

STUDENT PERCEPTIONS OF ATHLETIC TRAINING PRECEPTOR
TRAITS AND THEIR EFFECTS ON BOARD OF CERTIFICATION
EXAMINATION OUTCOMES

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In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

STUDENT PERCEPTIONS OF ATHLETIC TRAINING PRECEPTOR TRAITS
AND THEIR EFFECTS ON BOARD OF CERTIFICATION
EXAMINATION OUTCOMES

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a candidate for the degree of Doctor of Education,

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DEDICATION

Dedicated to my two men and little lady, you make everything right in my world.

Dr. Ronald Van Dam, you were a mentor, teacher, father, and friend. Your Christ-centered life and dedication to family were inspiring. I lost my father at an early age, but God sent me you. With you, I rediscovered my self-worth and set forth on my true journey in life. I will never forget when you talked me into continuing with graduate school, saying, "It takes a work horse, not a race horse." One thing is for certain it takes a Mule! I love you Doc. I miss you. In the words of Cole Swindell, "you should be here."

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ABSTRACT

This study explored the perceptions Athletic Training Students' harbored of the traits of preceptors they have been assigned. The preceptor characteristics examined in this study were nurturing, contemplative, consolidative, management, inspirational, and rigorous. These perceived traits of preceptors were then compared to Athletic Training Programs who were compliant and non-compliant with CAATE Standard 11 for Professional Programs. The study investigated whether there would be a significant difference in any of the trait characteristics between programs in compliance and non-compliance with Standard 11. This was a quantitative study in which data were collected via Preceptor Effectiveness Survey. The data were analyzed through SPSS 23 using descriptive statistics and MANOVA. The MANOVA failed to result in a significant multivariate effect, however, the univariate results indicated a significant difference between programs ($p < .05$) for the "rigorous" trait, $F(1, 105) = 7.210, p = 0.008$. Overall, non-compliant programs presented lower mean scores on all traits when compared to compliant schools. The study can offer evidence for effective preceptor traits in programs with successful Board of Certification (BOC) outcomes. This could be utilized to improve training, recruitment, hiring, establishing appropriate student-preceptor ratios to individual preceptors, and enhancing the overall student clinical experience.

CHAPTER ONE

INTRODUCTION

Two professional football teams battle it out on the gridiron on a crisp Sunday afternoon. Down after down, athletes are subjected to collisions, torsions, and bodily extremes. Inevitably, a player is injured and the first on the field to render care is the highly skilled Certified Athletic Trainer (ATC). Recognized in 1990 by the American Medical Association as allied health professionals, Athletic Trainers offer a multitude of services to the diversely active population (Ebel, 1999). The profession works in collaboration with physicians and provides, “preventative services, emergency care, clinical diagnosis, therapeutic intervention, and rehabilitation of injuries and medical conditions” (NATA, 2015, para. 2).

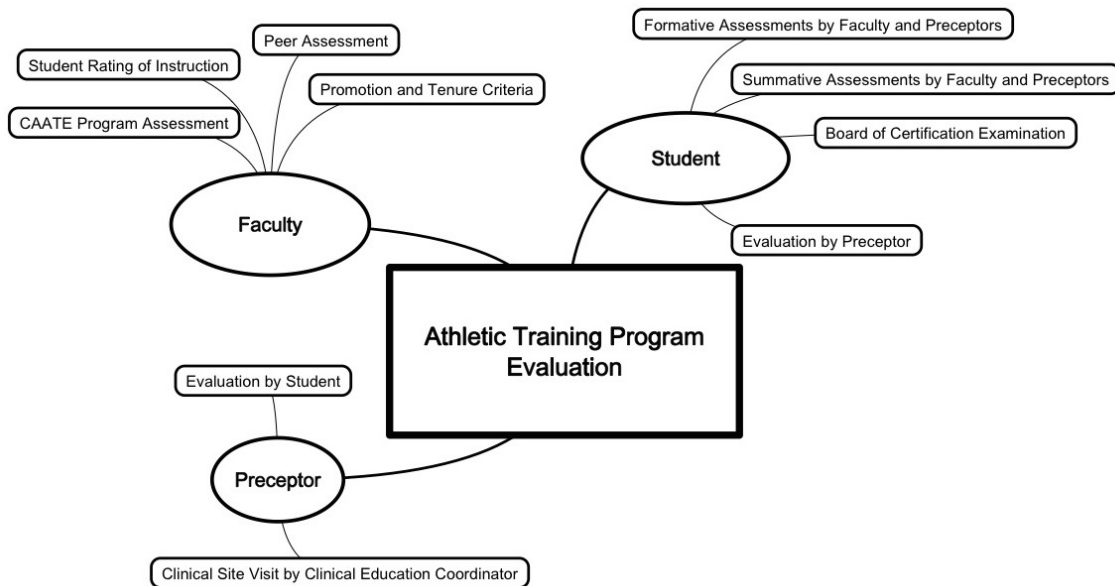
Athletic Trainers are present in a number of different job settings. Though a minimum of a bachelor’s degree is required, seventy percent of all Athletic Trainers hold a master’s degree or higher (NATA, 2015). By the year 2022, all Athletic Training educational programs will be required to end matriculation of bachelor level students and transition to a master’s degree level (CAATE, 2015, May 20). Athletic Training education has made a number of changes over the years to improve the outcomes for students. In addition to formal education conducted in the confines of a classroom, clinical education is also performed.

Clinical education requires the use of experts or clinical instructors to guide learning in a practical environment (Dodge & Mazerolle, 2015; Neville, 2009). The fields of nursing, pharmacology, medicine, and athletic training all utilize the term “preceptor” when referring to the clinical instructor. A preceptor, according to the

CAATE (2015, October 12) is “a certified/licensed professional who teaches and evaluates students in a clinical setting using an actual patient base” (p. 14). Preceptors help guide the appropriate use of students’ professional knowledge, skills, and abilities or competencies. The successful integration of content knowledge and problem-based learning produce the most effective outcomes (Arocha & Patel, 1995; Imanieh, Dehghani, Sobhani, & Haghigat, 2014; Seegmiller, 2003).

Healthcare education, including athletic training, is safeguarded in many ways. The field of athletic training implements a number of evaluative processes in the educational curriculum to ensure professional knowledge is taught appropriately and competent Certified Athletic Trainers (ATC) are produced. The evaluative bodies are divided between the faculty, preceptors, and students. Displayed in Figure 1.1 is a breakdown of the evaluative process in an Athletic Training education program.

