knowledge, the role of the learner and the role of the teacher and the purpose of the curriculum (Conti, 2007).

Liberal Education. Like Aristotle, Socrates and Plato, the liberal education philosophy emphasizes the development of intellectual power (Zinn, 2004). This philosophy is not associated with liberal political views; liberal education philosophy stresses traditional, classical humanism based on the liberal. It is supported by more contemporary educators such as Houle, Adler, and Piaget (Zinn, 2004) and has its roots in idealism and realism traditional schools of philosophy (Kauchak & Eggen, 2005). Emphasis is placed on general, liberal humanities education to shape a rational mind. The task of education is to impart knowledge of eternal truth and preparation for life through great works of literature, philosophy, history and science (Kauchak & Eggen, 2005).

Teachers with the liberal education philosophy might be referred to as the expert 'sage on the stage' transmitting knowledge with an authoritative approach to a rigorous intellectual curriculum (Zinn, 2004; Kauchak & Eggen, 2005). Teaching methods based in this philosophy often include lecture, critical reading and discussion, which direct the student in the broadest sense "intellectually, morally, spiritually and aesthetically" (Zinn, 2004, 72). From a practice standpoint, liberal education is oriented toward conceptual and theoretical understanding and not just absorbing and using facts (Elias and Merriam, 1995).

Behavioral Education. Behavioral education is a contemporary philosophy with its foundation in the early 1900's from psychologists Watson, Pavlov, Thorndike and Skinner. Behaviorists believed psychology should be about the science of behavior and not about science of the subjective mind (Slavin, 2000). Behaviorism is consistent with the traditional philosophy of realism which utilizes absolute law and scientific method to stress knowledge and skills useful

in today's world (Conti, 2007). It professes the purpose of education is to promote skill development and behavioral change (Zinn, 2004). Emphasis is placed on compliance with standards and societal expectations. The teacher's role is of manager and controller of the learning environment through prediction and direction of learning outcomes. Some teaching methods used by behaviorists include programmed instruction, skill training, competency-based and criterion-referenced assessments, mastery learning, and feedback and reinforcement. The learner is expected to take an active role in learning and expected to practice new behavior and respond to feedback and reinforcement (Zinn, 2004). Behaviorism is associated with a learner-centered teaching style(Conti, 2007). Generally the process of learning involves the educator diagnosing specific learning needs and evaluating progress towards meeting those needs. Accountability for learning is placed on the shoulders of the learner using competency-based behavioral objectives for evaluation (OBrian, 2001). Several models of behaviorist adult education exist. Special education programs, computer based training, adult basic education programs, vocational training and military training are often based on behavioral educational philosophy (OBrian, 2001; Zinn, 2004).

Progressive Education. The educational focus of progressivism is the notion that the child is an experiencing organism capable of learning by doing; education should be life itself, not preparation for living.

Progressive education is aligned with the traditional philosophy of pragmatism (Kauchak & Eggen, 2005). Prominent educators include Spencer, Dewey, Bergevin and Lindeman (Zinn, 2004). John Dewey's ideas about education reform in the early part of the 20th'century created both excitement and criticism (Kauchak & Eggen, 2005). His emphasis on "seeing learners actively involved in real-world problems" was considered a stimulating concept in the traditional

educational system (p. 200). Critics of Dewey's reform principles believed "progressive education seemed to de-emphasize content and cater to student whims" (p. 200). Progressive schools encourage cooperation rather than competition; the free interplay of ideas enhance individual effectiveness in society through practical knowledge and problem solving skills (Kauchak & Eggen, 2005; Zinn, 2004). School is viewed as a microcosm of society with emphasis on learning through application of experience and problem solving (Kauchak & Eggen, 2005).

Classrooms are designed for experiential learning and spaces to learn from each other through active learning and cooperative group learning experiences. The teacher is a guide and organizer for experiential learning through use of scientific method, integrated curriculum, project method and problem based learning (Zinn, 2004). Constructivist teaching, a progressive based teaching method in which knowledge is actively constructed by the pupils, is consistent with the traditional pragmatism philosophy (Kauchak & Eggen, 2005; Ozman & Craver, 2007). All three, pragmatism, progressivism, and constructivism, "emphasize concrete experiences, real-world tasks, and the central role of the individual in determining reality and promoting learning" (Kauchak &Eggen, 2005, p. 220).

Humanistic Education. In the classroom, humanistic philosophy, also known as humanism, places emphasis on a nondirective approach to education which focuses on individual choice rather than on academic subjects or timeless ideas (Conti, 2007). Humanism, which is closely associated with the philosophy of existentialism, is influenced by Abraham Maslow and Carl Rogers, who were primary contributors from the field of psychology (Elias & Merriam, 1995). Carl Rogers stressed person centered and unconditional regard. Maslow is most well known for his hierarchy of motivation which evaluates needs based on growth and being needs,

culminating in self-actualization (Slavin, 2000). Several adult educators have contributed to this theory, however Malcolm Knowles may be the most well known in the field of adult education. He spawned the concept of adragogy as a specific teaching strategy for adults (Elias & Merriam, 1995).

The function of school from the humanistic educational philosophy is to enhance personal growth and development and to facilitate self-actualization (Zinn, 2004). Teachers are facilitators and partners in students' growth; however they do not direct the learning. Through the use of self-directed learning, discovery, and experiential learning, the learners assume the responsibility for their education. Cooperation, group tasks and communication are valued as a part of the process of growth (Zinn, 2004). Specific education programs which are based on humanistic educational philosophy are limited. Examples include self-actualization workshops, self-esteem building programs, and the Esalen Institute in Big Sur, California (OBrian, 2001). Some educators consider progressivism to be controversial because too much emphasis is placed on "children's interests and self-esteem and that knowledge and understanding has been sacrificed " (Kauchak & Eggen , 2005, p. 218).

Radical Education. In the radical education, the political power of the individual is viewed as a responsibility to create and change history and culture through reflective action (Zinn, 2004). Education's purpose is to bring about, through education, fundamental social, political and economic changes in society. The educational focus is recognition that society needs to be reconstructed and that education must take the lead in that reconstruction (Kauchak & Eggen, 2005). The exploration of the political nature of education, including social control and power in schooling and a rejection of the politics of exclusion is reflected in the radical education influenced curriculum. Founded in existentialism, and closely aligned with postmodernism, the

consciousness of the freedom of choice, the responsibility for making choices, and cognitive as well as affective components of human development, are all important to the beliefs of radical education (Kauchak & Eggen, 2005).

Paulo Freire, a Brazilian philosopher and educator, may be the most prominent figure in the radical education movement (Elias & Merriam, 1995). Freire suggested one must become aware of one's oppression, which requires a movement through several stages of consciousness. For Freire, as the learner gains an understanding (consciousness) of individual freedoms, they are able to change their environment and social conditions. Freire's efforts in literacy campaigns and literacy training for peasants the local people resulted in change their own culture (Elias & Merriam, 1995).

The radical education teacher serves as the coordinator who does not determine the direction of learning but suggests and empowers the learner (Zinn 2004). Equality between the learner and the teacher provides learner autonomy, dialog, problem posing and critical reflection. Social action and noncompulsory learning are ways of 'de-schooling" the learning process (Zinn, 2004). Radical philosophy is associated with the learner-centered teaching style (Galbraith, 2004).

Regardless of the philosophical tenants of one's belief and practice, philosophical questions about education ask why educators use a particular teaching method in order to"(a) provoke reflection, (b) systematically analyze and evaluate procedures, and (c) determine the appropriate philosophy or philosophies to back or drive the practice" (Strom, 1996). An educator's philosophy provides beliefs about the purpose of education, influences the expectations for the teaching-learning process, provides a foundation for professional growth and the methods of instruction (Conti, 2007; Elias & Merrium, 1995; Kauchak & Eggen, 2005;

Petress, 2003). Whereas one can read about schools of philosophy and how they contrast and even overlap, it is much more difficult to categorize one's actions in the classroom by a particular philosophical approach" (Elias & Merriam, 1995). When an educator is able to clearly articulate one's philosophy they are distinguished as a professional educator instead merely a practitioner (Heimlich & Norland, 1994). If an educator is not able to espouse their philosophy their decisions may be swayed by routine, convention or current educational trends. Educators who are not aware or committed to their beliefs and ideologies are not able to vocalize their values and assumptions, make justifications for curriculum, or defend their stance in the professional or political arena (Elias & Merriam, 1995; Galbraith, 2004; Heimlich & Norland, 1994).

Elias & Merriam (1995) advocated the need for a more systematic investigation of philosophies held by educators. It is believed theoretical writings have advanced to the point where such an investigation is both possible and necessary (Zinn, 2004). Educators who can identify their philosophy of education "have a very good source of assistance in the Philosophy of Adult Education Inventory (PAEI)" (Heimlich & Norland, 1994, p. 39). The PAEI categories used to interpret an educator's philosophy include the purpose of "education, learner, teacher, key words, methods and people and practices" (Heimlich & Norland, 1994, p. 39).

Teaching Styles

The range of behaviors and decisions that represent teaching style may vary according to a particular situation, however the teacher's personal philosophy provides the basis for these (Conti, 1989). Teaching style is one's philosophy put into action. It includes teaching practices & methods, recognition of learners, expectations of the student-teacher relationship (Conti, 1989; Kauchak & Eggen, 2008). The amount of variation in a particular situation "will be limited by

tenets of the teacher's educational philosophy and by the strength to which that teacher adheres to that educational philosophy" (p. 4). "The way curriculum is organized, the manner in which instruction is delivered, the character of school environment and the processes used in testing and grading are informed by the philosophical views held by educators" (Johnson, Musial, Hall & Gollnick, 2011, p. 48). Research studies, using Zinn's Philosophy of Adult Education, examined by Conti (2004) Inventory (PAEI), "reveals that educational philosophy and teaching style are directly related and that the process that discriminates groups in this relationship is the educator's view of the role of the teacher in the teaching-learning process" (p. 77). It is crucial for teachers to reflect on their philosophy about teaching and its effect on all aspects of their teaching style (Heimlich & Norland, 1994).

Teaching style is not the same as teaching method. Teaching style could be described as "the range of behaviors in which a teacher can operate comfortably according to a certain value system" (Conti, 1989, p. 4). The way in which the teacher consistently functions inside this range defines the teacher's teaching style. It is broader than immediate teaching strategies which are employed to attain a specific instructional objective and cannot be determined by looking at a single isolated action of the teacher (Conti, 1998). There are two commonly accepted types of teaching styles; teacher-centered and learner-centered (Conti, 1989, 1998, 2004). Teacher-centered, involves a formal, controlled, and autocratic instructional style which assumes the learners are passive (Conti, 2004). Teacher-centered teaching styles are consistent with the philosophies of idealism, realism, liberal and behavioralism (Elias & Merriam, 1995; Conti, 2007). The teacher's role in the teacher-centered style is to design an environment that stimulates the desired behavior and discourages those which have been determined to be undesirable (Conti, 1998). Presenting information and monitoring student progress through high structure, high

levels of time on task and emphasis on student understanding with critical questions is typical of this traditional teaching style (Kauchak & Eggen, 2008). "Historically, classroom instruction was teacher-centered, which means that teachers carefully specify goals, present the content to be learned, and then direct learning activities" (p. 405). "Criticisms of teacher-centered instruction lead to a wave of reform, resulting in what is commonly called learner-centered instruction, in which teachers guide learners toward an understanding of the topics they study, rather than telling or lecturing" (p. 405). The belief that the student should be actively engaged in the learning process and role of the teacher is to serve as a facilitator in the learning process is known as learner-centered. It focuses on the experiences, abilities and needs of students. Learner-centered style is consistent with the philosophies of pragmatism, existentialism, reconstructionism, progressivism, humanism and realism (Elias & Merriam, 1995; Conti, 2007). A summary of the differences between teacher-centered and learner-centered teaching styles is presented in Table 2.

Table 2
Teaching Styles: Teacher-Centered & Learner-Centered

	Teacher-Centered	**Learner-Centered**
Education Philosophy	Liberal & Behavioralism	Progressivism, Humanism and Realism
Role of Teacher	Determine goals, direct learning to stimulate desired behavior	Serve as a guide, focus on using student prior experiences & responsive to needs
Role of Students	Passive learners	Actively engaged learners
Learning Environment	Formal, high structure, autocratic, time on task	Democratic, self-regulated, problem-centered, collaborative,
Teaching Methods	Lecture, Socratic, practice & feedback, Direct Instruction	Cooperative learning, Problem based learning, Inquiry

Note: From the following sources: Conti, 2004; Dupin-Bryant, 2004; Elias & Merriam, 1995; Galbraith, 2004; Kauchak & Eggen, 2008.

Teaching style includes several important areas of knowledge including principles and practices, understanding of self, recognition of learners, application of methods, and content knowledge (Galbraith, 2004). All of these areas contribute to teaching style. Understanding the impact of these can help teachers learn about themselves and their relationship with the learner and the learning environment. Development of a teaching style "is an ongoing and never-ending process of exploration, reflection, and application that includes much more than what we can merely observe during the teaching-learning exchange" (Heimlich & Norland, 1994, p. 177). An understanding of how beliefs and behaviors relate to teaching and learning is essential to continued improvement (Conti, 1984, 1998, 2004; Galbraith, 2004; Heimlich & Norland, 1994). When teachers match their teaching philosophies with their actions, which are reflected in their teaching styles, they are likely to improve their success in the classroom (Johnson, Musial, Hall & Gollnick, 2011). Through self-examination, teaching style can be made apparent and areas to be improved can be identified. . Consistency in belief patterns and resulting classroom behavior is important for development of a teacher (Conti, 1984; Conti, 1998). Such congruence in philosophical beliefs, attitudes, and actions can enhance performance as a teacher, which in turn would influence student learning (Heimlich & Norland, 1994).

A review of literature reveals a fairly robust promotion of research based evidence which proposes learner-centered teaching as the most effective teaching-style for all ages of learners (National Board for Professional Teaching Standards, 1996; National Commission on Teaching and America's Future, 1996; Hewett, 2003; Paris & Combs, 2006; Pierce & Kalkman, 2003; Stes, Gijbels, & Petegem, 2008). Learner-centered teaching has been documented as a successful approach for student achievement (Hewett, 2003; Stes et al., 2008). The traditional teacher-centered approach, however, is often the dominant approach (Conti, 1998; Stes et al.,

2008). A study of teaching style preference among adult rehabilitation educators, as measured by the Principles of Adult Learning Scale (PALS) instrument, showed most of the educators represented a balanced approach between both teacher-centered and learner-centered styles (O'Brien, 2001).

Studies have been done to investigate the relationship of educator demographics and teaching styles. At the University of Antwerp the 50 faculty participated in a research study concerning the relationship between faculty approaches to teaching and faculty demographics (Stes et al., 2008). Their study found no relationship between learner-centered teaching style and the teacher characteristics of gender, academic status, teaching experience, prior teacher training or age. In similar studies examining teaching styles and educational philosophies held by elementary school teachers revealed no significant relationships found among the demographics of gender, type of degree held, race, or years of experience (Fritz, 2008; Watkins, 2006). In a research study of adult educators some significance between demographics of age, years of experience and gender was found in relationship to teaching styles and educational philosophy (O'Brien, 2001).

Although many universities espouse learner-centered teaching, their faculty often are not implementing this teaching style (Hewett, 2003; Stes et al., 2008). While many faculty and education institutions have come to recognize the value of a learner-centered philosophy, higher education faculty are more likely to use teacher-centered strategies in their classrooms (Hewett, 2003; Larabee, 2005; Stes et al., 2008). This dichotomy of beliefs and practices between faculty and their intuitions can be a potential source of conflict (Stes et al., 2008). Many educators support the concepts of either a teacher-centered or a learner-centered teaching style; however it takes critical self-reflection to determine if their classroom practices match their beliefs.

Andragogy & Pedagogy

Andragogy is to adults what pedagogy is to children. This analogy crystallizes the general perception of the differences between andragogy and pedagogy. Since the inception of andragogy the proponents of adult education have been seeking to distinguish andragogy from pedagogy (Henschke, 2010b). The central issue in this analogy is whether andragogy is an extension of pedagogy or whether they are different fields. This issue has been expounded upon since the establishment of the concept of andragogy. Although the concept of pedagogy was established prior to the use of the term andragogy, literature about pedagogy does not bring into question the distinction between andragogy and pedagogy; it is usually those writing about andragogy who assert to clarify the distinction (Henschke, 2010b).

Pedagogy can be described with very a simplistic definition, "ways of teaching" (Martin & Loomis, 2007, p. 172). It is often used as a synonym with education or instruction. "The link between what a teacher wants students to learn and students' actual learning is called instruction, or pedagogy" (Slavin, 2012, p. 238). Pedagogy is also described as "knowledge of general principles of teaching and learning, such as the ability to maintain an orderly and learning-focused classroom or to guide student learning with questions" (Kauchak & Eggen, 2008, p. 16). While none of these descriptions of pedagogy mention the age of the student(s) they all have a common source; they come from articles and textbooks which are written for teachers of prekindergarten to 12th grade (Pk-12). Thus the very nature of the context of this literature removes the need to define pedagogy as a concept which applies exclusively to those who teach children and adolescents.

In the adult education literature, unlike literature for Pk-12 educators, pedagogy generally refers to education of children and andragogy specifically to the education of adults (Muirhead,

2007). It is interesting to note it was a Pk-12 teacher, Alexander Kapp, who first authored the term andragogy (Henschke,2010a). Kapp was a high school teacher in Germany in 1883 and used the term andragogy as a way to describe "the lifelong necessity to learn" (Henschke,2010a , p 118). The term andragogy was not commonly known to American educators until in the late 1960's Malcolm Knowles became known as an advocate of adult education. He described andragogy as a system of ideas, concepts, and approaches and the science of helping adults learn (Henschke,2010a; Hiemstra, 2011). Over the last 40 decades educators have clearly established the field of adult education (Henschke, 2010a).

The andragogical model is based on several assumptions that are different from those of the pedagogical model (Knowles, Holton, Swanson, 1998). Knowles' (1980) adragogical model initially began with four assumptions: as students mature they move from dependent learners to being self-directed learners; (b) adults accumulate a reservoir of knowledge which serves as a resource for learning; (c) adults have a readiness to learn when they perceive the need to learn; (d) adults want immediate application for what they have learned (pp. 44-45). Later Knowles added two more assumptions about adult learners. Knowles posited that adult motivation to learn is internal and adults need to know why they should know something prior to beginning a learning project (Knowles, 1990).

Adult educators have asserted several central characteristics to distinguish adults as learners such as the need to be actively involved in learning; have a preference for problem based learning experiences; utilize prior experiences to learning activities, and a desire to learn subjects which have immediate transference to their personal life (Muirhead, 2007). "Adult learners are self-directed and motivated to learn and require to be involved in the process and development of their education" (p. 180). Not all adult education proponents, however, believe these

characteristics to be true of the majority adult learners. Darbyshire (1993) counter argues "not all adult learners are self-directed, but rather use different strategies and have different motivations to learn"(p. 180).

Adult education definitions of andragogy serve to distance pedagogy as distinctly different. Examples of definitions of pedagogy taken from adult education literature range from "education of children" (Gehring, 2000, p. 151), "the art and science of teaching children" (Ozuah, 2005, p. 83), to "child leading" (Muirhead, 2007, p 179). The adult education field has solidly confirmed their perspective of pedagogy as the education of children and andragogy as the education of adults. This is somewhat similar to the medical treatment of children versus the medical treatment of adult. While both are human, they each have different needs which are inherent to their period of life (Ozuah, 2005). Although adult education literature clearly distinguishes the needs of adult learners, authors of Pk-12 education literature and higher education literature usually agree there are contrasts between teaching children and teaching adults (Hiemstra, 2011; Henschke, & Weinstock, 1991; Merriam & Brockett, 1997; Muirhead, 2007). The main difference is that outside of specific adult education literature, the term pedagogy is frequently used interchangeably in reference to education of both adults and to the education of children (Muirhead, 2007).

"The discourse around the terms pedagogy and andragogy is not semantics but the recognition that teaching and learning in higher education relies on different theories and philosophies in its development" (Muirhead, 2007, p. 179). Despite the differentiation between pedagogy and andragogy found in adult education literature, the term pedagogy, is commonly used in higher education literature. "Pedagogy is the term that is most frequently used in the literature to describe teaching and learning in higher education "(Muirhead, 2007, p. 179). The

distinction educators make concerning adult development and child development applies to many areas of post-secondary training and education, including higher education.

There is another area in which adult educators and Pk-12 educators and some higher education specialists differ. In addition to viewing pedagogy concept for teaching PK-12 learners, adult educators often critically define pedagogical teaching methods as a teaching style which employs teacher-centered practices. "It should be noted that pedagogy is fundamentally a teacher-centered model, where the teacher determines what will be learned, how it will be learned, when it will be learned, and if it has been learned" (Ozuah, 2005, p. 83). Andragogy in turn is defined as a learner-centered teaching style with emphasis on learner self-direction and active applied learning. "The learner is responsible for achieving his or her own learning goals through self-direction and evaluation, aided by a "facilitator' rather than a 'teacher'" (Marshak, 1983, p. 80).