Figure 1.1 *Athletic Training Program Evaluations*



There are multiple methods utilized to assess competency with each participating body, but one appears to be lacking comparable data. The preceptors receive little evaluative feedback when compared to faculty and students (Schelhase, 2010; Walker, Weidner, & Armstrong, 2008). As a crucial part of the athletic training educational experience, it is necessary preceptors are cultivated and developed into high quality teachers and held to the same instructional standards as classroom faculty (Carr & Drummond, 2002; Lauber & Killian, 2009; Shinnery & Franqueiro, 2015). Additionally, athletic training programs are evaluated against a set of standards as single entities for the purpose of accreditation (CAATE, 2015, October 12).

The Commission on Accreditation of Athletic Training Education (CAATE) established 109 standards to evaluate professional level athletic training programs (CAATE, 2015, October 12). These standards are utilized for “development, evaluation, analysis and maintenance” of each institution (CAATE, 2014, paragraph 2). Professional level athletic training programs at both the undergraduate and graduate levels must adhere to all of the established standards to achieve and maintain accreditation. Regardless of the level of degree being offered by an athletic training program, the program is evaluated on the same curricular standards and outcomes.

A significant outcome measured by the Commission on Accreditation of Athletic Training Education is the percentage of students that who pass the Board of Certification (BOC) examination on their first attempt from each athletic training program. Both clinical skills and content knowledge are assessed in the Board of Certification examination. The successful completion of this examination is a national and international credential necessary to practice as a Certified Athletic Trainer (ATC).

Many healthcare fields such as nursing, physical therapy, and medicine have similar national comprehensive certification examinations and statistics that measure first-time pass rates. These professions utilize similar models of education, with didactic and clinical components.

Five CAATE standards (7, 8, 11, 12, and 13) are directly related to the pass rate on the BOC examination. Those standards are as follows:

7. Assessment Measures: The program's BOC examination aggregate data for the most recent three test cycle years must be provided and include the following metrics: Number of students graduating from the program who took the examination, number and percentage of students who passed the examination on the first attempt, and overall number and percentage of students who passed the examination regardless of the number of attempts.

8. Assessment Measures: Programs must post the data from Standard 7 on the program's home page or a direct link to the data must be on the program's home webpage.

11. Data Analysis: Programs must meet or exceed a three year aggregate of 70 percent first-time pass rate on the BOC examination.

12. Action Plan: The results of the data analysis are used to develop a plan for continual program improvement. This plan must:

- a. Develop targeted goals and action plans if the program and student learning outcomes are not met; and
- b. State the specific timelines for reaching those outcomes; and
- c. Identify the person(s) responsible for those action steps; and

d. Provide evidence of periodic updating of action steps as they are met or circumstances change.

13. Action Plan: Programs that have a three-year aggregate BOC first-time pass rate below 70% must provide an analysis of the deficiencies and develop an action plan for correction. (CAATE, 2015, October 12, p. 4)

Standard 11 has been controversial with the discipline since its implementation on July 1, 2013 (CAATE, 2016, February 5). The concerns resulted from the new standard's compliance have created intense programmatic review as program directors and department chairs work to ensure their athletic training programs comply with the rigorous requirements of Standard 11. Because of this controversy, the CAATE published a statement on February 5th, 2016 that clarified actions to be taken by all athletic training programs affected by this standard. Attached to the statement is a flowchart outlining the consequences to an athletic training program that fails to be in compliance with Standard 11. Athletic training programs were notified there is low tolerance for programs that do not meet this standard.

The flowchart attached to the statement provided by the CAATE demonstrated consequences of noncompliance with Standard 11 range from probation to withdraw of accreditation (CAATE, 2016, February 5). Some programs have not met the Standard 11 requirements are given an opportunity to meet this standard by raising their aggregate test scores during a probation period. A requirement of this probation is athletic training programs submit an analytic progress report by June 1st of each year. As of February 2018, programs with an aggregate pass rate less than 50% are ineligible for probation and the CAATE will move to withdraw their accreditation.

Figure 1.2 Standard 11 Accreditation Action Flow Chart

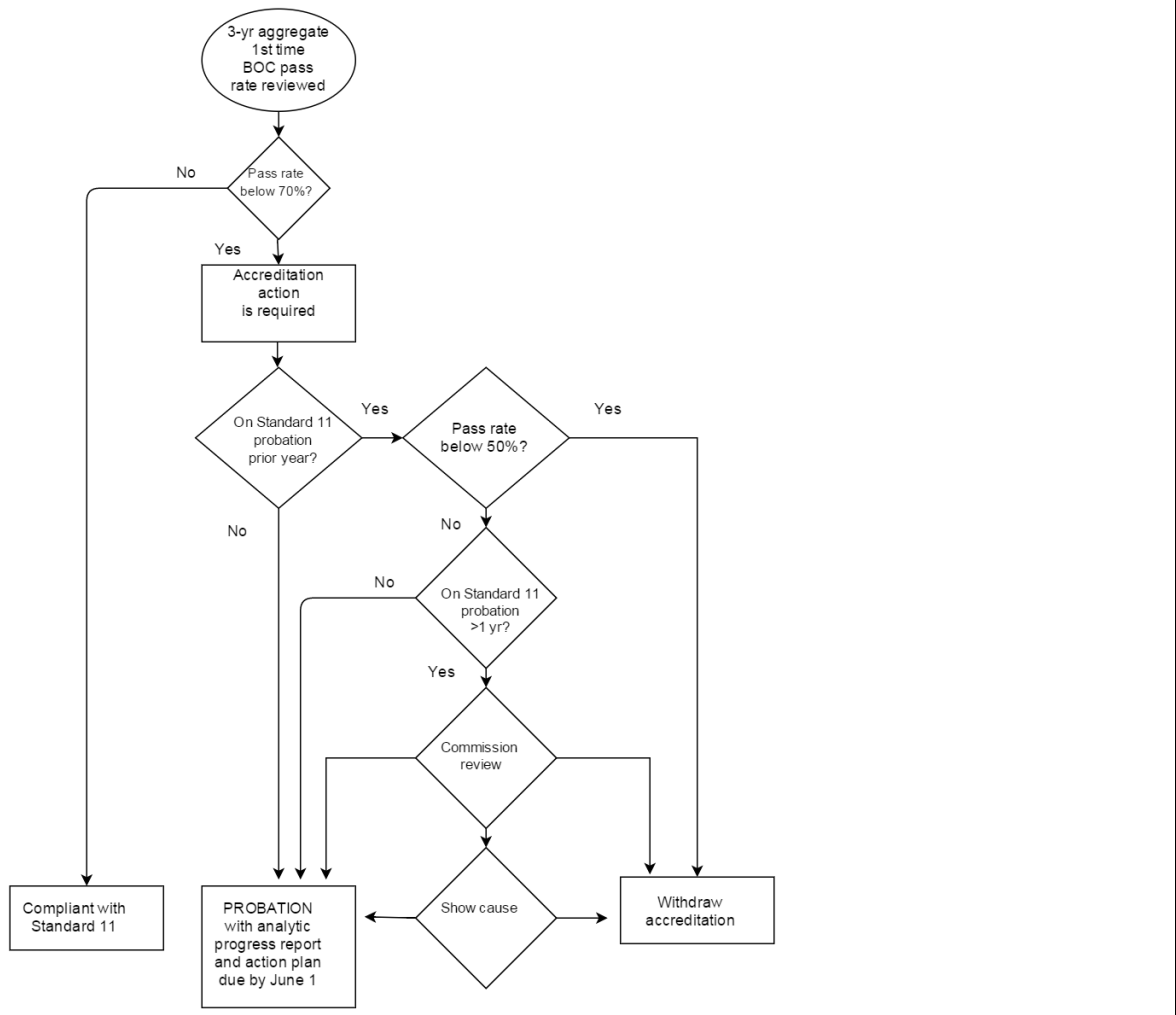


Figure 1.2. Algorithm developed by the CAATE to make accreditation decision in regard to Standard 11. Adapted with permission from “Official Communication Regarding Upcoming Review and Actions Related to Professional Standard 11,” by the Commission on Accreditation of Athletic Training Education, 2016, February 5, Retrieved from <http://caate.net/wp-content/uploads/2016/02/CAATE-Professional-Standard-11.pdf>. Copyright 2016 by the CAATE.

During program reviews, many factors have been scrutinized for the contribution to athletic training students’ successes. It can be argued didactic education provides the foundation for all knowledge; however, research has countered clinical education provides a richer and improved long-term content retention experience (Benes, Mazerolle, & Bowman, 2014). Preceptors have the responsibility of connecting the

content knowledge to a real-time experience so the student applies theory to practice. Many of the preceptors provide this opportunity to students as service learning to the field and receive little compensation. This can create added stress, as each preceptor must find a balance between skillfully teaching practical students and performing in the duties as a Certified Athletic Trainer.

Utilizing the most recent aggregate data, 2013-2015, available on the CAATE website, a comparison can be made between programs in compliance with Standard 11 (70% and above first-time pass rate) and those who are not (69% and below first-time pass rate) (CAATE, 2014). Multiple factors exist to increase the pass rate of the Board of Certification examination. Faculty, preceptors, students, and administrators all play a role in the education of athletic training students. However, in comparison, a factor often overlooked is the perception of students to the education they are receiving. Wilkerson, Manatt, Rogers, and Maughan (2000) concluded measuring student learning required a multifaceted approach, which required a 360-degree feedback from all stakeholders involved, most importantly, the students. Though some teachers in the study rejected the idea as a popularity contest, the results proved to highly correlate effective teaching outcomes with positive student surveys.

Dodge and Mazerolle (2015) have also found students who were assigned to preceptors who demonstrated excitement and passion for the career field often fostered this characteristic in their students. The perception students have for preceptors and the demonstrated characteristics may vary from program to program. A student perception of preceptors' traits within programs meeting compliance and non-compliance in accordance with the most current data (2013-2015) may give insight to this component of

the BOC examination process.

Statement of the Problem

Since the implementation of Standard 11, specific components of success have not been independently investigated for success on the Board of Certification Examination. Preceptor traits, as perceived by students have not been adequately studied by standardized methods.

This study explored the perceptions Athletic Training Students' harbored of the characteristic traits of preceptors they are assigned to study under. The preceptor traits examined in this study are nurturing, contemplative, consolidative, management, inspirational, and rigorous. The study then analyzes the characteristic traits of the preceptors who were identified by the Athletic Training Students, and compares the traits of those preceptors who work with Athletic Training Programs that were in compliance with Standard 11 and those that were non-compliant.

For an Athletic Training Program to be in compliance with Standard 11, the program must have an aggregate passing rate of the Board of Certification examination of 70 percent or greater over a three-year period. Programs with an aggregate passing rate of 69 percent or lower over a three-year period are deemed non-complaint with Standard 11. Athletic Training Programs not in compliance with Standard 11 are placed on probation and are at risk of losing accreditation.

Rationale of the Study

Every component of the educational process in Athletic Training is vital for positive outcomes. It is a mixture of content-based instruction and problem-oriented learning. As with most fields of study, there is not one specific component leading to the

ultimate success or failure of the students. There are many factors relating to the success of each program. The classroom environment and the relationships students have with faculty are part of each program and could be analyzed for effect. However, perceptions of the preceptors, in regard to the program, faculty, and students, may also play a role in success. The purpose of this study was to focus on one potential contributor: how students perceive specific characteristics of their preceptors.

The didactic component develops a foundation from which students can learn, engage, and problem solve. In 2006, Kirschner, Sweller, and Clark made an argument against a complete disregard of the didactic component in curriculum as constructivism, or problem-based learning (PBL) came into fashion. Arocha and Patel (1995) found programs produced students who were skilled at backward inference. In other words, given a goal, students could work their way backward to an answer if faced with an unknown variable. In backward inference, the students are given the result and must work their way backward to the start of the problem and multiple solutions. However, content-based curriculum fostered forward inferences, which is considered to be what experts would utilize. Arocha and Patel (1995) described forward inference as a diagnostic and evaluative processing of data. This follows a step-by-step system, which encourages each piece to fit the next.