In Pk-12 and higher education literature, pedagogy is often presented as a neutral teaching practice in which expert teachers are expected to possess general pedagogical knowledge (Kauchak & Eggen, 2005; McKeachie & Svinicki, 2006). "General pedagogical knowledge is a general understanding of instruction and management that transcends individual topics or subject-matter areas" (p. 485). General pedagogical knowledge applies "regardless of the content area or topic being taught, expert teachers know how to create classroom environments that are orderly and focused on learning" (p. 485).

In literature not specifically aimed towards adult educators, writings about general pedagogical knowledge offer a compendium of recommendations for best teaching practices. Some educators are proponents of best teaching practices in the form of traditional teaching based in philosophies of idealism and realism, which is usually described as a teacher-centered

style (Elias & Merriam, 1995). There are numerous articles and books offering general pedagogical advice for using teacher-centered teaching methods such as lecture-discussion, the Socratic method, and direct-instruction (Bain, 2004; Kauchak & Eggen, 2011; McKeachie & Svinicki, 2006; Slavin, 2012). Other authors write about learner-centered teaching styles, which are based on humanism and pragmatism philosophies (Elias & Merriam, 1995). A review of the literature shows educators of Pk-12, higher education, and of adults do apply a variety of learner-centered pedagogical methods such as guided discovery, inquiry learning, problem based learning and constructivist based methods (Martin & Loomis, 2007). The use of learner-centered teaching and teacher-centered teaching are both debated and researched among all adult educators (Hiemstra, 2011).

In higher education, terms, teaching methods and attitudes which pedagogy and andragogy are often used as interchangeably as best fits the circumstances of the instructional situation (Cuba, 2009; Marshak, 1983). Differentiation of children and adult learners create a special potential dilemma for teacher education faculty in higher education teacher education programs. Teacher educators teach adult learners who are studying how to apply pedagogical principles to teach children. The potential dilemma is when teacher educators instruct about pedagogy. Do they employ andragogical or pedagogical models? This is a possible conflict because pre-service teachers are adult learners; thus by adult education definition they fall into the realm of andragogy, not pedagogy, and should be taught as such (Marshak, 1983). Some might assert that it would be best to use adult education andragogy teaching practices while instructing in Pk-12 pedagogy principles.

Many teacher educators and teacher education programs want their pre-service teacher candidates to understand the principles of pedagogy; however, instead of treating their students

as adult learners, classroom teaching practices are often based on Pk-12 teacher-centered pedagogical teaching methods (Foster, 2006; Hewett, 2003; Rieg &Wilson, 2009). Most teacher education faculty have years of experience utilizing pedagogical teaching methods in Pk-12 schools. These years of Pk-12 experience may predispose teacher educators to more likely to use a traditional teacher-centered Pk-12 pedagogy. This may be due to receiving teacher-centered pedagogical based teacher training and a lack of training in adult education andragogy concepts (Rieg &Wilson, 2009).

With higher education classrooms populated by adult students, one might presume that the advice of adult educators would be heeded and andragogical teaching practices would be standard; however this presumption is not often found in higher education environments. "We reside within institutions that are designed largely for the transmission of knowledge and are not well suited to other strategies of development" (Darling-Hammond, 2010, p. 35). Most teacher education programs instruct pre-service teachers using both a pedagogical teacher-centered transmission of knowledge approach and an andragogical learner-centered applied "to develop their understanding of education theories and real world applications of theory" (Darling-Hammond, 2010, p. 35). The challenges of teacher education programs to prepare new teachers can be compounded by the entrenched traditional higher education academic environment. There is a need for greater emphasis on utilizing andragogical principles by teacher education practitioners. "At the heart of much of this progress has been an effort to tap the wisdom of practice through the involvement of strong practitioners and to connect theory to practice, both through well-designed clinical experiences…and through the use of case methods, action research and performance assessments"(p. 36).

As in the general field of higher education, practitioners in teacher education programs are concerned about effective teaching methods. "The past two decades have witnessed a remarkable amount of policy directed at teacher education—and an intense debate about whether and how various approaches to preparing and supporting teachers make a difference" (Darling-Hammond, 2010, p. 36). Determining the instructional effectiveness of teaching strategies, which inherently call to question andragogy or pedagogy based methods, is a conundrum not only for teacher education faculty but for all higher education faculty. The criterion for instructional effectiveness is generally not clearly defined for all higher education faculty (Delvin & Samarawickerma, 2010). The lack of established criterion gained national attention when this concern was highlighted in the federal report, *Commission on the Future of Higher Education,* by the Spellings Commission (U.S. Department of Education, 2008). One of the areas of recommendations in the report dealt with accountability and making student learning more transparent. The section on accountability and assessment in the Spellings federal report indicated a concern for course design that favored lecture formats, multiple-choice tests and those which failed to promote critical thinking and problem solving skills. The Spelling's report also listed concern for a lack of use of proven effective teaching and learning techniques (Miller & Malandra, 2006).

Although some teacher education faculty and education programs might be concerned about the dilemma of using pedagogical or andragogical teaching methods, the quandary is clarified in the standards put forward by national agencies. The National Board for Professional Teaching Standards (1996), the Interstate New Teacher Assessment and Support Consortium, and the National Commission on Teaching and America's Future (1996) are just some of the

agencies that assume learner-centered approaches are the best practice for excellence in teaching (Paris & Combs, 2006).

Teacher Education Program

The teacher training program in the College of Education (COE) has a long history. NSU is among one of the oldest institutions of education west of the Mississippi River (Newton State University, 2003). Presently, NSU offers 13 bachelor's degrees of education, seven master's education degree programs and as of 2011 had an enrollment of approximately 1,400 undergraduate teacher candidates (College of Education, n.d.a). Recently, the Teacher Education program at NSU was ranked first in the state for graduating the most number of teachers. It was also identified as the institution which produced the most number of teachers employed in the state public schools (State Regents for Higher Education, 2009). The teacher education program at NSU has had a distinguished history of professional growth, increase in programs, and faculty development. All professional teacher education programs at NSU have continuously held national accreditation, National Council for Accreditation of Teacher Education (NCATE), and state accreditation since 1954 accreditation since 1954 (NSU, 2003). NCATE defines the professional standards for teacher preparation. A majority of states standards for teacher preparation have been significantly influenced by NCATE standards (National Council for Accreditation of Teacher Education, 2006). A part of the accreditation criteria involves national and state evaluators' assessment of a sampling of the student teacher candidate portfolios to determine if the philosophy of the COE teacher education program is being realized in the students' educational experiences and to ascertain if candidates are receiving the necessary knowledge-base to be a successful teacher (College of Education, 2010). The NSU College of Education uses a self-created rubric assessment system to critically evaluate each candidate's

portfolio and attainment of the state and national requirements and professional education guidelines (College of Education, 2010).

The influence of national and state accrediting bodies is evidenced by the NSU College of Education having a well-defined conceptual framework which serves as the college's mission statement A mission statement serves as a source for the vision and inspiration for the key stake holders, the faculty, the staff and the administration (Velcoff & Ferrari, 2006). "An effective mission statement also helps employees understand how to operate within the organizational interests and objectives, thus helping individuals to operate more successfully within the organization" (Velcoff & Ferrari, 2006, p. 329). Guided by the COE's mission, the philosophy and theoretical background are stated in the Conceptual Framework document (Newton State University, 2008a). A mission statement, like the COE Conceptual Framework, can enable " a community atmosphere, integrating the internal stakeholders" and help " maintain a clear focus on the priorities of a university" (Velcoff & Ferrari, 2006, p. 329). The success of the COE Conceptual Framework, like the success of a mission statement for any college or university, is dependent upon the vigor with which it is implemented(Velcoff & Ferrari, 2006).

The COE Conceptual Framework provides direction and standards for courses, teaching practices, and accountability for the undergraduate and graduate education programs. Self-assessment of programs, courses, and best-teaching practices is necessary to maintain NCATE accreditation (NCATE, 2010). NCATE requires an institution to closely define its mission and to establish institutional accountability through self-assessment of programs, courses, and teaching best practices consistent with the institutional mission (NCATE, 2011a; Starnes, Saderholm & Webb, 2010). An important area examined in self-assessment is the degree to which the

philosophies and conceptual framework are implemented within programs and courses (Starnes, Saderholm & Webb, 2010).

The College of Education has several documents which serve as a program self-assessment guides (Newton State University, 2008b). NSU's College of Education's mission statement in the Conceptual Framework and the General Competencies for Licensure and Certification rubrics assert their beliefs, principles and ideals for best practices with language and expectations which can be found in ideals based on learner-centered humanistic and progressive philosophies of education. Analysis of these documents demonstrates that the COE promotes a learner-centered teaching ideology. The philosophical and theoretical basis of the COE is stated in the Conceptual Framework document.

> The basic pedagogical philosophy of the NSU teacher education unit is that learning is a social transaction and an active, constructive process. This philosophy is shaped by theorists and philosophers whose ideas about learning have remained stable over time (Piaget, 1970, 1974; Dewey, 1904, 1933, 1938; Vygotsky, 1978; Bruner, 1966; and Friere, 1970/1990). More recently, the work of Goodlad (1994), Posner (2000), Zemelman, Daniels, & Hyde (1998), Caine and Caine (1998), and Brooks and Brooks (1993) informs the program's faculty and inspires us to continually reflect on the teacher education program and seek opportunities to improve education of candidates. (College of Education, 2008, p. 7).

Another source which reflects a learner-centered ideology comes from the COE portfolio General Competencies for Licensure and Certification assessment rubrics. These are used by teacher education faculty to evaluate evidence of a teacher candidate's attainment of the state's 15 competencies required for new teachers (College of Education, n.d.a). This evidence

documents the teacher candidate's competencies determined by state and national standards and the teacher preparation institution (State of Oklahoma, 2011a). Learner-centered language is embedded in much of the rubric criteria. Examples of learner-centered language in these rubrics: "knowledge of principles of active inquiry learning," and "use of teaching strategies which meet student's learning styles," (College of Education, n.d.b, rubrics 1,2, 5,6). Other learner-centered concepts included in the rubric criteria teacher are: "evidence of supportive interaction using community resources to foster learning", "a commitment to student-directed learning," and "authentic performance assessment" (College of Education, n.d. b, rubrics 4, 9, 6).

These examples from the Philosophy of the Unit statement, Conceptual Framework, and rubrics demonstrate the COE's commitment to learner-centered teaching ideologies. The COE expects their faculty to put into practice these ideologies. As an institution of teacher preparation, and as a function of a professional education institution, they are expected to self-assess programs and teacher education faculty in order to evolve and improve (National Council for Accreditation of Teacher Education, 2008; State of Oklahoma, 2011a).

Conclusion

In adult education literature, Pk-12 education literature, and higher education literature there is general agreement that there are contrasts between teaching children and teaching adults (Hiemstra, 2011; Henschke, & Weinstock, 1991; Merriam & Brockett, 1997; Muirhead, 2007). In the end it may not matter whether or not higher education faculty agree with the analogy that andragogy is to adults what pedagogy is to children. What matters is if a faculty member believes teaching is not just something that is done to students. The teaching-learning process, expectations of the role of the student and what method of instruction to use, are examples of

actions guided by a teacher's educational philosophy (Conti, 1982; Elias & Merium, 1995; Zinn, 1983, 2004).

Instructors who seek new insights expand their repertoire of skills and strategies which could engage students to become active participants in their learning. "Teaching effectiveness depends not just on what the teacher does, but rather on what the student does" (McKeachie, 2006, p. 6). Regardless of whether classroom instruction is approached with a concept of andragogy or pedagogy, or if teaching style is learner-centered or teacher-centered, faculty and teacher education programs might be strengthened through self-assessment. "Becoming an effective teacher of adults means that we should recognize the need to share, talk, and think about the craft of teaching adults" (Galbraith, 2004, p. 19). One type of self- assessment could be about degree of alignment of their teaching style and the philosophy of their teacher education, and whether this is compatible with the teacher education program at their institution.

The theoretical framework which supports this descriptive study is balanced on the relationship between philosophy and teaching style. These are are reflected in a teacher's professional behavior, curriculum and expectation of the teaching-learning process. Teacher education faculty have a relationship with their education institution. The mission statement in the COE's Conceptual framework, which includes its philosophy and teaching style preferences, provides structure and guidance for the faculty, courses and the pre-service teachers. A clear and shared mission statement "provides the institution with a compass for navigating a course when tension or outright conflict arises, either between the school and its environment or between sets of external forces that touch the school" (Berg, Csikszentmihalyi, & Nakamura, 2003, p. 46). If there is tension or conflict between the beliefs and values of COE and the teacher education faculty the foundation of the COE could become ambigious or unstable (Andreescu, L. 2009).

Teacher education faculty teach through andragogical principles, and the pre-service teachers in turn learn how to use pedagogical methods on Pk-12 students. These relationships are represented in Figure 1. Andragogy and pedagogy are conceptually relevant to this study and as a result are a part of the theoretical framework influencing this study; however they are beyond the scope of the study's research questions.

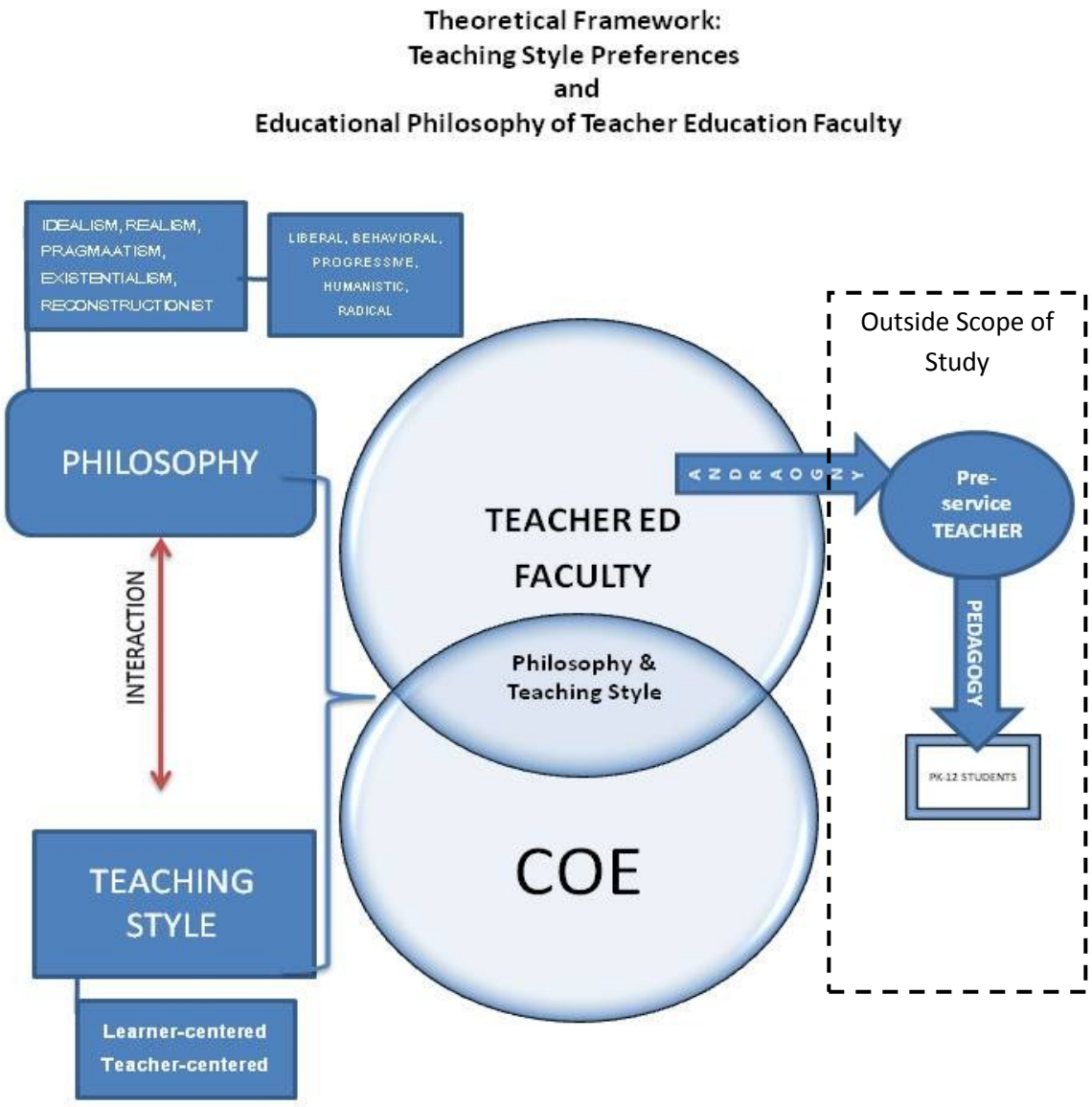

Figure 1. Theoretical Framework

CHAPTER III

METHODOLOGY

Design

A descriptive research design with survey methodology was used for this study. Descriptive research is used to organize, describe and summarize the characteristics of the research data from a sample or population to describe the current status of the study topic without altering the situation (Gay & Airasian, 2000; Moreno, 2010; Salkind, 2008; Shavelson, 1996). Many research studies use surveys for data collection because it has been found useful to gather information about a variety of education problems. Survey research is one of the widely used research types in educational studies in order to determine the current status of a population concerning one or more variables (Gay & Airasian, 2000; Wiserma, 1995). The design of this research study used a survey methodology to describe the teacher education faculty at Newton State University. The Philosophy of Adult Education Inventory and the Principles of Adult Learning Scale are two published survey instruments appropriate for measuring the philosophies and teaching styles of the teacher education faculty at NSU.

Sample

The sample for this descriptive study was a portion of the total population of the 122 Newton State University full time and adjunct undergraduate and graduate teacher education faculty members as identified by the College of Education Dean's office (L. White, personal communication, March 9, 2011). "Sampling is the process of selecting a number of individuals for a study in such a way that they represent the larger group…referred to as the population"

(Gay & Airasian, 2000, p. 121). The Teacher Education program consisted of two categories of faculty members. The largest group consisted of the faculty members within the College of Education. The other groups consisted of the faculty outside the College of Education who teach specialized subject matter and methodology courses including the College of Mathematics and Science, College of Arts and Letters, and College of Social and Behavioral Sciences (Newton State University, 2008).

Instruments

Two established instruments were used to gather information describing the educational philosophy and teaching style of teacher education faculty population at NSU, the Philosophy of Adult Education Inventory (PAEI) and the Principles of Adult Learning Scale (PALS).

Philosophy of Adult Education Inventory

The Philosophy of Adult Education Inventory (PAEI) was developed by Lorraine Zinn (1983). It is an "assessment tool developed to assist the adult educator to identify his/her personal philosophy and to compare it with prevailing philosophies in the field of adult education" (Zinn, 2004, p. 52). The PAEI provides information to help educators identify their philosophical belief (Foster, 2006).

The PAEI was designed to be self-administered, self-scored and self-interpreted (Zinn, 2004). The inventory includes 15 incomplete sentences. Each incomplete sentence is succeeded by five possible statements that could complete the sentence for a total of 75 responses. The respondent selects a degree of agreement for each of the statements on a 7-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) with a neutral point of 4 (p. 60). The five options used to complete each sentence represent categories of education: purpose of adult education, how adults learn, teacher role, beliefs about learners, and teaching methods (p.54).

Each of these five categories represented a particular philosophy of education. The PAEI instrument reflected the conceptualization of philosophies adapted from Elias and Merriam (Zinn, 2004). The philosophies represented are Liberal, Behavioral, Progressive, Humanistic and Radical (pp. 55-56). The scores can range from 15 to 105 for each of the five philosophies. The respondents scores for each of the 75 items was calculated by the sum value of the five grouped philosophy responses. The highest score indicated the philosophy with which the educator is most likely to agree. The lowest score indicated the philosophy most unlike the educator's beliefs about education. A score range of 95–105 indicated a strong agreement with the philosophy, and a score range of 66–94 indicated agreement with the philosophy, a disagreement with the philosophy is a score below 55, a score range of 15–25 indicated a strong disagreement. A score range of 56–65 indicated a neutral perception of the philosophy. It is possible for educators to have two philosophies with identical or very similar high scores. Teachers may need to closely examine their beliefs for innate contradictions, if score combinations of three or more are close or high (Zinn, 1983). The PAEI "is designed to help you, as an adult educator, to begin a process of philosophical inquiry and reflection on your beliefs and actions" (Zinn, 2004, p. 52).

Validity. Validity is the property of an instrument which specifies that the instrument measures what it purports to measure and the inferences made from the results of the test are interpretable (Moreno, 2010; Salkind, 2008). Validity is one of the most important characteristics an instrument can possess (Gay & Airasian, 2000). "Validity deals with the relevance of a test for its intended purpose" (Slavin, 2012, p. 473). Three types of validity are construct, content and criterion (Salkind, 2008; Gay & Airasian, 2000).

"Construct validity is the most interesting and the most difficult of all the validities to develop because it is based on some underlying construct or idea behind a test or measurement

tool" (Salkind, 2008, p. 115). An instrument can be said to have construct validity when the performance measured provides legitimate indication of the attribute(s) that the assessment intends to measure (Moreno, 2010; Wiserma, 1995). Construct validity is the degree to which the concept of interest is actually measured.

The construct validity of the PAEI was statistically tested using a factor analysis process (Zinn, 1983, p. 148). Individual response items showed that a majority "had a moderate to high common factor variance (> .50), indicating that they were both valid and reliable measures for the inventory" (p. 150). This data and the findings of a select jury confirmed the PAEI is a valid instrument to identify a person's educational philosophy (p. 150).

Content validity is the sampling adequacy of the content of an instrument compared to the subject matter it is intended to measure (Gay & Airasian, 2000, p.163). When "a sample of items truly reflects an entire universe of items on a certain topic" and "for which the test is designed" (Salkind, 2008, p. 111), an instrument can be considered to have content validity. Two criteria for content validity are item validity and sampling. An instrument's item validity indicates whether the test items measure the intended content area and sampling validity indicates how well the test samples the total content validity (Gay & Airasian, 2000). The content validity of the PAEI was demonstrated through a jury of experts who were considered knowledgeable in adult education philosophy (Zinn, 1983, pp. 145-146). An analysis of their responses determined high content validity through separate item analysis and individual response options were verified against particular philosophies as designated by Zinn (p. 146). "The Inventory (PAEI) was judged to have a fairly high degree of validity, based on jury mean scores of >.50 (on a 7-point scale) for 93% of the response options, and communality coefficients of >.50 for 87% options" (Zinn, 1983, p. 82).

The third type of validity often used to specify that the instrument measures what it purports to measure is criterion validity. Criterion validity is determined by comparing the instrument results with either present or future expectations. The comparison is made by correlation of scores from the instrument with another measure which assesses similar traits and is already established as valid (Gay & Airasian, 2000; Salkind, 2008; Slavin, 2012). The criterion-related validity for the PAEI was not addressed (Zinn, 1983, p. 267).

Reliability. Reliability of an instrument relates to the accuracy, consistency and trustworthiness of instrument results. The measure of reliability is the degree to which an instrument will give similar results for the same individuals at different times. The degree of reliability is higher when the scores of an instrument are consistently similar to scores which would be obtained if the test were re-administered. Reliability is an important measure in educational research (Gay & Airasian, 2000; Slavin, 2012). The PAEI has been determined to be a reliable instrument (Zinn, 1983). Reliability was established using participants from "various areas of adult education, including teachers, consultants, administration, program coordinators, and graduate students" (p. 151). Internal consistency and test-retest stability were determined based on Pearson product moment correlations for individual response options, items, and overall scales. Reliability coefficients of > .40 on 84 percent of the response options and alpha coefficients ranging from .75 to .86 on the five philosophy scales were considered measures of moderate to high reliability (Zinn, 1983).1n addition, retest data revealed a tendency toward moderate to high reliability (.48 to .83) for the five philosophy scales. Test-retest reliability is an established method obtained from measuring the degree to which scores are correlated through repeated administration of the instrument over time (Moreno, 2010; Salkind, 2008). The test-retest method of reliability is commonly measured using a 0 to 1

correlation coefficient range in which the higher the number, the more reliable the test. As reliability increases, confidence in the trustworthiness of the scores obtained from the instrument increase (Slavin, 2012; Wiserma, 1995). There was an apparent positive correlation between internal consistency and test-retest reliability measures on overall scales (Zinn, 1983).

Principles of Adult Learning Scale

The Principles of Adult Learning Scale (PALS) is an instrument which indicates overall teaching style. It was developed by Conti (Conti 1978, 1982, 1983, 1984, 2004) to measure the extent to which practitioner supported the collaborative mode of the teaching-learning. The PALS was initially published in 1979 and is based upon the body of adult literature which supports collaborative teaching (Conti, 1982). "This 44-item instrument measures the frequency with which one practices teaching learning principles that are described in the adult education literature" (Conti, 2004, p. 79). High scores on PALS demonstrate support for a learner-centered approach to teaching, while low scores on PALS indicate support for a teacher-centered approach. The instrument contains statements about practices a teacher might do in a classroom. The respondents answer questions based on how they might perform in a classroom. Each of the 44 items is answered by selecting from a modified 6-point Likert-type scale in which the respondent selects the degree of agreement with the statement ranging from 0 (Always), 1 (Almost Always), 2 (Often), 3 (Seldom), 4 (Almost Never), and 5 (Never). The total scores may range from 0-220. The established mean for PALS is 146 with a standard deviation of 20. Derived from a normative sample of 534 adult education practitioners (Conti, 1982). Scores above 146 indicate a tendency toward the learner-centered teaching preference. Low scores suggest support for a more teacher-centered approach and middle range scores indicate an eclectic approach (Conti, 2004).

In addition to the overall teaching style score, the 44 items in PALS can be broken down to examine seven factors which comprise teaching style (Conti, 2004). The seven teaching style factors are learner-centered activities, personalizing instruction, relating to experience, assessing student needs, climate building, participation in the learning process, and flexibility for personal development. The title of each factor reflects a theme in adult learning literature. Each factor contains a group of related items which pertain to a major component of teaching style and adult learning principles. High factor scores signify support for learner-centered teaching. Teaching style can be quickly assessed using PALS. It is expected that respondents take approximately 10-15 minutes to complete the instrument (Conti, 2004, pp. 79-80).

Validity. PALS is a valid and reliable instrument (Conti, 1982, p. 145). "The construct validity of the items was established by the testimony of juries of adult educators" (Conti, 1982, p. 139). Both a regional and a national jury of adult education professors were used to analyze the items and provide information and suggestions on the construct of the items (Conti, 1992, pp. 139-141). The concepts in the instrument were found to be congruent with adult education principles and supportive of the collaborative mode (p. 141).

Content validity of PALS was established by field tests with practitioners of adult basic education in fulltime public school programs in Illinois (Conti, 1982). The field-testing was completed in two phases. Phase one consisted of three field-tests to identify items that discriminated between the supporters and non-supporters of each teacher-centered and learner-centered collaborative modes. Phase two tested 57 practitioners in six programs. The scores of the practitioners were calculated and analyzed. This test-retest method established a reliability coefficient of .92 (Conti, 1978; 1979). "Content validity was determined by Pearson correlations

which measured the relationship between each individual item and the total score of each participant" (Conti, 1982, p. 140). This helped produced the 44-item PALS instrument.

Criterion-related validity was established by comparing the scores on the PALS for those who scored two standard deviations either above or below the means from the phase two field testing to their scores on the Flanders' Interaction Analysis Categories (FIAC). FIAC was selected as the external criterion because it is a validated system for measuring initiating and responsive teacher classroom actions and because "the FIAC ratio scores confirmed the existence of a high degree of congruency between professing a teaching-learning mode on PALS and actually practicing behaviors characteristics of the mode in the classroom" (Conti, 1982, p. 142). Pearson correlations of r = .85 on the Teacher Response Ratio, r = .79 on the Teacher Question Ratio, and r = .82 on the Pupil Initiation Ratio confirmed the congruence between PALS and FIAC (Conti, 1978, 1979). Conti (1982) reported:

> "These high correlations statistically confirmed that PALS consistently measures initiating and responsive constructs and that PALS is capable of consistently differentiating among those who have divergent view concerning these constructs. (p. 142)."

Reliability. The reliability of PALS as a trustworthy and consistent standard for measuring the degree of an education practitioner's preference for the collaborative teaching mode was established by the test-retest method (Conti, 1982). The instrument was administered by test-retest method to 23 adult basic education practitioners after a seven day interval. The scores were compared by means of a Pearson correlation which yielded a "reliability coefficient of .92" (Conti, 1982, p. 142). The test-retest method was used to establish the reliability of the modified PALS instrument. The data indicated a reliability coefficient of .90. Internal

consistency as measured by Cronbach's alpha was .89. Analysis of 778 cases indicated that the descriptive statistics for PALS are stable (p. 140).

Demographic Data

Demographic data was self-reported from participating Newton State University teacher education through the participation of the on-line survey. Data was collected for the following variables: academic rank, assigned college, professional P-12 experience as a teacher and as an administrator, length of employment at NSU, age and gender.

Procedures

A letter from the Dean of the College of Education (COE) at NSU was obtained which demonstrated support of this research study. Approval was obtained first from the Newton State University Institutional Review Board (IRB). Since this doctoral research study was being conducted through Oklahoma State University (OSU) NSU provided approval in reciprocity with IRB approval from OSU IRB and with OSU IRB to provide guidelines for publication and protocols. . The NSU IRB approval was granted as valid until the OSU IRB approval expires. In addition to the required forms and documents, the OSU IRB office was also provided with the NSU IRB approval.

With the support of the NSU COE dean and administrative support services, the teacher education faculty were contacted through the NSU e-mail system. The list of teacher education e-mail addresses was obtained from the College of Education Dean's office and from the NSU directory. The first e-mail was sent from the COE Dean's administrative assistant with the e-mail letter composed by the researcher imbedded in the body of the e-mail. The administrative assistant selected the e-mail address list. One day after the e-mail was sent, it was discovered by the researcher that the e-mail list did not contain the e-mail addresses for any part-time NSU

teacher education faculty or for teacher education faculty outside the COE. The additional e-mail addresses were compiled and sent by the researcher direct to all part-time COE teacher education faculty and to full and part-time teacher education faculty in the other two colleges which have teacher education programs; the College of Liberal Arts and College of Science and Health Professions. Nine days after the first e-mails were sent out, the department chair of the COE Educational Foundations and Leadership and the department chair of the COE Curriculum and Instruction send out an e-mail to the full time and part time faculty in their department reminding the faculty of the request to participate in the study.

The-mail was sent to a total of 122 teacher education faculty. The e-mail invited them to participate in a 20-25 minute survey designed to gather information about preferred teaching styles and to identify personal philosophies of education. The e-mail provided information that the results of the study would provide data for the researcher's dissertation for a doctorate degree at OSU. It was stated that the survey was anonymous and that neither their name or e-mail address would be retained and the information collected would be reported in categorical groupings to further protect anonymity. A statement at the end of the e-mail indicated the participation was completely voluntary and they had the right to discontinue participation at any time by closing their browser. Then the participants decided whether or not to voluntarily select to participate in the study by choosing to click on the provided hyperlink. The hyperlink took the participants to a dedicated custom URL provided by a web-site called Checkbox . NSU is licensed to use Checkbox . Checkbox is an on-line survey tool which provides professional online survey and data collection tools (Checkbox, 2012).

There are only two NSU administrators who can access the NSU accounts. The administrators only access accounts with request from the account holders to find a problem with

a survey. The creation, modification and results of the survey are password protected with the password known only by the researcher. When a participant accessed the URL of the survey, the only identifier collected about participant is the IP address of the participant. The data collected will be held on the CheckBox server as long as the account holder desires and can be deleted from the server by the account holder. For this research study the data will be held on the server for no longer than three years.

Once the participants clicked on the hyperlink they were taken to the first page on the dedicated URL web-site. Prior to access to the questionnaire instruments, participants were asked to read a detailed participant consent form with information about the dissertation title, name of investigator and advisor, and explanations of the purpose, risks, benefits, and compensation. Participants were notified that in addition to use in this dissertation research, the results may be presented in a conference presentation or published in a journal. They were also notified of their right to ask questions, and to whom to direct their questions. A statement on the consent form indicated their voluntary participation could be withdrawn upon closing their internet browser and if they must stop their participation before completing the survey that they could return to take the survey again and that there was no compensation provided for their participation. It was recommended to print a copy of the consent page.

After the participant read the consent page, five pages were questions from the PAEI instrument, one page of questions from the PALS instrument and one page with demographic questions. The demographic information was collected in the last section of the web page. Seven areas of demographic data were gathered by ascertaining their faculty duties through selection of their assigned College as either the College of Education, College of Liberal Arts, College of Sciences and Health Professions or other; their academic rank of Part-time Instructor, Full-time

Instructor, Assistant Professor, Associate Professor, or Professor; professional P-12 experience by asking if they had experience as a teacher or as an administrator in preschool through 12 grade; years of experience in higher education teacher education; length of employment at NSU; age; and gender.

Based on the low number of faculty who participated in the initial e-mail, a second e-mail was sent encouraging participation in the study. The second e-mail was sent ten days after any of the teacher educators were contacted. The second e-mail was sent to the total teacher education population regardless of whether or not they had taken the survey because there was no identifying information to determine who had not participated in the survey. Although the hyper link to the CheckBox web page was used to access the web page from their e-mail, the e-mail address trail or any other information was not traceable and thus the identity of the respondent was not identifiable. Check-Box kept a record of each time the on-line survey was accessed through the e-mail link. The on-line survey was designed so participants could not proceed to the next page until all the questions on the current page were answered. This prevented missing or incomplete data.

Twenty days after the last e-mail was sent to the teacher education faculty, 45 faculty had participated. The data was downloaded from the CheckBox web-site in categorical groups with no identifying information. CheckBox randomly assigned each participant a record number associated with the participant's survey responses. The data was saved into an Excel spread sheet and SPSS for statistical evaluation. By or before March, 2015 the researcher will delete the data from the CheckBox server and destroy any data in all other forms

The data collected from the on-line survey was analyzed using the three different statistical measurements: frequency distributions, analysis of variance (ANOVA), and chi-

square. Descriptive statistical methods were used to establish the profiles for each instrument and demographic variables. Frequency distributions were used to construct the educational philosophy and teaching style profiles for the participants. Frequency distributions were use in this study to represent the educational philosophies profiles and teaching styles profiles found through the Philosophy of Adult Education Inventory (PAEI) and the Principals of Adult Learning Scale (PALS) survey instruments. Frequency distributions ued in this study follow the basic method used in many research studies (Green & Salkind, 2008). Frequency distributions usually present categorical data through representing the count or frequency of each category's incidence of scores, often arranged by percentages, intervals, or ranges of numbers (Green & Salkind, 2008; Salkind, 2008). Frequency distributions were also used to represent the eight areas of demographic variables. . Frequency distributions are an organized method to present a mass of data in an interpretable form (Salkind, 2008). Frequencies tables reported the sample, *N*, the categorical numerical frequencies and the percentages.

Analysis of variance was used to examine the relationship among the demographic variables and the educational philosophies and the teaching styles. There were 8 categories of demographics and two instruments used in the study. A one-way ANOVA was an appropriate choice in this study to examine the amount of variability between demographics and categories of factors within the instruments (Salkind, 2008). The PAEI instrument had five philosophy categories. The second instrument, PALS, with two categories of teaching style, provided a total score or either learner-centered and teacher-centered, with seven subcategories of teaching style. ANOVA was used to if identify the difference of the means of one group differed significantly ($p < .05$) by chance from the means of another group (George & Mallery, 2006).

Chi Square analysis was used to examine the relationship between educational philosophies and teaching styles to test for the association, also known as independence, between two nominal/dichotomous variables (Lund & Lund, 2012a). Chi-square is a valuable nonparametric statistical analysis which was used to investigate the relationship between PAEI and PALS. This was a useful statistical test because the sample size for this study was under 50 (N= 45) and in most areas did not represent a normal distribution. This test is useful to determine if what was observed would be expected to occur by chance (Salkind, 2008). Crosstabs the Goodness of Fit Chi Square were run to determine if statistical differences ($p < .0\ 5$) existed between learner-centered and teacher-centered teaching style with the five philosophies.

CHAPTER IV

FINDINGS

This descriptive study examined teaching philosophies and teaching styles of teacher educators at the selected university through an on-line survey presented through a web-site called Checkbox. Teaching philosophy was measured by using the Philosophy of Adult Education Inventory (PAEI). Teaching style was measured by using the Principles of Adult Learning Scale (PALS). The variables of education philosophy and teaching style were examined in relationship to the demographics of gender age, rank, assigned college at this comprehensive Midwest university, years working in higher education, years teaching at the university, Pk-12 teaching experience and Pk-12 administration experience. The relationship between education philosophy and teaching style was examined. The teaching style and education philosophy preferences of the teacher education faculty were compared to the stated teaching style and educational philosophy of the COE. The findings are reported in this chapter as related to the specific research questions they address.

Research question one:

What are the education philosophies and teaching styles of the university's teacher education faculty?

Educational Philosophy

The Philosophy of Adult Education Inventory (PAEI) is an instrument that classifies respondents into five philosophical schools of thought related to adult education (Zinn, 1983). The five philosophical orientations are Liberal, Progressive, Behaviorist, Humanist, and Radical.

The PAEI was used to examine the education philosophies of the teacher education faculty. In order determine the preferred philosophy with the PAEI, a score is calculated for each of the five philosophical classifications based on responses to 15 incomplete questions (Zinn, 1983). Each incomplete question requires a response to five statements which are related to the incomplete phrase. The score for each statement could range from one as strongly disagree to seven as strongly agree. The result is a score for 75 items. Respondents were required to answer each item, thus there was no missing data. To determine a respondent's dominant philosophy the respondent's scores from the five philosophies are compared to one another. The highest score of the five classifications of philosophies indicates the philosophy nearest to the respondent's beliefs, and their lowest score indicates which philosophical orientation the respondent preferred the least. The highest score possible is 105 and the lowest score possible is 15 (Zinn, 1983). Although the five categories of scores are compared to each other in order to determine the philosophy nearest to the respondents' beliefs, their highest score may not actually be indicative of a compelling preference for that philosophy. A score of 95 to 105 is indicative of a strong preference for a philosophy; a score of 15 to 25 indicates a strong disagreement with a given philosophy; a score of 55 to 65 indicates neither strong agreement nor disagreement with a particular philosophy (Zinn, 2004).

There was a challenge in comparing the highest scored preference of one respondent to another. The obtained individual raw scores of the philosophies for the PAEI are not standardized. Scores that reflect a person's preferred philosophy may greatly vary between individuals with the same philosophical preference. For example, two respondents may have a similar highest philosophical reference but have very different raw scores. Therefore, the participant's scores for each philosophical school were converted to percentages of their total

score to more effectively compare the scores for all individuals participating in the study. A quantitative comparison was then possible. The percentages of support are represented in the frequency distribution shown in Table 2. This approach was used in other studies using PAEI and resulted in standardized scores representing percentage of support for each philosophy which ranged from 0 to 100, this standardization of scores allowed for equitable comparisons between individuals (Foster, 2006; Fritz; 2008; O'Brien, 2001).

Table 3

PAEI Philosophy of Highest Individual Preference (N=45)

Philosophy	*N*	%
Liberal	3	6.7
Behavioral	4	8.9
Progressive	24	53.3
Humanistic	8	17.8
Radical	0	0.0
Mixed	6	13.3
Total	45	100

Table 3 shows that the teacher education faculty were not equally distributed among the five educational philosophies. The data in table 2 follows the scoring instructions of the PAEI to use the highest score for each respondent of the five philosophy categories. Over half (53.3%) of the teacher education faculty had the strongest support for the progressive philosophy. None (0%) of the teacher education faculty had radical philosophy as their strongest philosophy preference. Six (13.3%) of the 45 faculty had equal scores in two or more philosophies as their philosophy preference. These six participants were counted as having a 'mixed' philosophy. Of the six with mixed philosophy preferences, one respondent had three philosophies with the same highest score and five respondents had two philosophies with the same highest scores. The mixed philosophy combinations included four with behavioral, three with liberal, three with

progressive, and two with humanistic. The mixed raw scores ranged from 55 to 96. Half (3) of the respondents with mixed philosophies had scores above 90 (91-96) and one respondent's highest score was 55.

The profile of the philosophy scores is altered when considering the range of raw scores for all of the philosophies, rather than just the sores for the strongest philosophy preference. The profile of the number of respondents who scored high and low for each philosophy provides new information about the composition of the philosophies preferred by the group. The raw scores for all of the philosophies ranged from 50 to101 (Table 4), compared to the possible raw points for the PAEI are 15 to 105 indicates the respondents scored in the upper ranges of the raw scores.