The most valuable asset in any curricular program is the student. They are the component around which all teaching revolves. The feedback received from each student may provide insight as to why specific outcomes are happening. Educators apply what is measurable, so as to quantify this and improve our andragogy and therefore, improve the cyclic relationship of student outcomes. Utilizing the inspiration of Knowles' adult

learning theory (Knowles, Holton, & Swanson, 2015), this learning approach is applied to the content-driven component in Athletic Training Programs. In the collegiate setting, the student population is comprised of adults and, therefore, instruction should be in accordance with the principles of andragogy (Hoch, White, Starkey, & Krause, 2009; Noor, Harun, & Aris, 2012; Volberding & Richardson, 2015; Zemke & Zemke, 1995). Athletic Training Programs must find a balance between content-based instruction and problem-based learning for successful outcomes.

Knowles, Holton, and Swanson (2015) qualified the needs of an adult learner as more problem-based. Adults prefer to know why they are learning something and use life experiences to make sense of it. Research has shown problem-based learning, or putting theory to practice, increases retention and deepens the breadth of the knowledge (Imanieh, Dehghani, Sobhani, & Haghighat, 2014; Neville, 2009). The clinical component of ATPs provides an opportunity to utilize foundational knowledge in real-time situations.

A number of studies have been conducted to expose the characteristics of acceptable, good, or even outstanding preceptors (Groh, Gill, Henning, Stevens & Dondanville, 2013; Laurent & Weidner, 2001; Lockwood-Rayermann, 2003; Platt-Meyer, 2002; Weidner & Henning, 2002). In 2004, Weidner and Henning introduced a standardized method of choosing, training, and assessing preceptors. The tool followed the standards and competencies current for athletic training programs at that time. The instrument was lengthy and never gained popularity among programs. Clinical Education Coordinators (CEC) interview, hire, and train preceptors and are required to use verbal feedback and non-standardized surveys to obtain the data necessary to build strong

educators.

Clinical Education Coordinators are often burdened with a faculty and administrative load with little to no release time and those CECs find it difficult to visit the clinical sites are part of their athletic training program, as often as would be considered ideal. The CEC is there to provide encouragement, answer questions, and ensure the educational needs are being met for the athletic training student on site. Often the CEC depends on the feedback of both students and preceptors (Hoch, White, Starkey, & Krause, 2009; Volberding & Richardson, 2015).

Clinical Education Coordinators train preceptors and engage them with teaching techniques, but receive little feedback about this. As seen in Figure 1.1, most programs do have the student perform evaluations on their preceptors, but there is no consistency in regard to what is being measured or why. It is proposed, by the researcher, preceptors are measured with a standardized tool. Kane, Kerr, and Pianta (2014) discussed the results of a 3-year study on the Measurement of Effective Teaching (MET) for K-12 teachers that utilized the Tripod survey. The Tripod survey divided the components of a skilled teacher into seven areas or teacher traits and was designed for Kindergarten through 12th grade students (Ferguson, 2014). The student completed this assessment in regard to the teacher's characteristics.

Although the survey is intended for use in the K-12 environment, it was proposed this survey be modified to fit the needs of adult learners. Kane, Kerr and Pianta (2014) stated the Tripod survey has been utilized by school districts all over the United States to provide feedback to numerous teachers. Ferguson (2014) stated the tripod survey was developed in 2001 and completed in 2013. Due to its extensive development for

Measurement of Effective Teaching, it seemed logical this survey could be modified to measure the perception of effective clinical education by athletic training students.

Giving the students a voice adds an additional component to a lacking assessment of preceptors in program evaluation. It may provide another view to the question of whether the success or failure of a student is the result of a good or bad teacher. It may be possible the student was exceptional or below average. By utilizing a modification of the Tripod instrument the researcher can provide the student with a standardized opportunity to assess the nurturing, contemplative, consolidative, management, inspirational, and rigorous traits of their preceptor.

Research Questions

The following research questions guided this study:

1. Is there a significant difference in athletic training programs preceptors' abilities to consolidate information, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
2. Is there a significant difference in athletic training programs preceptors' contemplation of professional ideas, as perceived by students, between programs in compliance and those no in compliance in accordance with Standard 11?
3. Is there a significant difference in athletic training programs preceptors' ability to inspire professional curiosity, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
4. Is there a significant difference in athletic training programs preceptors' demonstration of nurturing, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

5. Is there a significant difference in athletic training programs preceptors' ability to manage the clinical site, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
6. Is there a significant difference in athletic training programs preceptors' ability to impose rigor, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Conceptual Framework

Athletic Training involves a dichotomous educational process. The engagement of both classroom knowledge and clinical components construct the hands-on based curriculum on which athletic training education was founded (Delforge & Behnke, 1999; Seegmiller, 2003). Students are taught theory and foundational knowledge in the classroom and implement them immediately at clinical experiences outside of the classroom (Yardley, Teunissen, & Dorman, 2012). Faculty members undergo student assessment of instruction for all courses. Most faculty also participate in promotion and tenure processes, such as peer-teaching assessment. On the didactic side, the evaluative process is extensive (Kreiser, 2001; Seldin, 1980). However, the clinical preceptors receive minimal feedback relative to their performance as field educators (Weidner & Henning, 2005).

Young, Vos, Cantrell, and Shaw (2014) found a disconnection between how preceptors self-assess their success in teaching and how students actually perceive them as educators. Looking at this problem from a positivist's perspective, the question can be pursued regarding the impact the field educator has upon student outcomes. A deductive approach will be applied during analysis for the most appropriate comparisons. Schools

are divided into two categories in regard to Standard 11, compliant and non-compliant. The most recent aggregate data were used to determine a program's compliance standing. All institutions maintain a varied number of preceptors for their clinical component. This number can be related to location of institution and convenience of clinical sites.

Research Design

This quantitative study on student perceptions of preceptor's traits, analyzes the characteristics in preceptors assigned to athletic training programs both in and out of compliance with Standard 11 of the Commission on Accreditation of Athletic Training Education. This quantitative study is being utilized with the purpose to examine a relationship rather than a phenomenon. Typically, in a quantitative study the instrumentation is predetermined, large samples are engaged and numeric data are analyzed (Creswell, 2009). The approach to research in such a method is deductive, working from general thought to specific. The type of quantitative method utilized in this study was ex post facto, as the independent variable was not manipulated. Ary, Cheser Jacobs, and Sorensen (2010) defined ex post facto research as comparing the dependent variable to the unchanging independent variable and looking for differences, not relationships. This is not the same as correlational research. Ex post facto is utilized, as many researcher lack control over many variables in a study. This holds true with the variables within this study and the ex post facto process was followed.