Table 4

PAEI Raw Scores for all philosophies: Percent of Group (N=45)

Philosophy	45-54 (*n*)	55-65(*n*)	66-75 (*n*)	76-85(*n*)	86-95(*n*)	96-105(*n*)	Total% (*N*)
Radical	8.8% (4)	20.0% (9)	24.4% (11)	31.1% (14)	15.5% (7)	0	100% (45)
Behavioral	0% (0)	2.2% (1)	20.0% (9)	55.5% (25)	20.0% (9)	2% (1)	100% (45)
Liberal	0% (0)	15.5% (7)	31.1% (14)	40.0% (18)	13.3% (6)	0	100% (45)
Progressive	0% (0)	2.2% (1)	11.1% (5)	31.1% (14)	42.2% (19)	13.3% (6)	100% (45)
Humanistic	0% (0)	8.8% (4)	20.0% (9)	42.2% (19)	24.4% (11)	4.4% (2)	100% (45)
Total % (*N*)	1.7% (4)	9.7% (22)	21.3% (48)	40.0% (90)	23.1% (52)	4.0% (9)	100% (225)

Note: PAEI raw score range 15-105.

Table 4 shows the results of where all of the raw scores fell for each philosophy and the percentage put into bands of 10 raw score points. A 10 point band was used with only those bands with respondents scores reported. The highest ranked philosophy for the group was progressive, with a standard deviation of 9.216 (Table 5) and 86 percent (n = 39) of the respondents scoring 76 or higher (Table 4). The second highest popular philosophy in the group was behavioral with a standard deviation of 7.787 (Table 5) and 77.5 percent (n = 35) of the group scoring 76 or higher (Table 4). A score of 55 to 65 indicates a neutral preference or

"neither strong agreement nor disagreement with a particular philosophy" (Zinn, 2004, p. 74). The vast majority of the group (88.4%) had raw scores of 65 which indicated an agreement with that philosophy (Table 4). For all philosophies, the raw score range for 40 percent of the group was between 76-85. Table 3 also shows that the only philosophy which had scores below the neutral range of 55 to 65 was radical (8.8%, *n*=4).

Table 5
PAEI Statistics (*N* = 45)

		Radical	Behavioral	Liberal	Progressive	Humanistic
N	Valid	45	45	45	45	45
	Missing	0	0	0	0	0
Mean		72.98	80.22	75.16	86.02	79.62
Median		73.00	81.00	76.00	87.00	79.00
Mode		68[a]	80[a]	76	85[a]	77
Std. Deviation		11.561	7.787	9.025	9.216	9.747
Variance		133.659	60.631	81.453	84.931	95.013
Range		44	43	38	49	46
Minimum		50	55	55	55	55
Maximum		94	98	93	104	101
Percentiles	10	55.80	69.00	62.60	75.00	66.20
	20	63.20	74.20	68.20	77.20	72.40
	30	65.80	76.80	70.00	80.60	75.80
	40	68.00	80.00	73.40	85.00	77.00
	50	73.00	81.00	76.00	87.00	79.00
	60	78.60	82.00	77.60	89.60	81.60
	70	81.20	83.20	80.20	92.20	84.40
	80	84.00	86.00	83.00	95.00	88.60
	90	87.00	89.80	86.40	96.40	94.00

Note: [a] Multiple modes exist. The smallest value is shown.

The overall group mean for all of the philosophies was 78.8 (Table 5). Radical had the lowest mode score of 68 and highest variance (133.659). Table 5 also reports that the progressive philosophy had the highest mean (86.02) and the highest median score (87).

Teaching Style

Teaching style of the teacher educator faculty was measured with the Principles of Adult Learning Scale (PALS) administered as an on-line survey. The PALS instrument has two categories of teaching styles that provide a result of a total score of either learner-centered or teacher-centered, and with seven subcategories of teaching style. Scores on PALS may range from 0 to 220 (Conti, 1998). PALS consists of 44 items that measure the frequency with which

one practices teaching-learning principles described in the adult education literature. The respondents indicated their answers on a Likert-type scale ranging from 0 to 5: 0–-Always; 1–-Almost Always; 2–-Often; 3–-Seldom; 4–-Almost Never; 5–-Never. The established mean score for the PALS instrument is 146 with an established standard deviation of 20. PALS scores between 220-146 indicate a tendency toward the learner-centered teaching style approach, while scores 145-0 imply support of the teacher-centered approach (Conti, 1998). The overall teaching style and strength of commitment to that style can be judged by comparing the score to the established mean score of 146. The further above or below the mean score the more committed the respondent is to that teaching style. Scores that are in the second standard deviation of 20 to 40 points away from the mean (below 126 or above 166) indicate "a very strong and consistent support of a definitive teaching style" (p. 77). Scores that are in the third standard deviation from the mean indicate "an extreme commitment to a style" (p. 77). PALS scoring instructions specify to assign omitted questions a neutral value of 2.5.

The total PALS scores for the teacher education faculty ranged from 95 to 180.5. Their mean score of 137.14 was less than one standard deviation below the PALS established mean. Although this is indicative of a committed support for the teacher-centered mode of instruction; it also indicated that the majority of respondents were similar to the norming scores represented in the instrument. Thirty-two of the respondents scored one standard deviation above and below the PALS mean (Table 6).

Table 6

PALS scores (N=45)

Score	N	%
167-186 (+ 2 SD)	2	4.4
147-166 (+ 1SD)	10	22.2
146 Mean	1	2.2
145-126 (- 1SD)	22	48.9
125-106 (-2 SD)	8	17.8
105-86 (-3 SD)	2	4.4
Total	45	100

Note. SD = PALS normed standard deviation (20)

The majority of the 32 respondents (71%) scored 145 or lower; which indicated a support of the teacher-centered approach (Table 6). Within this teacher-centered group, 22 respondents (68.7%) scored one standard deviation below the PALS mean indicating they had a commitment for teacher-centered teaching style. There were 4.4% of respondents who scored in the third standard deviation of both above and below the PALS mean indicating an extreme commitment for the representative teaching style (Table 6).

The total PALS score describes a general teaching style and is useful in providing a general label for the instructor's teaching style; however it does not identify specific behaviors the teacher may use in the classroom that would represent this style (Conti, 1998). The total PALS is made up of seven factors. Each of the seven factors contains a similar group of survey question items that form major components of the total PALS score for teaching style. The seven factor scores represent specific characteristics teaching style.

Learner-centered activities is the focus in Factor 1 (Conti, 1998). This main factor of PALS is made up of 12 negative question items which contrast to learner-centered principles. The items are related to student evaluation by formal tests and to a comparison of students to outside standards. The PALS normed mean for factor 1 is 38, with a standard deviation of 8.3 and a score range from 0 to 60. Factor 1 scores for this study ranged from 18 to 54 with a median

of 39. The group mean was 38.4 and a standard deviation of 7.6. Using the PALS standard deviation score for factor 1, of 8.3, seventeen (37%) of the respondents fell one standard above the mean (Table 7). High scores on this factor reflect support for the collaborative mode and a more leaner-centered approach. Low scores on this factor indicate a teacher-centered style where the teacher determines objectives, and use traditional methods to compare learners.

Table 7

PALS Factor 1 (N=45)

Score	N	%
48-55 (+ 2 SD)	3	6.6
40-47 (+ 1SD)	17	37.7
39 Mean	3	6.6
38-31 (- 1SD)	14	31.3
30-23 (-2 SD)	7	15.5
22-15 (-3 SD)	1	2.2
Total	45	100

Note. SD = PALS Factor 1normed standard deviation (8.3)

PALS Factor 2 is about personalizing instruction with six positive question items and three negative items (Conti, 1998). These nine items concern focus on student motives and abilities, self-pacing of learning, and using a variety of materials, assignments and methods. Factor 2 PALS normed mean for is 31, with a standard deviation of 6.8 and a score range of 0 to 45 (Table 8). Factor 2 scores in this study ranged from 13 to 38, with a group mean of 25.3. A low score for this factor indicates a teacher-centered style with an emphasis on focusing on the class majority completion of goals and less emphasis on the individual student needs. In this study over 77 % of the teacher education faculty scored one or two standard deviations below the mean. Only 13.3% of the teacher education scored above the established mean. A score above the mean indicates that the teacher does a variety of things to meet the individual needs of each student and utilizes a variety of instructional methods. Those with a high score on this factor generally do not believe in lecture as a primary teaching method (Conti, 1998).

Table 8

PALS Factor 2 (N=45)

Score	N	%
32-38 (+ 1SD)	6	13.3
31 Mean	2	4.4
30-24 (- 1SD)	17	37.8
23-17 (-2 SD)	18	40.0
16-9 (-3 SD)	2	4.4
Total	45	100

Note. SD = PALS Factor 2 established standard deviation (6.8)

Factor 3 is concerned with relating to experience (Conti, 1998). It consists of six positive question items. A low score indicates focus on adhering to a predetermined set of objectives and teacher may not make allowance for experience or independent growth. The teacher employs structured assignments with little room for independent variations. A high score reflects that the instructor takes into account students' prior experiences and encourages students to relate new learning to those experiences. An attempt is made by the teacher to make learning relevant by offering problems that may be encountered in everyday life. This can foster a learner to move "from being dependent on others to being independent" (Conti, 1998, p. 79). Factor 3 of PALS has an established mean of 21, with a standard deviation of 4.9 and a score range from 0 to 30. The scores for this study ranged from 6 to 30 and a mean of 20.7 (Table 9). The majority of scores were split around the mean with 73.2% of the teacher education faculty falling between one standard deviation above the mean and one standard deviation below the mean.

Table 9

PALS Factor 3 (N=45)

Score	N	%
27-31 (+2SD)	6	13.3
22-26 (+ 1SD)	15	33.3
21 Mean	4	8.8
20-16 (- 1SD)	14	31.1
15-11 (-2 SD)	4	8.8
10-6 (-3 SD)	2	4.4
Total	45	100

Note. SD = PALS Factor 3 normed standard deviation (4.9)

Factor 4 is made up of four positive question items about assessing student needs (Conti, 1998). Individuals who score high on this factor find out what each student wants and needs to know and treats them like adults. A high score indicates the teacher views learners as adults by finding out what the learners want and need to know. This is done by informal counseling and conferences with the individual learner (Conti, 1998). A low score indicates little student involvement in identifying needs or planning and less reliance on individual conferences to direct the instruction. Factor 4 has a normative mean of 14, with a standard deviation of 3.6 and a score range of 0 to 20. The teacher education faculty mean for this factor was 12.8 and the scores ranged from 6 to 19 (Table 10). The largest group of scores (42.2%) was one standard deviation below the established mean.

Table 10

PALS Factor 4 (N=45)

Score	N	%
19-21 (+2SD)	1	2.2
15-18 (+ 1SD)	13	28.8
14 Mean	5	11.1
13-10 (- 1SD)	19	42.2
9-7 (-2 SD)	5	11.1
6-3 (-3 SD)	2	4.4
Total	45	100

Note. SD = PALS Factor 4 normed standard deviation (3.6)

Factor 5 is composed of four question items focused on climate building (Conti, 1998). A high score indicates a preference for establishing a friendly and informal classroom atmosphere. To eliminate barriers the teacher encourages student to student relationship, uses errors as a natural part of learning and elements of risk-taking. A low score indicates a more task oriented environment with risk-taking and dialogue not encouraged. A more formal and structured environment would be implemented by teachers who scored low on this factor. Factor 5 has a normative mean of 16, with a standard deviation of 3.0 and a score range of 0 to 20. The teacher

education faculty had a mean of 16.4 and a score range of 7 to 20 (Table 11). Eighteen (62.2%) of the respondents scored at or one standard deviation above the mean.

Table 11

PALS Factor 5 (N=45)

Score	N	%
20-22 (+2SD)	3	6.6
17-19 (+ 1SD)	18	40.0
16 Mean	10	22.2
15-13 (- 1SD)	13	28.8
12-10 (-2 SD)	0	0.0
9-7 (-3 SD)	1	2.2
Total	45	100

Note. SD = PALS Factor 5 normed standard deviation (3.0)

Factor 6 is composed of four positive question items about the participation in the learning process (Conti, 1998). This factor focuses on the involvement of the student in determining the content of the material used and the evaluation method in a learning process. A high score indicates that students are involved in evaluating their own performance and determining the topics and types of materials used in the educational setting. A low score indicates an instructor who prefers a consistent fixed curriculum and evaluations with minimal student input. The normative mean of Factor 6 is 13 with a standard deviation of 3.5 and a score range of 0 to 20. The teacher educator group had a mean of 11.2 and a score range of 4 to 18 (Table 12). On this factor, one standard deviation below the mean was where the largest group of respondents (n=21, 46.6%) scored, which resulted a total of 72.6% of the group scoring below the mean.

Table 12

PALS Factor 6 (N=45)

Score	N	%
18-20 (+2SD)	1	2.2
14-17 (+ 1SD)	10	22.2
13 Mean	1	2.2
12-10 (- 1SD)	21	46.6
9-6 (-2 SD)	10	22.2
5-3 (-3 SD)	2	4.4
Total	45	100

Note. SD = PALS Factor 6 established standard deviation (3.5)

Factor 7 is made up of five negative question items regarding flexibility for personal development (Conti, 1998). A low score indicates a teacher who prefers to be the primary knowledge provider rather than a facilitator. They avoid discussion of value or controversial issues and have high regard for classroom discipline. A teacher who is likely to reject the concept of a rigid classroom has a high score and acts in the role of facilitator instead of the source of all knowledge, prefers flexibility, and is sensitive to the individual needs of the student. Factor 7 has a normative mean of 13, with a standard deviation of 3.9 and a score range of 0 to 25. The participants in this study had a score range of 1 to 19 with a mean of 12.2 (Table 13). The results from the group for this factor was a strong central tendency with 36 (80%) of the teacher educators scoring at the mean or one standard deviation above and below the mean.

Table 13

PALS Factor 7 (N=45)

Score	N	%
18-21 (+2SD)	2	4.4
14-17 (+ 1SD)	18	40.0
13 Mean	1	2.2
12-9 (- 1SD)	17	37.7
8-5 (-2 SD)	6	13.3
4-1 (-3 SD)	1	2.2
Total	45	100

Note. SD = PALS Factor 7 established standard deviation (3.9)

Research question two:

What is the relationship of the education philosophies and the demographic variables of the teacher education faculty?

Frequency distributions were used in this study to describe the educational philosophies and teaching styles profiles of the teacher education faculty. Frequency distributions are a basic method to present categorical data through tallying, charting or graphical representation of the frequency of each category's occurrence of scores, usually arranged by percentages, intervals, or ranges of numbers (Green & Salkind, 2008; Salkind, 2008). Frequencies can be used to depict qualitative data or categorical data with no quantitative meaning, such as gender, race, or teaching style. "Frequency distributions can also be used to describe a variable with ordinal, interval, or ratio data if the variable has a limited number of values" (Green & Salkind, 2008, p.139).

Eight variables of demographic data were obtained from the on-line survey completed by 45 the teacher education faculty members (Table 14). The majority of the participants were female (66.7%), between the ages of 56 to 65+ (55.6%), had between 11-20 years (44.2%) working in higher education and 9-15 years (42.2%) working for the university. Almost three-fourths (73.4%) of the participants held the rank of assistant professor or higher, with most (35.6%) holding the rank of assistant professor. The teacher educators predominantly (84.4%) worked within the College of Education. Of the 45 respondents 88.9% had previously been, or were currently, a teacher in a preschool, kindergarten through 12th grade (Pk-12) grade and 15.6% a Pk-12 administrator.

Table 14

Sample Population Demographic Variables (N=45)

Variable	*N*	%
Gender		
Female	30	66.7
Male	15	33.3
Total	45	100.0
Age		
20-30	1	2.2
31-35	2	4.4
36-40	3	6.7
41-45	5	11.1
46-50	4	8.9
51-56	5	11.1
61-65	10	22.2
65+	3	6.7
Total	45	100.0
Years in Higher Education		
Less than 2	4	8.9
2-5	7	15.6
6-10	8	17.8
11-15	9	20.0
16-20	10	22.2
21-24	2	4.4
25-30	5	11.1
Total	45	100.0
Years working at university		
Less than 2	5	11.1
2-5	6	13.3
6-10	11	24.4
11-15	13	28.9
16-20	5	11.1
21-24	3	6.7
25-30	2	4.4
Total	45	100.0
Academic Rank		
Part-time Instructor	4	8.9
Full-time Instructor	8	17.8
Assistant Professor	16	35.6
Associate Professor	10	22.2
Professor	7	15.6
Total	45	100.0
Assigned College		
Education	38	84.4
Liberal Arts	3	6.7
Sciences & Health	4	8.9
Total	45	100.0
Pk-12 Teaching Experience		
Yes	40	88.9
No	5	11.1
Total	45	100.0

Pk-12 Administration Experience		
Yes	7	15.6
No	38	84.4
Total	45	100.0

Relationship of Educational Philosophies and Demographic Variables

The relationship of the demographic variables and the educational philosophy of the teacher education was investigated using the PAEI instrument. Participants were grouped into six areas of educational philosophy. One-way analysis of variance (ANOVA) was used to compare means to see if there was sufficient evidence to infer "that the means of the corresponding population distributions also differ" (George & Mallery, 2006, p. 144). Using one-way ANOVA it was possible to have one continuous dependent variable and one categorical variable with several levels. Continuous data is based on quantitative variables "that exist on a continuum which ranges from low to high, or less to more" (Gay & Airasian, 2000, p. 150). Categorical data is based on variables that provide qualitative differences rather than quantitative information (Gay & Airasian, 2000). This type of analysis will help identify the likelihood that the mean of one group differed significantly from the mean of another group occurred by chance (George & Mallery, 2006).

There are many different types of ANOVA. Each type of ANOVA is used to analyze a particular situation where the relationships of the averages of groups are being compared. "The concept underlying ANOVA is that the total variation, or variance, of scores can be divided into two sources – treatment variance (variance between groups, caused by the treatment groups) and error variance (variance within groups)" (Gay & Airasian, 2000, p. 491). The technique separates the variance to determine if the variance is due to "difference between individuals within groups and variance due to differences between groups" (Salkind, 2008, p. 202). If there is one independent variable then it is considered a one-way ANOVA. A *t* test and one-way

ANOVA are very similar. They both compare differences between means; however, with ANOVA there is comparison of more than two means at a selected probability level (Gay & Airasian, 2000; Salkind, 2008). "The ANOVA formula (which is a ratio) compares the amount of variability between groups (which is due to the grouping factor) to the amount of variability within groups (which is due to chance)" (Salkind, 2008, p. 204).

A one-way ANOVA was an appropriate choice in this study to examine the amount of variability between demographics and categories of factors within the instruments. The use of one-way ANOVA presumes that there is one independent variable with two or more levels, that the levels of the independent variable exhaust the possible levels of interest to the researcher, that the levels of the independent variable differ either quantitatively or qualitatively and that a subject may appear in one and only one group or level of the independent variable (Shavelson, 1996). This study meets these presumptions about the data collection. In addition, the testing of the participants will not be repeated and there were more than two groups of data being examined.

There were 8 demographic variables and the PAEI instrument has five philosophy categories. The relationship of educational philosophy to demographic variables was investigated by using one-way ANOVA. The PAEI education philosophies were treated as the dependent variable and the demographics variables were treated as the independent variable. A separate one-way ANOVA was conducted for each of the independent demographic variables and were tested at the .05 significance level. Although all of the demographic variables for the survey were considered, statistically significant differences ($p < .05$) were found for only two variables, gender and Pk-12 teaching experience (Table 15, Table 16, Table 17 & Table 18).

Table 15

ANOVA PAEI & Gender (N=45)

		Sum of Squares	*df*	Mean Square	*F*	Sig.*
Radical	Between Groups	227.211	1	227.211	1.728	.196
	Within Groups	5653.767	43	131.483		
	Total	5880.978	44			
Behavioral	Between Groups	4.444	1	4.444	.072	.790
	Within Groups	2663.333	43	61.938		
	Total	2667.778	44			
Liberal	Between Groups	10.678	1	10.678	.128	.722
	Within Groups	3573.233	43	83.098		
	Total	3583.911	44			
Progressive	Between Groups	162.678	1	162.678	1.957	.169
	Within Groups	3574.300	43	83.123		
	Total	3736.978	44			
Humanistic	Between Groups	426.844	1	426.844	4.890	.032*
	Within Groups	3753.733	43	87.296		
	Total	4180.578	44			

* p <.05 level

Table 15 shows there was a statistically significant gender difference for humanistic philosophy ($F_{1,43} = 4.890$, $p = 0.032$). A statistically significant effect was also found for the liberal philosophy on Pk-12 teaching experience ($F_{1,43} = 6.848$, $p = 0.012$) at the p <.05 level.

Table 16

PAEI & Gender Descriptives (N=45)

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Radical	female	30	74.57	10.874	1.985	70.51	78.63	50	91
	male	15	69.80	12.605	3.255	62.82	76.78	51	94
	Total	45	72.98	11.561	1.723	69.50	76.45	50	94
Behavioral	female	30	80.00	8.804	1.607	76.71	83.29	55	98
	male	15	80.67	5.447	1.406	77.65	83.68	69	89
	Total	45	80.22	7.787	1.161	77.88	82.56	55	98
Liberal	female	30	75.50	9.892	1.806	71.81	79.19	55	93
	male	15	74.47	7.249	1.872	70.45	78.48	62	88
	Total	45	75.16	9.025	1.345	72.44	77.87	55	93
Progressive	female	30	87.37	9.129	1.667	83.96	90.78	55	97
	male	15	83.33	9.092	2.348	78.30	88.37	72	104
	Total	45	86.02	9.216	1.374	83.25	88.79	55	104
Humanistic	female	30	81.80	9.223	1.684	78.36	85.24	55	101
	male	15	75.27	9.588	2.476	69.96	80.58	61	94
	Total	45	79.62	9.747	1.453	76.69	82.55	55	101

Table 16 shows that out of 45 participants 30 females had a humanistic philosophy mean of 81.80 (*SD* 9.223) compared to 15 males with a mean of 75.27 (*SD* 9.588). Except for behavioral philosophy, the mean for females was higher mean than the mean for males.

Table 17
ANOVA PAEI & Pk-12 Teaching Experience (N=45)

		Sum of Squares	*df*	Mean Square	*F*	Sig.*
PAEI RAE	Between Groups	89.003	1	89.003	.661	.421
	Within Groups	5791.975	43	134.697		
	Total	5880.978	44			
PAEI BAE	Between Groups	177.803	1	177.803	3.071	.087
	Within Groups	2489.975	43	57.906		
	Total	2667.778	44			
PAEI LAE	Between Groups	492.336	1	492.336	6.848	.012*
	Within Groups	3091.575	43	71.897		
	Total	3583.911	44			
PAEI PAE	Between Groups	22.003	1	22.003	.255	.616
	Within Groups	3714.975	43	86.395		
	Total	3736.978	44			
PAEI HAE	Between Groups	31.803	1	31.803	.330	.569
	Within Groups	4148.775	43	96.483		
	Total	4180.578	44			

*p <.05 level

A statistically significant effect was found for the liberal philosophy on Pk-12 teaching experience ($F_{1,43} = 6.848$, $p = 0.012$) at the $p < .05$ level (Table18). A post hoc was not performed because there were fewer than three groups. This type of variable is known as a dichotomy with only two possible categories or values which "can be treated as though it were an interval-level measure and in some cases a ratio-level variable" (O'Brien, 2001).

Table 18
PAEI & Pk-12 Teaching Experience Descriptives (N=45)

				Std.	*Std.*	*95% Confidence Interval for Mean*			
		N	*Mean*	*Deviation*	*Error*	Lower Bound	Upper Bound	*Minimum*	*Maximum*
Radical	Yes	40	73.47	11.259	1.780	69.87	77.08	50	94
	No	5	69.00	14.560	6.512	50.92	87.08	51	84
	Total	45	72.98	11.561	1.723	69.50	76.45	50	94
Behavioral	Yes	40	80.93	7.859	1.243	78.41	83.44	55	98
	No	5	74.60	4.506	2.015	69.01	80.19	69	81
	Total	45	80.22	7.787	1.161	77.88	82.56	55	98

Liberal	Yes	40	76.33	8.480	1.341	73.61	79.04	55	93
	No	5	65.80	8.468	3.787	55.29	76.31	55	77
	Total	45	75.16	9.025	1.345	72.44	77.87	55	93
Progressive	Yes	40	85.78	9.582	1.515	82.71	88.84	55	104
	No	5	88.00	5.788	2.588	80.81	95.19	81	97
	Total	45	86.02	9.216	1.374	83.25	88.79	55	104
Humanistic	Yes	40	79.33	9.975	1.577	76.13	82.52	55	101
	No	5	82.00	8.185	3.661	71.84	92.16	69	89
	Total	45	79.62	9.747	1.453	76.69	82.55	55	101

Analysis of variance was also completed for the following demographic variables: academic rank, assigned college, professional P-12 experience as an administrator, length of employment at a higher education institution and length of employment at the university, and age. No statistically significant differences were discovered for these variables (Table 19).

Table 19
ANOVA PAEI and Non-Significant Demographic Variables (N = 45)

Variable		Sum of Squares	*df*	Mean Square	*F*	Sig.*
Age						
Radical	Between Groups	867.111	8	108.389	.778	.624
	Within Groups	5013.867	36	139.274		
	Total	5880.978	44			
Behavior	Between Groups	184.294	8	23.037	.334	.947
	Within Groups	2483.483	36	68.986		
	Total	2667.778	44			
Liberal	Between Groups	411.361	8	51.420	.583	.785
	Within Groups	3172.550	36	88.126		
	Total	3583.911	44			
Progressive	Between Groups	726.078	8	90.760	1.085	.395
	Within Groups	3010.900	36	83.636		
	Total	3736.978	44			
Humanistic	Between Groups	703.878	8	87.985	.911	.518
	Within Groups	3476.700	36	96.575		
	Total	4180.578	44			
College		Sum of Squares	*df*	Mean Square	*F*	Sig.
Radical	Between Groups	532.495	2	266.248	2.091	.136
	Within Groups	5348.482	42	127.345		
	Total	5880.978	44			
Behavior	Between Groups	196.032	2	98.016	1.665	.201
	Within Groups	2471.746	42	58.851		
	Total	2667.778	44			
Liberal	Between Groups	335.095	2	167.548	2.166	.127
	Within Groups	3248.816	42	77.353		
	Total	3583.911	44			
Progressive	Between Groups	116.754	2	58.377	.677	.513
	Within Groups	3620.224	42	86.196		

	Total	3736.978	44			
Humanistic	Between Groups	104.854	2	52.427	.540	.587
	Within Groups	4075.724	42	97.041		
	Total	4180.578	44			
Academic Rank		Sum of Squares	*df*	Mean Square	*F*	Sig.
Radical	Between Groups	395.596	4	98.899	.721	.583
	Within Groups	5485.382	40	137.135		
	Total	5880.978	44			
Behavior	Between Groups	101.838	4	25.460	.397	.810
	Within Groups	2565.939	40	64.148		
	Total	2667.778	44			
Liberal	Between Groups	300.333	4	75.083	.915	.465
	Within Groups	3283.579	40	82.089		
	Total	3583.911	44			
Progressive	Between Groups	164.013	4	41.003	.459	.765
	Within Groups	3572.964	40	89.324		
	Total	3736.978	44			
Humanistic	Between Groups	517.749	4	129.437	1.414	.247
	Within Groups	3662.829	40	91.571		
	Total	4180.578	44			
Years in Higher Education		Sum of Squares	*df*	Mean Square	*F*	Sig.
Radical	Between Groups	1231.094	7	175.871	1.399	.235
	Within Groups	4649.884	37	125.673		
	Total	5880.978	44			
Behavior	Between Groups	331.748	7	47.393	.751	.631
	Within Groups	2336.029	37	63.136		
	Total	2667.778	44			
Liberal	Between Groups	333.554	7	47.651	.542	.797
	Within Groups	3250.357	37	87.847		
	Total	3583.911	44			
Progressive	Between Groups	683.578	7	97.654	1.183	.336
	Within Groups	3053.400	37	82.524		
	Total	3736.978	44			
Humanistic	Between Groups	857.871	7	122.553	1.365	.249
	Within Groups	3322.707	37	89.803		
	Total	4180.578	44			
Years Teaching at University		Sum of Squares	*df*	Mean Square	*F*	Sig.
Radical	Between Groups	395.596	4	98.899	.721	.583
	Within Groups	5485.382	40	137.135		
	Total	5880.978	44			
Behavior	Between Groups	101.838	4	25.460	.397	.810
	Within Groups	2565.939	40	64.148		
	Total	2667.778	44			
Liberal	Between Groups	300.333	4	75.083	.915	.465
	Within Groups	3283.579	40	82.089		
	Total	3583.911	44			
Progressive	Between Groups	164.013	4	41.003	.459	.765
	Within Groups	3572.964	40	89.324		
	Total	3736.978	44			
Humanistic	Between Groups	517.749	4	129.437	1.414	.247
	Within Groups	3662.829	40	91.571		
	Total	4180.578	44			
Pk-12 Admin. Experience		Sum of Squares	*df*	Mean Square	*F*	Sig.

Radical	Between Groups	5.779	1	5.779	.042	.838
	Within Groups	5875.199	43	136.633		
	Total	5880.978	44			
Behavior	Between Groups	7.026	1	7.026	.114	.738
	Within Groups	2660.752	43	61.878		
	Total	2667.778	44			
Liberal	Between Groups	6.272	1	6.272	.075	.785
	Within Groups	3577.639	43	83.201		
	Total	3583.911	44			
Progressive	Between Groups	8.662	1	8.662	.100	.753
	Within Groups	3728.316	43	86.705		
	Total	3736.978	44			
Humanistic	Between Groups	39.890	1	39.890	.414	.523
	Within Groups	4140.688	43	96.295		
	Total	4180.578	44			

Research question three:

What is the relationship of teaching styles and the demographic variables of teacher education faculty?

The Principles of Adult Leaning Scale (PALS) was used to measure teaching styles of teacher educators who participated in this study. Eight demographic factors were collected from the respondents and the relationship to PALS was examined though the use of ANOVA. The relationship of the demographics was examined for the total PALS score and for each of the seven factors.

The same ANOVA demographic variable groupings as used for PAEI were used for the PALS analysis. The only demographic variable which resulted in statistical significance ($p < .05$) was found for the variable of age range and Factor 1 ($F_{8, 36} = 2.425$, $p = .033$), see Table 20. Learner-centered activities are the focus of Factor 1 (Conti, 2004). A post hoc was not conducted because at least one of the age range categories had fewer than two cases (20-30 years, $n = 1$) (Table 20).

Table 20
ANOVA PALS and Age Range (*N*=45)

		Sum of Squares	*df*	Mean Square	*F*	Sig. *
Total PAL	Between Groups	1.044	8	.131	.573	.793
	Within Groups	8.200	36	.228		
	Total	9.244	44			
Factor 1	Between Groups	899.746	8	112.468	2.425	.033*
	Within Groups	1669.554	36	46.377		
	Total	2569.300	44			
Factor 2	Between Groups	177.049	8	22.131	.673	.712
	Within Groups	1184.696	36	32.908		
	Total	1361.744	44			
Factor 3	Between Groups	131.694	8	16.462	.583	.785
	Within Groups	1016.083	36	28.225		
	Total	1147.778	44			
Factor 4	Between Groups	66.594	8	8.324	.761	.639
	Within Groups	393.983	36	10.944		
	Total	460.578	44			
Factor 5	Between Groups	18.357	8	2.295	.332	.948
	Within Groups	249.088	36	6.919		
	Total	267.444	44			
Factor 6	Between Groups	56.079	8	7.010	.742	.655
	Within Groups	340.221	36	9.451		
	Total	396.300	44			
Factor 7	Between Groups	112.746	8	14.093	1.029	.433
	Within Groups	493.054	36	13.696		
	Total	605.800	44			

Note: p <.05

Table 21
PALS Descriptives and Age Range

					95% Confidence Interval for Mean			
	Age	*N*	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Total PAL	20-30	1	1.00	.	.	.	.	1	1
	31-35	2	1.00	.000	.000	1.00	1.00	1	1
	36-40	3	1.33	.577	.333	-.10	2.77	1	2
	41-45	5	1.00	.000	.000	1.00	1.00	1	1
	46-50	4	1.25	.500	.250	.45	2.05	1	2
	51-56	5	1.20	.447	.200	.64	1.76	1	2
	56-60	12	1.42	.515	.149	1.09	1.74	1	2
	61-65	10	1.40	.516	.163	1.03	1.77	1	2
	65+	3	1.33	.577	.333	-.10	2.77	1	2
	Total	45	1.29	.458	.068	1.15	1.43	1	2
Factor 1	20-30	1	38.000	.	.	.	.	38.0	38.0
	31-35	2	34.000	8.4853	6.0000	-42.237	110.237	28.0	40.0
	36-40	3	44.000	1.7321	1.0000	39.697	48.303	42.0	45.0
	41-45	5	31.800	10.3779	4.6411	18.914	44.686	18.0	41.0
	46-50	4	30.375	1.2500	.6250	28.386	32.364	29.0	32.0
	51-56	5	39.800	4.3243	1.9339	34.431	45.169	35.0	46.0
	56-60	12	38.167	7.1202	2.0554	33.643	42.691	28.0	52.0

	61-65	10	41.300	6.8646	2.1708	36.389	46.211	33.0	53.0
	65+	3	46.500	7.0534	4.0723	28.978	64.022	40.0	54.0
	Total	45	38.400	7.6415	1.1391	36.104	40.696	18.0	54.0
Factor 2	20-30	1	23.000	.	.	.	.	23.0	23.0
	31-35	2	25.000	7.0711	5.0000	-38.531	88.531	20.0	30.0
	36-40	3	23.667	2.5166	1.4530	17.415	29.918	21.0	26.0
	41-45	5	24.900	1.5166	.6782	23.017	26.783	23.0	27.0
	46-50	4	29.875	5.8363	2.9182	20.588	39.162	21.5	35.0
	51-56	5	21.500	4.0620	1.8166	16.456	26.544	17.0	27.0
	56-60	12	25.583	6.4556	1.8636	21.482	29.685	15.0	34.0
	61-65	10	26.050	4.3745	1.3833	22.921	29.179	21.0	31.0
	65+	3	25.000	12.5300	7.2342	-6.126	56.126	13.0	38.0
	Total	45	25.289	5.5632	.8293	23.618	26.960	13.0	38.0
Factor 3	20-30	1	26.000	.	.	.	.	26.0	26.0
	31-35	2	20.000	4.2426	3.0000	-18.119	58.119	17.0	23.0
	36-40	3	21.000	5.1962	3.0000	8.092	33.908	15.0	24.0
	41-45	5	18.200	3.1145	1.3928	14.333	22.067	13.0	21.0
	46-50	4	23.250	3.5000	1.7500	17.681	28.819	19.0	27.0
	51-56	5	18.200	6.2510	2.7955	10.438	25.962	9.5	26.0
	56-60	12	21.667	6.3901	1.8447	17.607	25.727	6.0	30.0
	61-65	10	20.600	3.8644	1.2220	17.836	23.364	11.0	24.0
	65+	3	21.667	8.0208	4.6308	1.742	41.591	14.0	30.0
	Total	45	20.778	5.1074	.7614	19.243	22.312	6.0	30.0
Factor 4	20-30	1	9.00	.	.	.	.	9	9
	31-35	2	14.00	5.657	4.000	-36.82	64.82	10	18
	36-40	3	9.67	3.512	2.028	.94	18.39	6	13
	41-45	5	13.40	1.673	.748	11.32	15.48	11	15
	46-50	4	13.00	2.449	1.225	9.10	16.90	10	15
	51-56	5	12.60	3.912	1.749	7.74	17.46	7	18
	56-60	12	13.75	3.388	.978	11.60	15.90	9	19
	61-65	10	13.00	3.091	.978	10.79	15.21	6	18
	65+	3	11.33	4.163	2.404	.99	21.68	8	16
	Total	45	12.82	3.235	.482	11.85	13.79	6	19
Factor 5	20-30	1	16.000	.	.	.	.	16.0	16.0
	31-35	2	16.000	4.2426	3.0000	-22.119	54.119	13.0	19.0
	36-40	3	17.333	1.5275	.8819	13.539	21.128	16.0	19.0
	41-45	5	16.000	1.2247	.5477	14.479	17.521	15.0	18.0
	46-50	4	14.875	5.0724	2.5362	6.804	22.946	7.5	19.0
	51-56	5	17.000	3.0822	1.3784	13.173	20.827	13.0	20.0
	56-60	12	16.833	2.0375	.5882	15.539	18.128	13.0	19.0
	61-65	10	16.100	2.1318	.6741	14.575	17.625	13.0	19.0
	65+	3	16.667	3.0551	1.7638	9.078	24.256	14.0	20.0
	Total	45	16.389	2.4654	.3675	15.648	17.130	7.5	20.0
Factor 6	20-30	1	8.000	.	.	.	.	8.0	8.0
	31-35	2	14.500	3.5355	2.5000	-17.266	46.266	12.0	17.0
	36-40	3	11.333	.5774	.3333	9.899	12.768	11.0	12.0
	41-45	5	12.700	3.4928	1.5620	8.363	17.037	7.0	16.0
	46-50	4	9.625	3.6827	1.8414	3.765	15.485	5.5	14.0
	51-56	5	10.500	3.3912	1.5166	6.289	14.711	7.0	14.0
	56-60	12	11.333	2.5702	.7420	9.700	12.966	7.0	15.0
	61-65	10	11.100	1.5239	.4819	10.010	12.190	9.0	14.0
	65+	3	11.000	7.0000	4.0415	-6.389	28.389	4.0	18.0
	Total	45	11.233	3.0011	.4474	10.332	12.135	4.0	18.0
Factor 7	20-30	1	8.000	.	.	.	.	8.0	8.0
	31-35	2	10.500	6.3640	4.5000	-46.678	67.678	6.0	15.0
	36-40	3	15.000	4.0000	2.3094	5.063	24.937	11.0	19.0
	41-45	5	11.000	4.0000	1.7889	6.033	15.967	6.0	16.0
	46-50	4	8.875	5.8363	2.9182	-.412	18.162	1.0	15.0
	51-56	5	12.800	2.9496	1.3191	9.138	16.462	8.0	15.0

56-60	12	12.667	3.5248	1.0175	10.427	14.906	7.0	18.0
61-65	10	13.100	2.5582	.8090	11.270	14.930	9.0	17.0
65+	3	13.000	3.4641	2.0000	4.395	21.605	11.0	17.0
Total	45	12.233	3.7106	.5531	11.119	13.348	1.0	19.0

Analysis of variance was also completed for the following demographic variables: gender, years working in higher education, years teaching at the university, academic rank, assigned college, professional Pk-12 experience as a teacher, and professional Pk-12 experience as an administrator. No statistically significant differences ($p < .05$) were discovered for these variables (Table 22).