The instrument utilized for this study was a survey developed by the researcher, based on the Tripod survey developed by Dr. Ronald F. Ferguson (2012). The survey was distributed to solicit impressions from Athletic Training Students regarding traits or characteristics their preceptors possess. The data were categorized by the independent

variable of compliance. This means student impressions from athletic training programs in compliance with Standard 11 were compared to students from non-compliant schools. A multivariate analysis of regression (MANOVA) was utilized because there was more than one variable outcome for the analysis (Field, 2009). With the use of the Tripod survey as a basis, the variables were highly correlated, which infers MANOVA is more appropriate to control for dependent variable correlation than separate analysis of variances (ANOVA) (Keselman et al., 1998).

Delimitations

The boundaries of this study are defined in a variety of ways. The sample is based on the number of programs in compliance and non-compliance with Standard 11 from the aggregate 2013 - 2015. It was assumed all students would answer the survey in a fair and unbiased manner. Each student should answer the survey in response to the preceptor with whom they most recently completed a semester, not a preceptor with whom they are currently on rotation. It is assumed the same group of preceptors remains teaching at each Athletic Training Program from 2013-2015.

Definitions

The following words are commonly utilized within the athletic training profession.

Athletic Trainer (AT). “Health care professional who collaborates with physicians. The services provided by ATs comprise prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions” (NATA Board of Directors, 2013, paragraph 1).

Athletic Training Student (ATS). A student formally enrolled in an Athletic Training Program.

Board of Certification (BOC). The entity that awards the credential of Certified Athletic Trainer (ATC) and publishes the Role Delineation that establishes the standards of professional knowledge (Anderson & Parr, 2013).

Clinical Education. The application of knowledge and skills, learned in classroom and laboratory settings, to actual practice on patients under the supervision of preceptors (CAATE, 2015, October 12).

Clinical Site. A physical area where clinical education occurs (CAATE, 2015, October 12).

Commission on Accredited Athletic Training Education (CAATE). The governing body that independently accredits Athletic Training Programs.

Compliance. For the purpose of this study, programs must meet or exceed a three-year aggregate of 70 percent first-time pass rate on the BOC examination to be considered in compliance (CAATE, 2014).

Consolidative. Integrates ideas and makes learning coherent with classroom content-driven learning (Horn, 2014).

Contemplative. The trait of cultivating understanding, especially on concepts that students find difficult. This includes open discussions about ideas and welcomes feedback (Horn, 2014).

Didactic Instruction. Teaching of required competencies and proficiencies with instructional emphasis in structured classroom and laboratory environments (CAATE, 2006).

Inspiration. Inspires curiosity and interest in the profession and effectively provides a basis for continuing interest (Horn, 2014).

Management. Sustains order, respect, and focus at the clinical site between the student, staff, athletes, coaches, parents, and administrators.

Medical Model. The use of both didactic and clinical components within a healthcare profession's educational program (Seegmiller, 2003).

National Athletic Trainers' Association (NATA). The professional membership association for certified athletic trainers and others who support the athletic training profession.

Non-compliance. For the purpose of this study, programs that did not meet or exceed a three-year aggregate of 70 percent first-time pass rate on the BOC examination are considered to be non-compliant (CAATE, 2014).

Nurturing. The measure of a preceptor's "ability to develop supportive relationships with students, paying attention to them as individuals" (Horn, 2014, p. 24).

Preceptor. A certified/licensed professional who teaches and evaluates students in a clinical setting using an actual patient base (CAATE, 2015, December 12).

Professional Athletic Training Program: A bachelor or master's degree program that is based on the development of the current knowledge, skills, and abilities, as determined by the CAATE (currently the 5th Edition of the NATA Athletic Training Education Competencies).

Rigorous. Academically challenge and presses students for precision and consistency.

Summary

Athletic Training education has undergone a number of changes since its implementation. Ensuring the quality matriculation of students is ultimately the most important educational outcome. Consistent and equivalent evaluations need to be utilized for each component of the Athletic Training Program. Preceptor evaluations are often an afterthought and given inconsistently from the students, faculty, and administrators. Currently, programs are measured on a series of standards for accreditation. Standard 11 requires a program maintain a three-year aggregate of a seventy percent first-time pass rate of the Board of Certification Examination for Athletic Trainers. The need for program evaluation is essential now, more than ever, to identify any ways to improve the first-time pass rate. Students were identified as a valuable source of information in regard to preceptor characteristics. Using a modified Tripod survey, student perceptions will be compared of preceptors at both schools currently in compliance with Standard 11 and not in compliance.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

The education of Certified Athletic Trainers has been evolving since the late 1800s. It was not until 1917 that Dr. Samuel Bilik published “The Trainer’s Bible” which is considered to be the first published text addressing the needs of the professional Athletic Trainer (O’Shea, 1980). Shortly after, the Cramer Chemical Company was established in Gardner, Kansas. In 1932, Cramer established the monthly publication “The First Aider”. This early journal was developed to relay information about the young profession of Athletic Training (Delwiche & Hall, 2007). In 1947, after World War II, professional Athletic Trainers began to form regional organizations. There was an attempt to form a national organization before the war; however, the pressures of the conflict resulted in its failure. It was not until 1948 that the first curricular program in Athletic Training was offered at an institution of higher education (Delwiche & Hall, 2007).

Evolution of Athletic Training Education

Indiana State University blazed the trail for formal education in Athletic Training. In 1948, this institution initiated an undergraduate degree curriculum and the following year also established a Master of Science in Athletic Training (Delwiche & Hall, 2007). It was not until 1950 that the profession established a national organization, which continues to represent members today. The National Athletic Trainers’ Association (NATA) was founded in 1950 during the first national meeting in Kansas City, Missouri (O’Shea, 1980). Though Indiana State began their curricula in 1948, prototypical

curriculum was not developed by the NATA until 1959 (Delwiche & Hall, 2007). Four institutions were officially endorsed by the NATA for established curricular undergraduate Athletic Training Education Programs (ATEP) in 1970 (Delwiche & Hall, 2007), coinciding with the development of the Board of Certification for Athletic Trainers (BOC). This entity established the Role Delineation and professional domains of which Athletic Trainers are to be competent. The BOC is also responsible for delegating the credential of Certified Athletic Trainer (ATC) to those individuals who pass the national examination written by this entity. Prior to January 1, 2004, a candidate could qualify to sit for the BOC examination via two routes: internship or curricular program. After 2004, all internship programs were discontinued (Delwiche & Hall, 2007).

The Commission on Accreditation of Athletic Training Education

A significant change in the establishment of Athletic Trainers as allied health professionals occurred when the American Medical Association formally recognized this group in 1990. In 1991, the Joint Review Committee on Educational Programs in Athletic Training (JRC-AT) formed under the Committee on Allied Health Education and Accreditation (CAHEA) as an initial accrediting agency (Delforge & Behnke, 1999). However, in order to be recognized by the Council of Higher Education, this responsibility was quickly turned over to the Commission on Accreditation of Allied Health Education Programs (CAAHEP). In 1997, the NATA determined it was necessary to develop the Education Council to develop a standard list of professional skills and knowledge a graduating Athletic Training Student (ATS) should possess

(Delwiche & Hall, 2007). The competencies created governed the curriculum of professional Athletic Training Education Programs.

In 2006, JRC-AT became a stand-alone entity, now known as the Commission on Accreditation of Athletic Training Education (CAATE). The current accrediting body governs 392 professional, 16 post-professional, and 12 residency programs (CAATE, 2016, September 14). Programs are held to a number of standards and reviewed annually, with full programmatic accreditation reviews every 3, 5, or 10 years.

The Strategic Alliance

The profession of Athletic Training is presently supported by four entities: (a) Board of Certification for Athletic Trainers, (b) Commission on Accreditation of Athletic Training Education, (c) National Athletic Trainers' Association, and (d) National Athletic Trainers' Association Research & Education Foundation. This is called the Strategic Alliance (AT Strategic Alliance, 2016). Each group is independent of each other and has a specific mission to support and advance the profession of Athletic Training. The BOC focuses on the certification credential and consumer protection, whereas the CAATE's mission is accreditation and quality education. The NATA focuses on the areas of professional development and advocacy, while the Foundation's task is to enhance scholarship and research (AT Strategic Alliance, 2016). This alliance has built a pillared foundation for the profession of Athletic Training.

Program Standards

There are 109 standards for professional programs currently published by the CAATE (2015, October 12). These standards govern a variety of different areas in Athletic Training Programs. As opposed to Standards 7, 8, 11, 12, and 13, which

measure program outcomes, Standards 37 through 41 mandate what a preceptor must do by program standards to meet minimum standards, to include “supervise during clinical education” and “be credentialed by the state” (CAATE, 2015, October 12). Standard 37 specifically addresses preceptor assessment of students, stating that evaluations should be completed; however, institutional autonomy is granted for the actual process. All programs are not created equal. There is no standardized way to evaluate any entity of Athletic Training Programs.

Students

Student Development

The basis of every academic major begins with students. How is each student recruited to the profession? What demographics define the landscape of the major? What kind of learner is a program addressing? Questions like these change the way a program or major develop students throughout their academic career. Athletic Training Programs are developing students in a number of ways; however, the focus is not just for qualified health care providers but professional leaders, as well. In addition to the academic curriculum, many programs support student organizations that encourage involvement at the national, district, and state levels of Athletic Training.

At the national level, select students are invited to join the Athletic Training educators in a conference called iLead, where they learn the distinct principles of leadership on a larger platform. A larger variety of student committees are available on the district and state levels, opening the opportunities for students to broaden and enhance their undergraduate years outside of the classroom (Katch, Tomczyk, Shinkle, & Berry,

2013). Placing students in positions of leadership opens networking opportunities and broadens the job market.

Is a leader born with the skill or developed? Katch, Tomczyk, Shinkle, and Berry (2013) discussed the difference between leaders and managers. Students who could live more in the now and are comfortable dealing with maintaining the status quo may feel more comfortable in a managing role. Leaders tend to be visionaries. They are unafraid of change and focus they goals for the future. Katch et al. (2013) reported students become more effective when they understand what type of role is the best fit. Educators are often faced with the issue of developing a teaching style that will enhance or develop the most competent student, leader, and professional. Problem-based learning was introduced to accommodate for the clinical learning as applied in Athletic Training programs. This learning style marries the content knowledge to skill application to make knowledge functional.

Problem-based learning

In modern literature, there are a number of definitions of problem-based learning (PBL). Neville (2009) identified McMaster University as the first to utilize PBL for medical education in 1969. Ironically, Barrows, the developer of this learning style, had no background in educational psychology or cognitive science (Barrows, 1986; Neville, 2009). Regardless, problem-based learning became extremely popular and a standard among most health care educational programs (Imanieh, Dehghani, Sobhani, & Haghghat, 2014; Kirschner, Sweller, & Clark, 2006; Neville, 2009).

After the popularity of problem-based learning became apparent, Barrows (1986) went on to further describe his educational objectives. PBL had been touted as a specific

educational method, of which Barrows dispels. Problem-based learning is intended to be a fluid approach, catering to the needs of individual students, yet consistently focusing on four objectives: (a) structuring of knowledge for use in clinical context; (b) development of effective clinical reasoning process; (c) development of self-directed learning skills; (d) increased motivation of learning (Barrows, 1986, p. 481-482; Neville, 2009).

Exposure to real-time, or real-life situations engage the learner to structure knowledge in a safe environment.

Problem-based learning has proven to be beneficial to medical education as students are often presented with complicated problems requiring layers of answers. Textbook cases do not always present in real-time situations. PBL offers the student the opportunity to experience the task in a controlled environment and become more effective self-directed learners (Imanieh, Deghani, Sobhani, & Haghigat, 2014).

Andragogy

Modeled after European origins, andragogy as it is known in the United States is attributed to Dr. Malcolm Knowles. After meeting Dusan Savicevic, Knowles was introduced to the learning theory of andragogy and the two exchanged multiple ideas about the concept (Savicevic, 2008). Knowles developed his own divergence on the theory, ultimately calling it a ‘model’ and ‘technology’ of learning, which may not be selectively for adults (Clapper, 2010; Knowles, Holton, & Swanson, 2015; Savicevic, 2008). Knowles, Holton, and Swanson (2015) describe the distinct differences of traditional pedagogical model and andragogical model. As seen in Table 2.1, Knowles et al. differentiate the six aspects of learning for each model (as cited in Noor, Harun, & Aris, 2012, p. 674).