Table 22

ANOVA PALS Non-Significant Demographic variable (N = 45)

		Sum of Squares	*df*	Mean Square	*F*	Sig.
Gender						
Total PALS	Between Groups	.178	1	.178	.843	.364
	Within Groups	9.067	43	.211		
	Total	9.244	44			
Factor 1	Between Groups	67.600	1	67.600	1.162	.287
	Within Groups	2501.700	43	58.179		
	Total	2569.300	44			
Factor 2	Between Groups	4.669	1	4.669	.148	.702
	Within Groups	1357.075	43	31.560		
	Total	1361.744	44			
Factor 3	Between Groups	53.669	1	53.669	2.109	.154
	Within Groups	1094.108	43	25.444		
	Total	1147.778	44			
Factor 4	Between Groups	2.844	1	2.844	.267	.608
	Within Groups	457.733	43	10.645		
	Total	460.578	44			
Factor 5	Between Groups	.003	1	.003	.000	.983
	Within Groups	267.442	43	6.220		
	Total	267.444	44			
Factor 6	Between Groups	12.100	1	12.100	1.354	.251
	Within Groups	384.200	43	8.935		
	Total	396.300	44			
Factor 7	Between Groups	.400	1	.400	.028	.867
	Within Groups	605.400	43	14.079		
	Total	605.800	44			
College		Sum of Squares	*df*	Mean Square	*F*	Sig.
Factor 1	Between Groups	91.484	2	45.742	.775	.467
	Within Groups	2477.816	42	58.996		
	Total	2569.300	44			
Factor 2	Between Groups	45.419	2	22.709	.725	.490
	Within Groups	1316.326	42	31.341		
	Total	1361.744	44			
Factor 3	Between Groups	21.449	2	10.724	.400	.673
	Within Groups	1126.329	42	26.817		

	Total	1147.778	44			
Factor 4	Between Groups	8.775	2	4.388	.408	.668
	Within Groups	451.803	42	10.757		
	Total	460.578	44			
Factor 5	Between Groups	5.429	2	2.715	.435	.650
	Within Groups	262.015	42	6.238		
	Total	267.444	44			
Factor 6	Between Groups	29.662	2	14.831	1.699	.195
	Within Groups	366.638	42	8.729		
	Total	396.300	44			
Factor 7	Between Groups	4.666	2	2.333	.163	.850
	Within Groups	601.134	42	14.313		
	Total	605.800	44			

Academic Rank		Sum of Squares	*df*	Mean Square	*F*	Sig.
Factor 1	Between Groups	101.892	4	25.473	.413	.798
	Within Groups	2467.408	40	61.685		
	Total	2569.300	44			
Factor 2	Between Groups	21.863	4	5.466	.163	.956
	Within Groups	1339.882	40	33.497		
	Total	1361.744	44			
Factor 3	Between Groups	39.711	4	9.928	.358	.837
	Within Groups	1108.067	40	27.702		
	Total	1147.778	44			
Factor 4	Between Groups	31.862	4	7.965	.743	.568
	Within Groups	428.716	40	10.718		
	Total	460.578	44			
Factor 5	Between Groups	13.626	4	3.406	.537	.709
	Within Groups	253.819	40	6.345		
	Total	267.444	44			
Factor 6	Between Groups	4.437	4	1.109	.113	.977
	Within Groups	391.863	40	9.797		
	Total	396.300	44			
Factor 7	Between Groups	47.534	4	11.883	.851	.501
	Within Groups	558.266	40	13.957		
	Total	605.800	44			

Years In Higher Ed		Sum of Squares	*df*	Mean Square	*F*	Sig.
Factor 1	Between Groups	188.246	7	26.892	.418	.885
	Within Groups	2381.054	37	64.353		
	Total	2569.300	44			
Factor 2	Between Groups	77.119	7	11.017	.317	.941
	Within Groups	1284.625	37	34.720		
	Total	1361.744	44			
Factor 3	Between Groups	160.083	7	22.869	.857	.549
	Within Groups	987.695	37	26.694		
	Total	1147.778	44			
Factor 4	Between Groups	73.413	7	10.488	1.002	.445
	Within Groups	387.164	37	10.464		
	Total	460.578	44			
Factor 5	Between Groups	36.812	7	5.259	.844	.559
	Within Groups	230.632	37	6.233		
	Total	267.444	44			
Factor 6	Between Groups	37.701	7	5.386	.556	.786
	Within Groups	358.599	37	9.692		
	Total	396.300	44			
Factor 7	Between Groups	76.883	7	10.983	.768	.617

	Within Groups	528.917	37	14.295		
	Total	605.800	44			
Years Teaching At University		Sum of Squares	*df*	Mean Square	*F*	Sig.
Factor 1	Between Groups	330.231	7	47.176	.780	.608
	Within Groups	2239.069	37	60.515		
	Total	2569.300	44			
Factor 2	Between Groups	169.159	7	24.166	.750	.632
	Within Groups	1192.585	37	32.232		
	Total	1361.744	44			
Factor 3	Between Groups	36.475	7	5.211	.173	.989
	Within Groups	1111.303	37	30.035		
	Total	1147.778	44			
Factor 4	Between Groups	91.321	7	13.046	1.307	.274
	Within Groups	369.256	37	9.980		
	Total	460.578	44			
Factor 5	Between Groups	27.034	7	3.862	.594	.756
	Within Groups	240.410	37	6.498		
	Total	267.444	44			
Factor 6	Between Groups	51.625	7	7.375	.792	.599
	Within Groups	344.675	37	9.316		
	Total	396.300	44			
Factor 7	Between Groups	62.869	7	8.981	.612	.742
	Within Groups	542.931	37	14.674		
	Total	605.800	44			
Pk-12 Teaching Experience		Sum of Squares	*df*	Mean Square	*F*	Sig.
Factor 1	Between Groups	8.100	1	8.100	.136	.714
	Within Groups	2561.200	43	59.563		
	Total	2569.300	44			
Factor 2	Between Groups	3.501	1	3.501	.111	.741
	Within Groups	1358.244	43	31.587		
	Total	1361.744	44			
Factor 3	Between Groups	98.178	1	98.178	4.022	.051
	Within Groups	1049.600	43	24.409		
	Total	1147.778	44			
Factor 4	Between Groups	.178	1	.178	.017	.898
	Within Groups	460.400	43	10.707		
	Total	460.578	44			
Factor 5	Between Groups	.201	1	.201	.032	.858
	Within Groups	267.244	43	6.215		
	Total	267.444	44			
Factor 6	Between Groups	13.225	1	13.225	1.485	.230
	Within Groups	383.075	43	8.909		
	Total	396.300	44			
Factor 7	Between Groups	17.556	1	17.556	1.283	.264
	Within Groups	588.244	43	13.680		
	Total	605.800	44			

Note: $p < .05$

Research question four:

What is the relationship between the education philosophies and teaching styles of the teacher education faculty?

Chi-square analysis was used to examine the relationship between educational philosophies and teaching styles. Because the sample size for this study was under 50 (N= 45) and in most areas did not represent a normal distribution, Chi-square was a valuable nonparametric statistical analysis to analyze the relationship between PAEI and PALS. "Chi-square is an interesting nonparametric test that allows you to determine if what you observe in a distribution of frequencies would be what you expect to occur by chance" (Salkind, 2008, p. 263). It is a nonparametric test of significance in which a test of association between variables can be performed, also called test of independence (George & Mallery, 2006). This statistical analysis will help identify the likelihood if the observed values, from the results of PAEI and PALS instruments, differed significantly from expected values and if the difference occurred by chance (George & Mallery, 2006). The expected distribution is usually the frequencies that would be expected if the groups were equal. If there is a large discrepancy between observed values and expected values the chi-squared statistic will be large. This discrepancy suggests a significant difference between the observed and expected values (Lund & Lund, 2012a).

Along with the Chi-square statistic the probability value must be established (Gay & Airasian, 2000). "With $p < .05$, it is commonly accepted that the observed values differ significantly from the expected values and that the two variables are NOT independent of each other" (George & Mallery, 2006, p. 107).

In this study, the contingency Chi-square statistic compared the categorical responses between the teaching styles of learner-centered and teacher-centered from the PALS data, to

highest ranked preferred philosophy for each respondent from the PAEI data. Chi Square tests can only be used on actual numbers and not on percentages, proportions, or means (George & Mallery, 2006). More specifically, it tests for the association, also known as independence, between two nominal/dichotomous variables (Lund & Lund, 2012a). Based on the total PALS score, the teaching style for each respondent was labeled with a 1 for teacher-centered and a 2 for learner-centered. Based on the total PAEI score, the highest ranked philosophy of each respondent was labeled as their dominant philosophy. The following numeric labels were assigned to the philosophies: liberal – 1, behavioral – 2, progressive – 3, humanistic – 4, radical – 5 and mixed philosophy – 6 (multiple identical high philosophy scores). Using the contingency Chi-square for PALS statistical differences ($p < .05$) were found between the expected and observed distributions of PALS teaching styles ($X^2 = 8.022$, df =1, $p = .005$) or for PAEI philosophies ($X^2 = 32.889$, df =4, $p = .000$). There were not equal numbers of teacher educators in each group of teaching styles or in each group of philosophy. If there was no statistical difference among the teaching styles or among the philosophies it would be expected that the same number of teacher educators would be equal among each of these groups, thus each teaching style and each philosophy would be expected to have an equal number of participants.

To determine the relationships between the two teaching styles of learner-centered and teacher-centered from PALS data with the five philosophies from PAEI data, a Chi-square Test of Independence was conducted to determine whether the variables were statically independent or associated. Crosstabs were run comparing learner-centered and teacher-centered teaching style with the five philosophies (Table 23). Radical philosophy was not included because it was not a preferred philosophy by any of the teacher educators. The teacher-centered makes up the majority (71%) of the group. Of the 53 percent who had a progressive philosophy, 15

respondents (33%) had a teacher-centered teaching style and while only 9 (20%) respondents a learner-centered teaching style (Table 23).

Table 23
Chi-square PAEI Philosophy and PALS Teaching Style Cross Tabulation

			PALS		
			Teacher-Centered	Learner-Centered	Total
PAEI	Liberal	Count	3	0	3
		Expected Count	2.1	.9	3.0
		% within PAEIRATING	100.0%	.0%	100.0%
		% within PALRATING	9.4%	.0%	6.7%
		% of Total	6.7%	.0%	6.7%
	Behavioral	Count	3	1	4
		Expected Count	2.8	1.2	4.0
		% within PAEIRATING	75.0%	25.0%	100.0%
		% within PALRATING	9.4%	7.7%	8.9%
		% of Total	6.7%	2.2%	8.9%
	Progressive	Count	15	9	24
		Expected Count	17.1	6.9	24.0
		% within PAEIRATING	62.5%	37.5%	100.0%
		% within PALRATING	46.9%	69.2%	53.3%
		% of Total	33.3%	20.0%	53.3%
	Humanistic	Count	6	2	8
		Expected Count	5.7	2.3	8.0
		% within PAEIRATING	75.0%	25.0%	100.0%
		% within PALRATING	18.8%	15.4%	17.8%
		% of Total	13.3%	4.4%	17.8%
	Mixed	Count	5	1	6
		Expected Count	4.3	1.7	6.0
		% within PAEIRATING	83.3%	16.7%	100.0%
		% within PALRATING	15.6%	7.7%	13.3%
		% of Total	11.1%	2.2%	13.3%
Total		Count	32	13	45
		Expected Count	32.0	13.0	45.0
		% within PAEIRATING	71.1%	28.9%	100.0%
		% within PALRATING	100.0%	100.0%	100.0%
		% of Total	71.1%	28.9%	100.0%

Note: Radical philosophy was not included because it was not a preferred philosophy by the teacher education faculty.

The Chi-square test of Independence was conducted at a .05 criterion level between philosophy and teaching styles (Table 24). Based on the theoretical relationship between teaching style and philosophy (Elias & Merriam, 1995; Conti, 2007) no association for Chi-square for this study was that there was no association between philosophy and teaching style. There was no statistically significant association between philosophy and teaching styles (X^2

=.2.610, df =1, p = .625). Although this is not a viable Chi-square test, and thus was not required, this researcher was none-the-less interested in examining this data.

Table 24
Chi-square PAEI Philosophy and PALS Teaching Style

	Value	*df*	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.610[a]	4	.625
Likelihood Ratio	3.446	4	.486
Linear-by-Linear Association	.025	1	.873
N of Valid Cases	45		

Note: p <.05. 7 cells (70.0%) have expected count less than 5. The minimum expected count is .87.

Research question five:

To what degree are the education philosophy and teaching styles of the University teacher education faculty similar to the stated education philosophy and preferred teaching style of University's College of Education?

College of Education's mission statement, Conceptual Framework, and General Competencies for Licensure and Certification rubrics assert their ideals and principles for best practices with language and expectations which can be found in beliefs based on humanistic and progressive philosophies of education. The dominant educational philosophy was progressive with 53 percent the teacher education faculty at this university ranking this philosophy as their preferred belief. The humanistic philosophy was the dominant philosophy for 17 percent of the teacher education faculty. Behavioral philosophy had 8.9 percent support and the liberal philosophy had 6.7 percent support. Several of the faculty (13%) did not have a single dominant philosophy and instead had a mixed philosophy of two or more. The radical philosophy was not a dominant philosophy for any of the teacher educators.

Analysis of the COE documents demonstrated promotion of a learner-centered teaching style. The majority of the teacher education faculty (71%) were identified with a support for teacher-centered teaching style. Of this majority, most had a mild support for teacher-centered,

as evidenced by the scores falling close to the normed mean (-1 *SD* = 48.9%) on the Principles of Adult Learning Scale. Only a very small number of faculty (*n* = 2) scored the extreme commitment range for teacher-centered. Of the teacher education faculty only 26.6 percent of the scores demonstrated a preference for the learner-centered teaching style and the greater part of this group (22.2%) scored one standard deviation above the normed mean with the rest (4.4%) scoring two standard deviations above the mean.

CHAPTER V

CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

The purpose of this chapter is to present a discussion of the findings from this study. Initially, the first four chapters of this study are summarized. The key conclusions related to each of the five research questions are presented. A discussion of the results from this study for education philosophy and teaching style of the teacher educators at Newton State University are presented in the next section, along with recommendations for future research in this area. Newton State University(NSU) is a fictional name to represent the university where the study occurred. The chapter ends with concluding remarks concerning the significance of the study. The following research questions guided this study:

1. What are the education philosophies and teaching styles of the university's teacher education faculty?
2. What is the relationship of the education philosophies and the demographic variables of the teacher education faculty?
3. What is the relationship of teaching styles and the demographic variables of teacher education faculty?
4. What is the relationship between the education philosophies and teaching styles of the teacher education faculty?
5. To what degree are the education philosophy and teaching styles of the university teacher education faculty similar to the stated education philosophy and preferred teaching style of the university's College of Education?

Summary of the Study

The purpose of this descriptive quantitative study was to determine the educational philosophy and teaching style of teacher educators at NSU and to compare this to the preferred educational philosophy and teaching style of NSU's College of Education (COE). Newton State University is a fictional name used to protect the identity of the university where the study took place. The 122 teacher education faculty at NSU were asked via e-mail to participate in an on-line survey. Teacher education faculty included part-time and full-time faculty who taught undergraduate and graduate education courses in the College of Education, the College of Liberal Arts and the College of Science and Health at NSU. The e-mail was sent twice to the faculty by the researcher and sent out once more by two department heads to the teacher education faculty in their department. Forty-five faculty completed the on-line survey. Educational philosophy was measured by using the Philosophy of Adult Education Inventory (PAEI). Teaching style was measured by using the Principles of Adult Learning Scale (PALS). The variables of education philosophy and teaching style were examined in relationship to the demographics of gender, age, academic rank, assigned college at NSU, years working in higher education, years teaching NSU, Pk-12 teaching experience and Pk-12 administration experience. COE documents were examined and analyzed to determine the stated preferred philosophy and teaching style preference. The COE stated educational philosophy is progressivism and the stated teaching style preference is learner-centered.

Findings for Research Question 1

Research question one asks: What are the education philosophies and teaching styles of the university's teacher education faculty? The following are a list of the findings with regard to this research question.

Slightly more than half of the teacher education faculty (53%) had a dominant educational philosophy preference for progressive. The second most dominant philosophy among the respondents was humanistic (17%). Several of the faculty (13%) did not have a single dominant philosophy and instead had a mixed philosophy of two or more. The radical philosophy was not a dominant philosophy for any of the teacher educators. The dominant philosophy was determined by comparing each respondent's raw scores for the five philosophies: liberal, radical, behavioral, progressive and humanistic. The philosophy with the highest score represented the one most like the respondent's beliefs, while the respondent's lowest score reflected a philosophy which was least like the respondent's beliefs.

When considering the raw scores of all the philosophies, rather than the most dominant philosophy for each respondent, it was apparent that the teacher educators were in agreement with all of the philosophies, except the radical philosophy. There were three philosophies, humanistic (71%), behavioral (77.5%), and progressive (86.6%), which had raw scores in the higher range of the PAEI. Both individually and as a group, there was a strong commitment to the progressive philosophy from the majority of the teacher educators.

There was evident support for the teacher-centered style of instruction. The majority of the teacher education faculty (71%) were identified with a support for teacher-centered teaching style. Of this majority, most had only a mild of support for teacher-centered, as evidenced by the majority of the scores falling close to the normed mean on PALS scores. Only a very small number of faculty (4) scored in the extreme commitment range for either teaching style.

The total PALS score describes a general teaching style and is useful in providing a general label for the instructor's teaching style; however it does not identify the specific behaviors and beliefs the teacher may use in the classroom that represents this style (Conti,

1998). There are seven factors which provide more detail concerning the group's behaviors and beliefs that make up the total PALS scores. The teacher educator group scored at or one standard deviation above and below the normed mean for PALS Factor 3, 4, 5 and 7. Since most of the faculty fell immediately above and below the normed mean for these factors, this indicates that the majority of the group did not have a strong determination either for or against the characteristics in these factors. The scores for Factor 2 and Factor 6 fell below the normed mean. Scoring below the normed mean for Factor 2 indicates such teacher-centered characteristics as emphasis on the class majority, completion of goals, and less emphasis on the individual student. The low scores on Factor 6 indicated the majority of the teacher educator group preferred teacher-centered characteristics concerning academic requirements and are less likely to allow student input in assessment and curriculum. Learner-centered characteristics are the focus in Factor 1. The teacher education group was split above and below the normed mean with 48.8 percent of the faculty falling between one to three standard deviations below the normed mean and 44 percent falling between one to two standard deviations above the normed mean. Scores above the normed mean indicated favoring the characteristics for learner-centered teaching and scores below the mean indicated favoring teacher-centered characteristics (Conti, 1998).

Findings for Research Question 2

Research question two asks: What is the relationship of the education philosophies and the demographic variables of the teacher education faculty? The following are a list of the findings with regard to this research question.

Eight variables of demographic data were obtained from the on-line survey completed by 45 teacher education faculty members. It was not unexpected that most of the respondents were faculty in the College of Education (84.4%), between the ages of 56 to 65+ (55.6%), and were

female (66%) since this fit the demographic of the teacher educator population at NSU. Almost three-fourths (73.4%) of the participants held the rank of assistant professor or higher. The largest group (35.6%) had the rank of assistant professor and the smallest group (8.9%) were part-time instructors. There were 44.2 percent of the teacher education faculty who had between 11-20 years working in higher education and 53.3 percent who had between 6-15 years working for the university. Of the 45 respondents 88.9% had previously been, or were currently, a teacher of preschool, kindergarten through 12th grade (Pk-12) grade; however only 15.6% had previously been, or were currently, a Pk-12 administrator.

The demographic variables of gender and Pk-12 teaching experience were the only two demographic variables which had a statistically significant relationship with philosophy ($p <$ .05). The statistically significant effect of gender was for the humanistic philosophy. Except for behavioral philosophy, the mean score for philosophy among females was higher than the mean for males. The greatest difference was between female scores and male means scores for humanistic philosophy.

A statistically significant effect was found for the liberal philosophy on Pk-12 teaching experience. Based on the findings females scored higher on humanistic philosophy on the PAEI than males. There was also evidence that those who have taught in any grade preschool through 12th were more likely to score higher on the liberal philosophy

No statistically significant differences (p= .05) were discovered for the following demographic variables: academic rank, assigned college, professional P-12 experience as an administrator, length of employment at a higher education institution, length of employment at the university, or age.

Findings for Research Question 3

Research question three asks: What is the relationship of teaching styles and the demographic variables of teacher education faculty? The following are a list of the findings with regard to this research question.

The only demographic variable which resulted in statistical significance ($p < .05$) was found for the variable of age range and Factor 1 concerning learning-centered teaching characteristics; however, merit of the statistical significance could be confounded by the small sample size.

No statistical significant differences ($p < .05$) were discovered for the following demographic variables: gender, years working in higher education, years teaching at the university, academic rank, assigned college, professional Pk-12 experience as a teacher, or professional Pk-12 experience as an administrator.

Findings for Research Question 4

Research question four asks: What are the relationships between the education philosophies and teaching styles of the teacher education faculty? The following are a list of the findings with regard to this research question.

Overall there was no statistically significant association ($p <.05$) between philosophy and teaching styles, thus the philosophies and teaching styles were independent and there was no association between philosophy and teaching style.

Of the dominant progressive philosophy, more than half of the teacher educators (62%) had a teacher-centered teaching style.

Findings for Research Question 5

Research question five asks: To what degree are the education philosophy and teaching styles of the university teacher education faculty similar to the stated education philosophy and preferred teaching style of university's College of Education? The following are a list of the findings with regard to this research question.

College of Education asserts ideals and principles based on humanistic and progressive philosophies of education. The dominant educational philosophy among the teacher education faculty was progressive. To a lesser degree the humanistic philosophy and behavioral philosophy were favored by teacher education faculty. Several faculty did not have a single dominant philosophy and instead had a mixed philosophy of two or more. The radical philosophy was not an individual dominant philosophy for any of the teacher educators.

The COE favors a learner-centered teaching style. Among the teacher education faculty there was clear support for the teacher-centered style of instruction. Most of these faculty had a moderate support for teacher-centered teaching style and a very small number of these faculty had a strong commitment to teacher-centered. Of the smaller percentage of teacher education faculty who supported the learner-centered teaching style, most had a moderate support.

Limitations and Delimitations

Like most research studies, this study had limitations. The conclusions may be affected by particular limitations of this study. Although the 45 participants in this study are a good representation of the demographics of the total 122 teacher educators at this university, the sample size most likely has limited the results. A small sample size can affect the assumptions of normal distribution and have effects upon statistical significance (Green & Salkind, 2008). The investigator of this study believes that the results might have yielded different findings if a

greater number of the population had participated. With a small sample number of 45 was it was unlikely to have a normal distribution. If another researcher does a similar study it is recommended to have a larger enough sample so the assumption of normal distribution will more likely be met.

The investigator delimited the study to include only the teacher education faculty at a single university. Consequently, the study's findings are not generalizable to other faculty at this university or to faculty at other universities. Including teacher education faculty from other universities could have impacted the results of the study, as those excluded might have had different demographics, philosophy and teaching style preferences.