Table 2.1 *Pedagogical and Andragogical Assumption about Learners*

No.	Aspect	Pedagogical Model	Andragogical Model
1.	Need to know	Learners need to know what the teacher tells them.	Learner need to know why something is important prior to learning it.
2.	The learner's self concept	Learner has a dependent personality.	Learners are responsible for their own decisions.
3.	The role of the learner's experience	The learner's experience is of little worth.	The learner's experience has great importance.
4.	Readiness to learn.	Learners become ready to learn what the teacher requires.	Learners become ready to learn when they see content as relevant to their lives.
5.	Orientation to learning	Learners expect subject centered content.	Learners expect life centered content.
6.	Motivation	Learners are motivated by external forces.	Learners are motivated by primarily by internal forces.

Source: Knowles et al. 1998

Note. Reprinted with permission from “Andragogy and Pedagogy Learning Model Preference among Undergraduate Students,” by N. Noor, J. Harun, & B. Aris, 2012, *Procedia – Social and Behavioral Sciences*, 56, p. 674. Copyright 2012 by Elsevier.

In the model of pedagogy, responsibility of learning and relating content weighs on the teacher. Andragogy the takes an experiential approach, relating to students as partners in learning and relying on internal motivational factors. Knowles admitted ultimately, a multifaceted approach would work best for success in learning (Clapper, 2010; Knowles, Holton, & Swanson, 2015). One approach does not take the place of another, but rather scaffold the information and allow it to be digested by students in different ways. Noor, Harun, and Aris (2012) concluded in higher education students, ages 18 to 24, prefer a mixture of pedagogical and andragogical methods to enhance their academic success.

This methodology aligns consistently with most health care related education programs, as students are given related content and placed in clinical or simulated situations to engage self-directed and problem-based learning (Clapper, 2010; Draganov, Andrade, Neves, & Sanna, 2013). As consumers of content knowledge, the adult learner

can now digest the information and relate it into applicable, real world situations. The six principles of Andragogy require the instructors to be more than the sage on the stage. Professors now become the guide on the side or as Knowles labels them, facilitators (Clapper, 2010; Knowles, Holton , & Swanson, 2015). Educators welcome the complexity of adult learners and addressing these needs in instruction. Each of these needs is listed as to how Andragogy is put into practice in Figure 2.1 below. In the world of Athletic Training education, content knowledge is taken to the next level as students are shifted into clinical rotation.

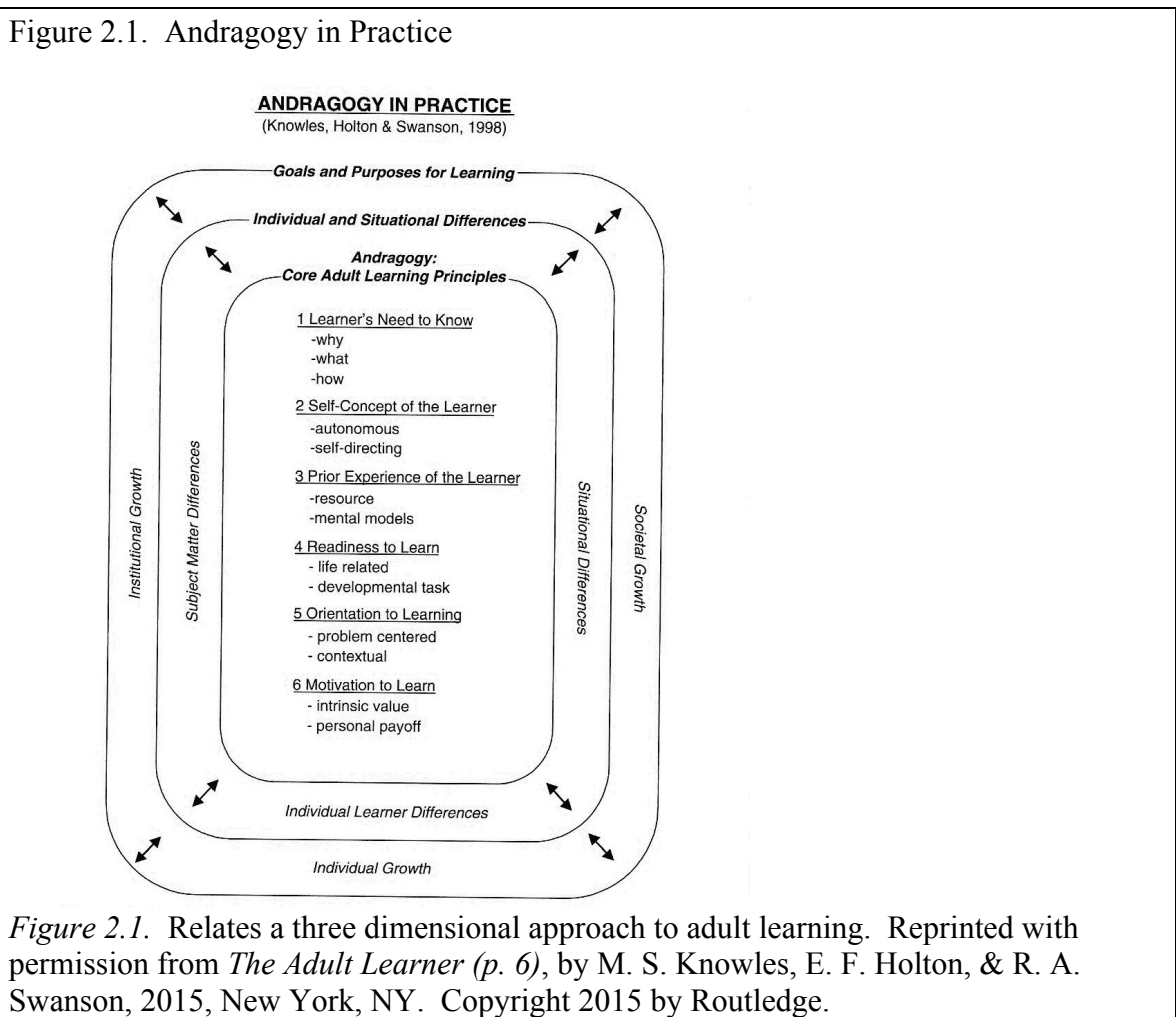


Figure 2.1. Relates a three dimensional approach to adult learning. Reprinted with permission from *The Adult Learner* (p. 6), by M. S. Knowles, E. F. Holton, & R. A. Swanson, 2015, New York, NY. Copyright 2015 by Routledge.