The results were delimited to the timeframe of the study. The data for this study was gathered in late February 2012. After the e-mails were sent to the teacher education faculty requesting their participation in the study, the investigator received three e-mails from faculty indicating they were interested in participating in the study but were too busy at that point in the semester to make the time to take the on-line survey. Without implying that the sixth week of the spring semester played a role in the response rate, the teacher education faculty could have been busier at this point in the semester than during the first few weeks of the semester. Additionally if the time needed to complete the survey was less than the stated 20 minutes, results might have yielded a bigger response rate than the 36.8 percent response rate achieved. Web-site data from the on-line survey indicated there were 26 blank responses. Most likely these blank surveys resulted from faculty activating the web-site link embedded in the email and then deciding not to take the survey. The on-line survey opened and was activated automatically upon clicking on the web-site link embedded in the e-mail. For unknown reasons after the faculty activated the web-site link, 26 did not answer any of the questions. It is unknown if those faculty returned to

complete the survey at another time since there was no identifying data collected. With an alpha level of .05, a 5 percent margin of error and a population of 122, the appropriate response rate for the findings of this study to have a strong effect was found to be 93 participants (76.2 %). The investigator accepted the delimitation that collecting that number of responses might be challenging.

Another potential limitation of this study is that the investigator of this study is a teacher education faculty at this university. While this may provide some bias, it also provided the investigator insight into the research design and theoretical framework for the study.

Conclusions

The following conclusions are based on the findings from this study concerning the teacher education faculty sample from the Newton State University.

Conclusion 1. The majority of teacher education faculty favor the progressive educational philosophy and have a preference for the teacher-centered teaching style.

Conclusion 2. There is dissonance between the dominant educational philosophy of progressive and the preferred teaching style of teacher-centered.

Conclusion 3. The humanistic education philosophy and behavioral philosophy are supported to a lesser degree than the progressive philosophy by the teacher education faculty.

Conclusion 4. Liberal and radical education philosophies do not have much support amongst the teacher education faculty.

Conclusion 5. Those who support the learner-centered teaching style are not strongly committed to it.

Conclusion 6. The female teacher educators have a stronger support of humanistic philosophy than males.

Conclusion 7. Teacher educators who taught Pk-12th grade are more likely to favor liberal philosophy.

Conclusion 8. With the exception of gender and Pk-12th grade teaching , the teacher education faculty demographic variables have no statistically significant relationship to their philosophy or teaching style.

Coclusion 9. The educational philosophy of the COE and the teacher education faculty are congruent.

Conclusion 10. There is dissonance between the teaching style preference of the COE and the teacher education faculty.

Discussion

An educational philosophy and teaching style provide a foundation for understanding and effective analysis of teaching and for guiding professional practice (Conti, 1982; Conti, 2007; Elias & Merrium, 1995; Graham & Havlick, 2005; Kauchak & Eggen, 2002). Teaching style is directly related and guided by a teacher's educational philosophy (Elias & Merium, 1995; Zinn, 1983, 2004). Teacher-centered teaching styles are reported to be consistent with philosophies of liberal and behavioralism, while the learner-centered style is reported to be consistent with the philosophies of progressivism, humanistic and radical (Elias & Merriam, 1995; Conti, 2007). The conclusions of this study do not support previous research based assumptions because the faculty in this survey favored a progressive philosophy, yet they prefer a teacher-centered teaching style.

The majority of the teacher educators in this study were found to prefer the progressive philosophy, and to a lesser extent the humanistic philosophy. Progressivism is associated with the concepts of constructivist teaching, inquiry learning and the learner-centered teaching style (Kauchak & Eggen, 2005).Progressivism is associated with pragmatic educators such as John Dewey and John Goodlad (Kauchak & Eggen, 2005; Ozman & Craver, 2007). In this study a lesser number of the teacher education faculty agreed with the humanistic philosophy. Teachers with a humanistic philosophy seek to promote self-understanding and to encourage the learner to grow through awareness of options (Conti, 2007). Interestingly the females in this study were stonger supporters of the humanistic philosophy than the males. Nevertheless, for both males and

females the preferred teaching style was not a match with either progressivism or humanistic philosophies. This may indicate a conflict between the philosophical beliefs of the teacher educators and their preferred teaching style.

One other philosophy which was favored just slightly less than humanism was behavioralism. It has been reported that teachers with this philosophy tend to view their role as that of a manager and controller of the learning environment through competency-based behavioral objectives, feedback and reinforcement (OBrien, 2001; Zinn, 2004). It is interesting to note that although behaviorism was not the dominant philosophy in this study, it was more closely associated with the teacher educator's preference for the teacher-centered teaching style. This is in contrast to previous research because behaviorism is associated with a learner-centered teaching style (Conti, 2007).

The findings for this study provided evidence that although there was an indicated preference for teacher-centered teaching style, except for a very few respondents, the majority did not have a definite compelling predilection for either teaching style. Both the majority of the learner-centered group and the majority of the teacher-centered group had the largest portion of their scores very close to the normed mean which indicated a moderate commitment. The moderate commitment could explain the reason why the philosophical beliefs do not match with the preferred teaching style. The liberal and radical philosophies are the extreme philosophies on the spectrum between teacher-centered to learner-centered. This could be why philosophy means of the group for these two philosophies were the lowest. It appears that the demographics, with the exception of gender and Pk-12th teaching experience, had no effect on the philosophy and teaching style preferences. There are several reasons which could explain the mismatch between preferred philosophy and teaching style.

It is possible that the teacher educators in this study had a lack of awareness of their teaching philosophy or inconsistency in commitment. An educator's philosophy is a "compilation of one's beliefs, values and attitudes" (Heimlich & Norland, 1994, p. 38). If an educator is not aware of their philosophy, or is aware but not consistent, then decisions are likely to be based upon routines, conventions or trends, rather than on congruence and consistency with beliefs and actions (Heimlich & Norland, 1994). Educators who are not aware of, or not committed to, their beliefs and ideologies are not able to espouse their values and assumptions, make justifications for curriculum, or defend their stance in the professional or political arena (Elias & Merriam, 1995; Galbraith, 2004; Heimlich & Norland, 1994). A lack of awareness , or inconsistency in commitment, to their ideology could be a possible explanation for those in this study who had mixed philosophies, or for the high number of responses which were in positive agreement with three of the five philosophies.

The findings that the teacher education faculty prefer philosophies which support learner-centered teaching (progressive and humanistic), yet their preference was for teacher-centered teaching, may indicate that they believe in, but are not utilizing, the concepts of learner-centered teaching styles. It is possible, however, that the teacher-centered teaching style is an actualized expression of the true philosophical beliefs, however knowing what the COE's preference for progressive philosophy, the majority of teacher educators could have selected options on the PAEI which support that philosophy. If there is true incongruence between their actual educational philosophy beliefs and their preference for teaching style tension would disrupt the connection for their philosophy to a guide actions and attitudes. One's philosophy serves as "the system used to guide decision making in the practical world" (Heimlich & Norland, 1994, p. 38). If one's teaching style is not supported by a congruent philosophy can result in "inconsistency in

word and deed" (Heimlich & Norland, 1994, p. 38). It is never flattering for a professional to be told "if you're going to talk the talk, you've got to walk the walk" (Martin, 2012, Meanings, para. 1).

Other possible explanations for the mismatch between preferred philosophy and teaching styles could be due to the type of training that most teacher educators may have received or due to the PK-12 academic environment for those who were current or former Pk-12 teachers. Most of the teacher educators in this study had previous experience teaching in one or more grades in a Pk-12th grade school. In most preschool, elementary and secondary schools there is a culture of a traditional, teacher-centered, Pk-12 academic environment (Darling-Hammond, 2010). The teacher educators in this study with Pk-12 teaching experience were found to more likely favor the liberal philosophy, which is reported to be associated with the teacher-centered teaching style (Conti, 2004). This result may be due to the traditional nature of most Pk-12 teacher-centered classrooms. The previous Pk-12 teaching experiences of the faculty may have predisposed them towards utilizing teacher-centered pedagogical teaching practices in their higher education classrooms. In addition, most teacher educators receive teacher-centered pedagogical based training and have a lack of training in adult andragogy concepts (Rieg &Wilson, 2009). When Pk-12 teachers move into teaching higher education classes they might consider that their previous teaching experience removes the need to learn about teaching adult students. Unlike faculty who teach in other disciplines, teacher educators have established teaching routines and a teaching style which may delude them into thinking they don't need further training in effective strategies for teaching in higher education (Darling-Hamond, 2010; Rieg &Wilson, 2009).

Many teacher educators and teacher education programs want their pre-service teacher candidates to understand the principles of pedagogy; however, instead of treating their students

as adult learners, teacher-centered pedagogical teaching methods are often employed (Foster, 2006; Hewett, 2003; Rieg &Wilson, 2009). A strengthened awareness and knowledge about andragogy may assist the teacher education faculty to have a wider realm of best practice adult teaching methods. Although one's teaching style is more involved than simply the teacher-learner exchange, it does include several important areas of knowledge, including principles and practices and application of teaching methods (Galbraith, 2004). It is possible that if the teacher education faculty were provided with multiple types of training which support andragogical learner-centered teaching practices then there might be a stronger commitment to learner-centered teaching styles. Regardless of which teaching style the faculty implement, when teachers are able to match their teaching philosophies with their actions, which are reflected in their teaching styles, they are likely to have increased success in the classroom (Johnson, Musial, Hall & Gollnick, 2011).

The culminating question for this study was to what degree the education philosophy and teaching styles of the teacher education faculty were similar to the stated education philosophy and preferred teaching style of the College of Education. The stated philosophy of the COE was determined to be progressive and humanistic, thus since the dominant philosophy of the teacher education faculty, was progressive, and to a lesser degree humanistic, there was a match between the COE and the faculty. The stated teaching style preference of the COE is learner-centered. In this study the preferred teaching style of the teacher education faculty was teacher-centered. Since the COE and teacher education faculty teaching style preferences did not match this creates a potential conflict.

The COE desires for the graduates of their teacher education program to have a progressive and humanistic philosophy and a learner-centered teaching style (Newton State

University, 2008b). The COE documents do not clearly declare that the teacher education faculty must have a philosophy or teaching style which matches the college's philosophy or teaching style preference. It is not delinated by the COE if it is necessary for teacher education faculty to commit to learner-centered teaching. If the COE made it clear to the faculty whether or not they were expected to model the Conceptual Framework mission, then the need for faculty commitment to learner-centered teaching would be established. The philosophy and teaching style preferences of the COE are stated as objectives and goals for the students of the teacher education program. The COE's Conceptual Framework clearly state the institution's mission and beliefs and like the mission statements of institutions, a clearly defined institutional mission creates a goal toward which the faculty can meaningfully direct their energies. However, in the face of tension the teacher education faculty and the COE mission, the faculty may call to question their academic freedom and autonomy. It takes a great deal of leadership and good will to integrate often conflicting forces into an identity bolstered by a compelling narrative and expressed in congruent action (Andreescu, 2009).

The findings of this study are significant because it highlights what was previously unknown about the faculty. It was not within the investigator's realm of information to determine whether the COE expects their faculty to match the ideals of the college, or whether they may assume there is an agreement between the COE's ideals and those of the faculty. The intention of this study was to describe the philosophy and teaching style preferences of the teacher education faculty. The COE can now use this information to decide what, if anything, they will do with it. As an accredited institution of teacher preparation, the COE has a responsibility to function of as professional education institution. As such they are expected to self-assess programs and their

teacher education faculty in order to evolve and improve (National Council for Accreditation of Teacher Education, 2008).

Whether or not the COE wants to take notice of this potential conflict, the teacher education faculty have a responsibility to their own professional development. As a professional educator they should be aware of whether their teaching style is aligned with their educational philosophical beliefs. They should also be aware of whether or not their philosophy and teaching style are aligned with the ideology of the COE. It should be noted that many of NSU teacher education faculty were not staunch supporters of the teacher-centered teaching style. This could mean that with exposure and knowledge the faculty could increase their strength of commitment to a particular teaching style and philosophy. Such a strengthening would empower their ability to vocalize their values and support professional decisions. Reports such as the *Commission on the Future of Higher Education,* by the Spellings Commission (U.S. Department of Education, 2008) argue that educators have been remiss in their duties and need to improve higher education accountability. "One major reason for such an attack is that teachers as a group are not able to clearly state their beliefs about teaching" (Conti, 2004).

Recommendations for Further Research

Several recommendations for further research are drawn from this study's findings and conclusions.

1. Further research should be conducted to investigate whether the classroom application of teaching methods and teacher-learner exchanges of the teacher education faculty at NSU are teacher-centered or learner-centered. This research would expand the results of this study to discover if the self-reported results by the faculty in this study are similar to their actual classroom behaviors. The total PALS score described a self-reported general

teaching style; however it did not identify if the specific teaching style behaviors used in the classroom (Conti, 1998).

2. Teacher educators at NSU should seek opportunities to learn about adult education practices and adragogical concepts. This would be beneficial professional development due to the teacher-centered pedagogical based training that most teacher education faculty received and the lack of training that most teacher educators have in adult andragogy. This type of training would provide the teacher education faculty a wider realm of best practices to teach their adult student teacher candidates.
3. Further research should be conducted to investigate whether the student teacher candidates at NSU believe their teacher education faculty employ teacher-centered or learner-centered teaching styles. If the COE desires their teacher candidates to become learner-centered Pk-12 educators it would be informative to learn if the students believe whether or not the teacher education faculty are modeling the COE ideals and to discover if this would make a difference in the candidates preferred teaching styles and commitment to the profession.
4. Further research should be conducted to determine if there is dissonance or concurrence between the educational philosophy and teaching style among teacher education faculty at other universities. Such research would either confirm or put into question the findings of this study. In addition, there is a need to clarify the higher education teacher educator values and beliefs which support professional decisions about teacher training programs.
5. Further research should be conducted to determine if teacher education programs at other universities have dissonance or concurrence between their educational philosophy and teaching style and that of their teacher education faculty**.** Such research would assist in

determining if the results of this study are similar to other teacher programs. Nationwide it is an important part of the professional responsibility of teacher education institutions to evolve and improve through an understanding of the ideological relationship of the general body of teacher education faculty with the teacher education program.

Significance of the Study

This study was significant in three areas: addition to literature, expansion of theory, and practice. This study has added to the body of literature by providing an understanding of the educational philosophy and teaching style of the teacher education faculty at NSU. Until this study was conducted, there was no research concerning these topics for this university. This study also added to the literature by focusing on match or mismatch of the stated educational philosophy and teaching ideology of any university's college of education program with their teacher education faculty. There is very little published material concerning ideological relationship of the general body of teacher education faculty and teacher education programs at universities in the United States.

This study also served to increase the understanding of the differences of perspectives adult educators, Pk-12 educators, and some higher education educators, have concerning the theory of pedagogy. In this study literature was used to highlight the differing perspectives that these educators have regarding the association of pedagogy with a particular teaching style or with a particular age group. Very little literature is available which contrasts these various view points about pedagogy. Adult educators associate pedagogy as synonymous with Pk-12 teacher-centered teaching style, while Pk-12 educators and some higher education educators consider pedagogy as the complex skill of teaching which can employ either the best practices of teacher-

centered or learner-centered teaching styles (Bain, 2004; Cuba, 2009; Hiemstra, 2011Kauchak & Eggen, 2011; Marshak, 1983; McKeachie & Svinicki, 2006; Slavin, 2012).

This study highlighted some areas which call for recommendations for change of practice at NSU. The NSU teacher education faculty espouse philosophies based on learner-centered teaching; however like many faculty at other institutions (Hewett, 2003; Stes et al., 2008) these faculty members are not implementing the teaching style based on their beliefs. Regardless of whether the faculty support the concepts of teacher-centered or a learner-centered teaching style, it takes critical self-reflection to determine if their classroom practices match their beliefs. Given that a majority of the NSU teacher education faculty have a teaching style which is not aligned with their philosophy, it is recommended that faculty consider taking workshops or reading educational materials about the importance of the connection between beliefs and actions.

The findings and conclusions of this study could inform the COE at NSU of recommendations for professional practice. The philosophy and teaching style preferences of an institution provides structure and guidance for the faculty, courses and the pre-service teachers (National Council for Accreditation of Teacher Education, 2008). Resolving the dissonance between the teaching style preferences of COE and teacher education faculty has potential to enhance the COE teacher education program. Tension or conflict between the beliefs and values of COE and the teacher education faculty could erode the foundation of the COE to become ambiguous or unstable (Andreescu, L. 2009). The educational philosophy and teaching style provide a foundation for understanding, and a platform for guiding professional development and practice for both the COE and for the teacher education faculty. Both faculty and the COE should remember that teacher education programs are expected to refer to the mission and goals of their college in defining excellence in teaching for their program, course development and

teaching styles (National Council for Accreditation of Teacher Education, 2008). The COE has a very strongly stated belief in progressive and humanistic philosophy and learner-centered teaching style. These beliefs are evidenced in all the official documents and teacher candidate portfolio assessments.

For the College of Education at NSU, this study could help the administration and the faculty body better understand the relationship between the ideology of philosophy and teaching style. The teacher education faculty have a relationship with their education institution and as a result it is likely that the COE expects their faculty to put into practice the COE stated ideologies. Such a division of ideology and practices between university faculty and the institution can be a possible source of tension (Stes et al., 2008). Because it is unclear whether the COE leadership has an expectation that the teacher education faculty model in their classrooms the preferred learner-centered teaching style, this issue needs to be openly addressed and their position clarified. It is possible that the COE does not desire the teacher education faculty to conform to the COE stated philosophy and teaching style. They might declare that diversity of philosophy or teaching styles among the faculty is a strength of their teacher education program. If the COE espouse a recognition and support of the diversity of the faculty's philosophical beliefs and teaching style preferences, such recognition could provide relief from the tension of incongruity. While an institution's mission statement is the foundation of the vision for the community, the COE leadership could decide if the mission applies centrally to the teacher candidates or if the vision should also be put into action by the internal community of faulty.

If the COE leadership team wishes to develop a faculty body which match the mission statement of the COE then instruments used in this study could be administered as a part of the hiring practice. Potential new faculty could be screened with these instruments and then

interviewed to see if their educational philosophy and preferred teaching style is compatible with the COE. This process would ensure administrators could hire those faculty whose beliefs and teaching style matched those of the COE. The potential harmful consequences of a hiring practice to create a homogeneous faculty should be cautiously considered. It is possible the faculty would be highly resistant if pushed to model teaching practices and philosophies which are congruent with the COE. If the faculty quest academic autonomy in beliefs and practices, then the COE should recognize the force of academic freedoms. Professors who are restricted in their academic freedoms and "who censure themselves in their teaching and research out of fear of repercussions which are perceived as illegitimate will not only be, to their students, bad exemplars of professionals, but also poor examples of autonomous individuals (Andreescu, 2009, p. 510).

A discussion amongst the teacher education faculty and with the COE should consider whether it may weaken the COE internal community to have singular beliefs and teaching practices. There also could be ramifications of having faculty who differ from COE beliefs while continuing to teach curriculum based on the COE Conceptual Framework. Many faculty and education institutions have come to recognize the value of ideals based on a learner-centered philosophy; however it is not unusual for higher education faculty to be more likely to use teacher-centered strategies in their classrooms (Hewett, 2003; Larabee, 2005; Stes et al., 2008). Using the information in this study could generate both formal and informal discussion among the teacher educators and the COE leadership team and possibly change future practices. The COE could strengthen their program and hold true to their mission statement and Conceptual Framework by taking a stance about whether or not they want the faculty to model the COE philosophy and teaching styles.

Conclusion

The findings of this study do not support previous research based assumptions concerning the expected match of educational philosophy and teaching styles, thus these findings add to the body of literature concerning the possible detachment between theory and application. The professional development of the faculty and the COE program at this Midwest state university can be strengthened through an increased awareness of these issues. Further research at other universities about the educational philosophies and teaching styles of teacher educators and teacher education programs could broaden the scope of this research study's conclusions.

Developing a teaching style is an important part of developing as an educator. It requires an ongoing process of exploration, reflection and application which demands knowing one's own values and beliefs (Heimlich & Norland, 1994). Along the process of exploration and reflection it is possible to discover unfounded beliefs or behaviors. Such a discovery can provide an opportunity for growth in instruction and effectiveness of teacher education programs. Heimlich & Norland (1994) suggest that good teaching is the "process of inviting students to see themselves as able, valuable, and self directing, and encouraging them to act in accordance with these self-perceptions" (p. 21). Teachers must redirect this self-perception towards themselves, for this perspective of teaching to be true. Teachers have to first help themselves in order to help others, and to know others, they first have to know themselves.

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APPPENDICES

Appendix A:

OSU IRB Approval Letter

&

Approved e-mail to NSU Teacher Educators

Oklahoma State University Institutional Review Board

Date:	Tuesday, January 17, 2012
IRB Application No	ED11205
Proposal Title:	Teaching Style Preferences and Educational Philosophy of Teacher Education Faculty at Northeastern State University
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 1/16/2013

Principal Investigator(s):

Cindi H. Fries
6921 S. Gary Ave.
Tulsa, OK 74136

Belinda McCharen
255 Willard
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Shelia M. Kennison

Shelia Kennison, Chair
Institutional Review Board

Okla. State Univ.
IRB
Approved 1/17/12
Expires 1/16/13
IRB # ED11205

Dear NSU Faculty member,

I am asking for your participation to in a 20-25 minute survey to gather information about preferred teaching styles and to identify personal philosophies of education and to compare it with prevailing philosophies in the field of adult education. The results of this study will help me gather research data for my dissertation for my doctorate degree at Oklahoma State University (OSU).

The anonymous survey does not collect any identifying information. It will not ask for your name and your email address will not be retained. The information collected will be reported in categorical groupings in order to protect your anonymity.

Your participation is completely voluntary and you have the right to discontinue participation at any time by closing your browser.

By clicking on the hyperlink button below indicates that you have read the information above and that you voluntarily agree to participate.

If you choose to participate please click on this link -- insert hyperlink here---

I greatly appreciate your consideration to participate in this study.

Sincerely,
Cindi H. Fries, Ed.D. ABD
Oklahoma State University Doctoral Candidate
Instructor
Northeastern State University
College of Education
Education Foundations & Leadership
918-449-6588, fries@nsuok.edu

Appendix B:

Participant Consent Form

PARTICIPANT CONSENT FORM

Title: Teaching Style Preferences and Educational Philosophy of Teacher Education Faculty at Newton State University

Investigator: Cindi H. Fries, Oklahoma State University Doctoral Candidate
Doctoral Advisor: Dr. Belinda McCharen, Oklahoma State Univeristy

Purpose: This survey gathers data about the preferred teaching styles and educational ideologies of the NSU faculty who teach undergraduate and graduate courses for education majors.

What to Expect: This survey is administered online. Participation in this research will involve completion of two questionnaires and some questions about you. The first questionnaire, Philosophy of Adult Education Inventory ©, asks questions to identify your personal philosophy of education based on prevailing philosophies in the field of adult education. The second questionnaire, Principals of Adult Learning Styles ©, asks questions to identify college faculty classroom educational practices. It should take you about 20-25 minutes to complete. You will be expected to answer each question contained in this survey only once.
You may be contacted by email again to request your participation. If you have already participated please ignore the second request.

Risks: There are no risks associated with this project which are expected to be greater than those ordinarily encountered in daily life.

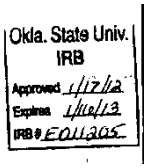
Benefits: The study may benefit you indirectly by helping you to reflect on your teaching practices and beliefs.

Compensation: Although your participation is greatly appreciated, no compensation, monetary or otherwise, will be provided.

Your Rights and Confidentiality: Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation at any time. This survey does not ask for your name. Your email address will not be recorded. In order to protect your identity, the information gathered will be reported in groups by category. Only Cindi Fries and the CheckBox site administrators will have access to the records. The results of this study will be included in C. Fries OSU doctoral dissertation. She may also use the data for a conference presentation(s) or in a journal publication(s).

Contacts: You may contact the researchers at the following addresses and phone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Cindi H. Fries, OSU Doctoral Candidate, 918-449-6588, fries@nsuok.edu or OSU Dissertation Advisor: Dr. Belinda McCharen, Associate Professor & Francis Tuttle Endowed Chair for Occupational Studies, College of Education, Oklahoma State University, 405.623.6196, belinda.mccharen@okstate.edu . If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

If you choose to participate: By answering the following questions you are indicating that you freely and voluntarily agreed to participate in this study and you also acknowledge that you are at least 18 years of age. You have the right to discontinue participation at any time by closing your browser. If you must stop participation before you have answered all the questions, please use the link in the email to return to take the survey again. It is recommended that you print a copy of this consent page for your records before you begin answering the following questions.



Appendix C:

Instrument

Philosophy of Adult Education Inventory

Note: To reduce document file size, the on-line
radio buttons for each question option have been removed

Philosophy of Adult Education Inventory

PHILOSOPHY OF ADULT EDUCATION INVENTORY (PAEI)©

Lorraine M. Zinn, Ph.D.

The Philosophy of Adult Education Inventory© is designed to assist the adult educator to identify his/her personal philosophy of education and to compare it with prevailing philosophies in the field of adult education.

PAEI Instructions PAEI:

Each of the fifteen (15) items on the Inventory begins with an incomplete sentence, followed by five different options that might complete the sentence. To the right of each option is a scale from 1 to 7.

To complete the Inventory, read each sentence stem and each optional phrase that completes it. On the 1-7 scale, choose the number that most closely indicated how you feel about each option. The scale goes from 1 (strongly disagree) to 7 (strongly agree), with a neutral point (4) if you don't have any opinion or aren't sure about a particular option.

Continue through all the items, reading the sentence stem and indicating how strongly you agree or disagree with each of the options. Please respond to every option, even if you feel neutral about it. THERE ARE NO RIGHT OR WRONG ANSWERS.

As you go through the Inventory, respond according to what you most frequently or most likely do. If it helps you to respond more easily, you may want to focus on a specific course that you teach. If you do focus on a particular course, choose one that you feel most comfortable teaching – one that you think best reflects your preferred style of teaching. HAVE FUN!

Please answer every question do not leave any blank!

STRONGLY DISAGREE		NEUTRAL			STRONGLY AGREE	
1	2	3	4	5	6	7

1. In planning an educational activity, I am most likely to:
   (a) identify, in conjunction with learners, significant social and political issues and plan learning activities around them.
   (b) clearly identify the results I want and construct a program that will almost run itself.
   (c) begin with a lesson plan that organizes what I plan to teach, when and how.
   (d) assess learners' needs and develop valid learning activities based on those needs.
   (e) consider the areas of greatest interest to the learners and plan to deal with them regardless of what they may be.

2. People learn best:
   (a) when the new knowledge is presented from a problem-solving approach.
   (b) when the learning activity provides for practice and repetition.
   (c) through dialogue with other learners and a group coordinator.
   (d) when they are free to explore, without the constraints of a "system."
   (e) from an "expert" who knows what he or she is talking about.

3. The primary purpose of Adult Education is:
   (a) to facilitate personal development on the part of the learner.

(b) to increase learners' awareness of the need for social change and to enable them to effect such change.
(c) to develop conceptual and theoretical understanding.
(d) to establish the learners' capacity to solve individual and societal problems.
(e) to develop the learners' competency and mastery of specific skills.

4. Most of what people know:
   (a) is a result of consciously pursuing goals, solving problems as they go.
   (b) they have learned through critical thinking focused on important social and political issues.
   (c) they have learned through a trial-and-feedback process.
   (d) they have gained through self-discovery rather than some "teaching" process.
   (e) they have acquired through a systematic educational process.

5. Decisions about what to include in an educational activity:
   (a) should be made mostly by the learner in consultation with a facilitator.
   (b) should be based on what learners know and what the teacher believes they should know at the end of the activity.
   (c) should be based on a consideration of key social and cultural situations.
   (d) should be based on a consideration of the learner's needs, interests and problems.
   (e) should be based on careful analysis by the teacher of the material to be covered and the concepts to be taught.

6. Good adult educators start planning instruction:
   (a) by considering the end behaviors they are looking for and the most efficient way of producing them in learners.
   (b) by identifying problems that can be solved as a result of the instruction.
   (c) by clarifying the concepts or theoretical principals to be taught.
   (d) by clarifying key social and political issues that affect the lives of the learners.
   (e) by asking learners to identify what they want to learn and how they want to learn it.

7. As an adult educator, I am most successful in situations:
   (a) that are unstructured and flexible enough to follow learners' interests.
   (b) that are fairly structured, with clear learning objective and built-in feedback to the learners.
   (c) where I can focus on practical skills and knowledge that can be put to use in solving problems.
   (d) where the scope of the new material is fairly clear and the subject matter is logically organized.
   (e) where the learners have some awareness of social and political issues and are willing to explore the impact of such issues on their daily lives.

8. In planning an educational activity, I try to create:
   (a) the real world--problems and all--and to develop learners' capacities for dealing with it.
   (b) a setting in which learners are encouraged to examine their beliefs and values and to raise critical questions.

(c) a controlled environment that attracts and holds learners, moving them systematically towards the objective(s).
(d) a clear outline of the content and the concepts to be taught.
(e) a supportive climate that facilitates self-discovery and interaction.

9. The learners' feelings during the learning process:
   (a) must be brought to the surface in order for learners to become truly involved in their learning.
   (b) provide energy that can be focused on problems or questions.
   (c) will probably have a great deal to do with the way they approach their learning.
   (d) are used by the skillful adult educator to accomplish the learning objective(s).
   (e) may get in the way of teaching by diverting the learners' attention.

10. The teaching methods I use:
   (a) focus on problem-solving and present real challenges to the learner.
   (b) emphasize practice and feedback to the learner.
   (c) are mostly non-directive, encouraging the learner to take responsibility for his/her own learning.
   (d) involve learners in dialogue and critical examination of controversial issues.
   (e) are determined primarily by the subject or content to be covered.

11. When learners are uninterested in a subject, it is because:
   (a) they do not realize how serious the consequences of not understanding or learning the subject may be.
   (b) they do not see any benefit for their daily lives.
   (c) the teacher does not know enough about the subject or is unable to make it interesting to the learner.
   (d) they are not getting adequate feedback during the learning process.
   (e) they are not ready to learn it or it is not a high priority for them personally.

12. Differences among adult learners:
   (a) are relatively unimportant as long as the learners gain a common base of understanding through the learning experience.
   (b) enable them to learn best on their own time and in their own way.
   (c) are primarily due to differences in their life experiences and will usually lead them to make different applications of new knowledge and skills to their own situations.
   (d) arise from their particular cultural and social situations and can be minimized as they recognize common needs and problems.
   (e) will not interfere with their learning if each learner is given adequate opportunity for practice and reinforcement.

13. Evaluation of learning outcomes:
   (a) is not of great importance and may not be possible, because the impact of learning may not be evident until much later.
   (b) should be built into the system, so that learners will continually receive feedback and can adjust their performance accordingly.
   (c) is best done by the learners themselves, for their own purposes.

(d) lets me know how much learners have increased their conceptual understanding of new material.
(e) is best accomplished when the learner encounters a problem, either in the learning setting or the real world, and successfully resolves it.

14. My primary role as a teacher of adults is to:
(a) guide learners through learning activities with well-directed feedback.
(b) systematically lead learners step by step in acquiring new information and understanding underlying theories and concepts.
(c) help learners identify and learn to solve problems.
(d) increase learners' awareness of environmental and social issues and help them to have an impact on these situations.
(e) facilitate, but not to direct, learning activities.

15. In the end, if learners have not learned what was taught:
(a) the teacher has not actually taught.
(b) they need to repeat the experience, or a portion of it.
(c) they may have learned something else which they consider just as interesting or useful.
(d) they do not recognize how learning will enable them to significantly influence society.
(e) it is probably because they are unable to make practical application of new knowledge to problems in their daily lives.

Appendix D:

Instrument:

Principles of Adult Learning Style

Note: To reduce document file size, the on-line radio buttons have been removed.

Principles of Adult Learning Scale

Directions: The following survey contains several things that a teacher of adults might do in a classroom. You may personally find some of them desirable and find others undesirable. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. Choose number 0 if you always do the event; choose number 1 if you almost always do the event; choose number 2 if you often do the event; choose number 3 if you seldom do the event; choose number 4 if you almost never do the event; and choose number 5 if you never do the event. If the item does not apply to you, choose the number 5 for never.

Always	Almost Always	Often	Seldom	Almost Never	Never
0	1	2	3	4	5

1. The trainer should allow trainees to participate in developing the criteria for evaluating their performance in a training session.	0	1	2	3	4	5
2. The trainer should use disciplinary action when it is needed.	0	1	2	3	4	5
3. The trainer should allow older trainees more time to complete assignments when they need it.	0	1	2	3	4	5
4. The trainer should encourage trainees to adopt middle-class values.	0	1	2	3	4	5
5. The trainer should help trainees diagnose the gaps between their learning goals and their present level of performance.	0	1	2	3	4	5
6. The trainer should provide knowledge rather than serve as a resource person.	0	1	2	3	4	5
7. The trainer should stick to the instructional objectives that were written at the beginning of a training session.	0	1	2	3	4	5
8. The trainer should participate in the informal counseling of trainees.	0	1	2	3	4	5
9. The trainer should use lecturing as the best method for presenting the subject material to adult trainees.	0	1	2	3	4	5
10. The training area should be arranged so that it is easy for trainees to interact.	0	1	2	3	4	5
11. The trainer should determine the learning objectives for each trainee.	0	1	2	3	4	5
12. The trainer should plan units which differ as widely as possible from the trainees' socio-economic backgrounds.	0	1	2	3	4	5
13. The trainer should motivate the trainees by confronting them in the presence of their coworkers.	0	1	2	3	4	5
14. The trainer should plan learning episodes to take into account the trainees' prior experiences.	0	1	2	3	4	5

Always	Almost Always	Often	Seldom	Almost Never	Never
0	1	2	3	4	5

15. The trainer should allow trainees to participate in making decisions about the topics that will be covered in the	0	1	2	3	4	5
16. The trainer should use one basic teaching method because most adults have a similar style of learning.	0	1	2	3	4	5
17. The trainer should use different techniques depending on the trainees being trained.	0	1	2	3	4	5
18. The trainer should encourage dialogue among the trainees.	0	1	2	3	4	5
19. The trainer should use written formal evaluations to assess the degree of growth in learning for the trainee rather than	0	1	2	3	4	5
20. The trainer should utilize the many competencies that most adults already possess to achieve their training objectives.	0	1	2	3	4	5
21. The trainer should use what history has proven that adults need to learn as the chief criteria for planning learning	0	1	2	3	4	5
22. The trainer should accept errors as a natural part of the learning process.	0	1	2	3	4	5
23. The trainer should have individual conferences to help trainees identify their educational needs.	0	1	2	3	4	5
24. The trainer should let each trainee work at the trainee's own rate regardless of the amount of time it takes the trainee to	0	1	2	3	4	5
25. The trainer should help the trainees develop short-range as well as long-range learning objectives.	0	1	2	3	4	5
26. The trainer should maintain a well-disciplined learning environment to reduce interference's to learning.	0	1	2	3	4	5
27. The trainer should avoid discussion of controversial subjects that involve value judgments.	0	1	2	3	4	5
28. The trainer should allow the trainees to take periodic breaks during the training session.	0	1	2	3	4	5
29. The trainer should use methods that foster quiet, productive, desk work.	0	1	2	3	4	5
30. The trainer should use tests as the chief method of evaluating the trainees.	0	1	2	3	4	5
31. The trainer should plan activities that will encourage each trainee's growth from dependence on others to greater independence.	0	1	2	3	4	5
32.The trainer should gear the instructional objectives for the training session to match the individual abilities and needs of the trainees.	0	1	2	3	4	5

Always	Almost Always	Often	Seldom	Almost Never	Never
0	1	2	3	4	5

33. The trainer should avoid issues that relate to the trainee's self-concept.	0	1	2	3	4	5
34. The trainer should encourage trainees to ask questions about the nature of their society.	0	1	2	3	4	5
35. The trainer should allow trainees' motives for participating in continuing education to be a major determinant in the planning of learning objectives.	0	1	2	3	4	5
36. The trainer should have the trainees identify their own problems that need to be solved.	0	1	2	3	4	5
37. The trainer should give all trainees the same assignment on a given topic.	0	1	2	3	4	5
38. The trainer may use materials that were originally designed for students in elementary and secondary schools.	0	1	2	3	4	5
39. The trainer should organize adult learning episodes according to the problems that the trainees encounter in everyday life.	0	1	2	3	4	5
40. The trainer should measure a trainee's long-term learning by comparing the trainee's total achievement in the training session to that trainee's expected performance as measured by established standards.	0	1	2	3	4	5
41. The trainer should encourage competition among the trainees.	0	1	2	3	4	5
42. The trainer should use different materials with different trainees.	0	1	2	3	4	5
43. The trainer should help the trainees relate new learning to their prior experiences.	0	1	2	3	4	5
44. The trainer should include units about problems of everyday living.	0	1	2	3	4	5

Appendix E:

Demographics survey

About You

The following information will help better understand the information you have provided

Gender: Female Male

Age Range:

20-30 31-35 36-40 41-45 46-50

51-55 56-60 61-65 65+

Assigned College:

Education

Liberal Arts

College of Sciences and Health Professions

Academic rank:

Part-time Instructor

Full-time Instructor

Assistant Professor

Associate Professor

Professor

Years of teaching in Higher Education: _____

Years of employment at NSU: _____

Professional P-12 experience:

Do you presently or have you previously worked in a school as a preschool-12th grade teacher?

Yes No

Do you presently or have you previously worked in a preschool-12th grade school as an administrator?

Yes No

VITA

Lucinda "Cindi" H. Fries
Applied Educational Studies: College Interdisciplinary Studies
Doctor of Education

Dissertation: TEACHING STYLE PREFERENCES AND EDUCATIONAL PHILOSOPHY OF TEACHER EDUCATION FACULTY AT A STATE UNIVERSITY

Major Field: College Teaching

Education:

Doctor of Education in College Interdisciplinary Studies at Oklahoma State University Stillwater, Oklahoma in July, 2012.

Master of Education in Counseling at Northeastern State University Tahlequah, Oklahoma in 1989

Bachelor of Science in Education, major in Special Education, at University Of Tulsa, Oklahoma in 1982

Experience:

Academic Appointment:

Assistant Professor	August 2012 - Present
Instructor	August, 2003- May, 2012
Northeastern State University	Tahlequah & Broken Arrow, Oklahoma

Department of Educational Leadership and Foundations, College of Education
Undergraduate Teaching Responsibilities: Clinical Education/Pre-Internship I, Educational Psychology, and Pre-Internship II
Semi-Administrative Duties: Faculty Course Coordinator for Teacher Education professional core and for Clinical Education/Pre-I; International Pre-Internship II Supervisor

Regional Publications (Refereed Journal):

Ausburn, F. B., Fries, C. H., Ausburn, L. J., Ashton, J., Briathwaite, P.,Dotterer, G., Elliott, W.,Hermes, M., Rendau, D., Siling, C., Williams, M.S. (2008) Effects of desktop virtual reality on scenic orientation, recall of scenic details and perceived confidence levels in scenic comprehension. *Oklahoma Association of Teacher Educators (OATE) Journal, 10*, 8-15

National Professional Presentation (Refereed):

Fries, C. H.(2010). I say what I do…but do I do what I say? Is Learner-Centered Teaching a MadHatter tea party? National Conference on Learner Centered Teaching, Tulsa, OK.

National Webinar Professional Presentation (Invitation):

Fries, C., Greenberg J., Marx H. (2010). Internationalizing Teacher Education Programs at U.S. Colleges and Universities. NationalWebinar presentation for NAFSA Association of International Educators.

Regional Professional Presentation (Refereed):

Fries, C., Sanders, S. (2011).Student teaching abroad: Lessons learned about being an American. NASFA Region III Conference, Oklahoma City, Oklahoma

Abstract:
Name: Cindi H. Fries Date of Degree: July, 2012

Institution: Oklahoma State University Location: Tulsa, Oklahoma

Title of Study: TEACHING STYLE PREFERENCES AND EDUCATIONAL PHILOSOPHY OF TEACHER EDUCATION FACULTY AT A STATE UNIVERSITY

Pages in Study: 133 Candidate for the Degree of Doctor of Education, Applied Educational Studies

Major Field: College Interdisciplinary Studies: College Teaching

Key words: Educational philosophy, teaching style, learner-centered, teacher-centered, pedagogy, andragogy

Scope and Method of Study:

An educational philosophy and teaching style provide a foundation for understanding and for guiding guide decisions about curriculum, teacher-learner relationship and professional practice. The purpose of this descriptive quantitative study was to describe the educational philosophies and teaching styles of the teacher educators at a specific Midwestern state university in the United States and to compare this to the preferred educational philosophy and teaching style of the university's College of Education (COE). All teacher educators (N=122) at this university were invited via the university's e-mail system to participate in this on-line survey. A total of 45 participants responded. The variables of education philosophy were measured using the Philosophy of Adult Education Inventory (PAEI). Teaching styles, as measured using the Principles of Adult Learning Scale (PALS), were categorized as either learner-centered or teacher-centered. The educational philosophies used in this study were liberal, behavioral, humanism, progressive and radical. The educational philosophies and teaching styles were examined in relationship to the demographic variables of: gender age, academic rank, assigned college at the university, years working in higher education, years teaching at the university, Pk-12 teaching experience and Pk-12 administration experience. The concepts of pedagogy and andragogy were contrasted between adult educators, and higher education and Pk-12 educators.

Findings and Conclusions:

It was found that the majority of teacher education faculty held the progressive educational philosophy and their preference for teacher-centered teaching style did not match. This may indicate that they believe in, but are not utilizing, the concepts of learner-centered teaching styles. The COE and faculty were in congruence with the same philosophy, however they differed in the faculty preferred teaching style. With the exception of gender and Pk-12th grade teaching, demographic variables had no statistical significance.

Adviser's Approval: Dr. Belinda McCharen