Preceptors

Characteristics

The Commission on Accreditation of Athletic Training Education (2015, October 15) defines the term preceptor as “a certified/licensed professional who teaches and evaluates students in a clinical setting using an actual patient base” (p. 14). As seen in other health care professions, a preceptor is utilized to aid students in transitioning content knowledge to applicable, real world situations (Knisley, Fulton, & Friesth, 2015; Laurent & Weidner, 2001; Lockwood-Rayermann, 2003; Shinnors & Franqueiro, 2015; Young, Vos, Cantrell, & Shaw, 2014). Prior to the current standards for accreditation of athletic training educational programs, preceptors were referred to as Approved Clinical Instructors (ACI) (CAATE, 2006). In keeping with current trend, the CAATE made the decision to align with other health care professions utilizing the term “preceptor” in place of “approved clinical instructor”.

Though the nomenclature changed, the purpose and duties of the preceptor did not. The standards for professional practice clearly define the qualifications and responsibilities of all faculty members in athletic training programs. Standards 37 and 38 define the responsibilities of a preceptor to include:

- Supervision
- Providing instruction and assessment of professional knowledge
- Providing opportunities to engage professional knowledge and utilize it in real time situations
- Provide assessments for real time decision making

- Facilitate actual use of professional knowledge in an athletic training (CAATE, 2015, October 15)

Standards 39, 40, and 41 address qualifications as such, the preceptors must be credentialed by the state in a health care profession, not enrolled in the athletic training program, and receive continual training from the program to promote successful learning (CAATE, 2015, October 15). The standards do also mention in program delivery, number 52, the majority of clinical hours earned by the student must be supervised by an ATC in good standing with the Board of Certification and state. These qualifications are minimal requirements. Individual programs have institutional autonomy to place further qualifications and requirements on preceptors, however most volunteer and receive no pay for the position.

With so little guidance from the CAATE in regard to preceptor hiring, athletic training programs are consistently investigating what constitutes a quality preceptor for positive student outcomes. In health care education, multiple studies were found in the literature identifying characteristics of preceptors or clinical instructors. Nursing closely aligns with the curricular model in athletic training programs. Shinnors and Franqueiro (2015) listed five skills necessary for preceptor to perform successfully in nursing. Timely and constructive feedback was the most important skill the preceptors demonstrated to students. Acting as both a teacher and role model were also addressed, providing the students with consistent learning opportunities and demonstrating appropriate professional behavior. A preceptor should also act as a facilitator of opportunities and foster an understanding for the culture of the work place. Lastly, the preceptor should demonstratively represent being a leader.

Characteristic traits such as, calm during times of stress, flexible, motivates students, enjoys teaching, communication skills, open-minded, stimulates student involvement, clinical competence and accessibility are characteristics relating a common theme across the allied health programs (Katz, 1984; Knisley, Fulton, & Friesth, 2015; Laurent & Weidner, 2001; Weidner & Henning, 2002; Young, Vos, Cantrell, & Shaw, 2014).

Weidner and Henning (2002) categorized nine traits in athletic training that would assist in the success of clinical instructors, known today as preceptors.

- Legal and ethical behavior
- Communication skills
- Interpersonal skills
- Supervisory skills
- Instructional skills
- Evaluation and assessment skills
- Clinical competence
- Administrative skills
- Professional development

Many of the characteristics noted in nursing cross over in athletic training. Laurent and Weidner (2001) found students identified clinical instructors who were confident and respectful to be the most helpful traits. Whereas, the least beneficial characteristics were noted as those heavily involved in research, style of presentation, and is critical of themselves. Communication, leadership tendencies, interpersonal behaviors, and professional behaviors heavily define the success of a preceptor (Herzog & Zimmerman,

2009; Lauber & Killian, 2009; Platt Meyer, 2002; Swann, 2009). Raab, Wolfe, Gould, and Piland (2011) defined the constructs of a quality Certified Athletic Trainer. The study elicited responses from other Certified Athletic Trainers, however the results related five constructs, of which four were affectively related. Only one characteristic related effectively or relevant to education, which was knowledge. The other four characteristics were care, communication, integrity, and commitment. All traits were desired in preceptors, and ultimately in students.

Training and Mentoring of Preceptors

As related previously, the standards set forth by the CAATE mandate minimal responsibilities and qualifications of preceptors. Individual institutions are responsible for the training and mentoring of these clinical instructors. There is no standardized method in which to train preceptors. The standard states training must be ongoing, however, provides no guidance as to what this means. Mazerolle, Bowman, and Thomas (2014) found many preceptors had no pedagogical training and though they may be a skilled athletic trainer, this does not constitute a successful preceptor.

Mazerolle et al. (2014) discussed formal and informal training, which appears to be involved when assuming the role of preceptor. Most athletic training programs will offer a formalized preceptor training session or orientation. Each program decides how often this training must be repeated. The best-case scenario is that a preceptor possesses a teaching certificate, however, most seek out professional development opportunities to enhance their skill as an instructor. Informally, many preceptors model behavior of role models, make observations, or utilize self-reflection.

In 2004, Weidner and Henning defined standardized criteria for selecting, training, and evaluating preceptors, however, it has been grossly underutilized. Programs do not appear to be consistently providing preceptors with the tools to support students and establish appropriate goals (Warren & Denham, 2010). Administrators can assist the development and motivation of preceptors in athletic training programs by providing both intrinsic and extrinsic motivation to the clinical staff. Intrinsically, preceptors need frequent, collaborative interactions, verbal or written feedback, and accessibility to the Program Director or Clinical Education Coordinator. By offering other extrinsic factors, such as free shirts, paid dues, or recognition with a plaque, administrators are covering the spectrum of motivational factors (Lauber & Wimer, 2008).

Challenges and Barriers

Preceptors are tasked with a large responsibility with little to no pay. Many relate taking on students, though at times difficult, has multiple benefits. These things can include giving back to the profession, keeping current with the professional knowledge of athletic training, or improving their personal skills through teaching (Bowman, Mazerolle, & Dodge, 2013; DeWolfe, Laschinger, & Perkin, 2010). Aside from the benefits, one of the main challenges for preceptors is that of role strain. Preceptors are expected to act as both clinical educator and health care provider, meeting the stringent demands of both positions. Henning and Weidner (2008) found collegiate athletic trainers serving as preceptors, 49% experienced high levels of role strain. Graduates assistants in this same setting were found to have a greater degree of role strain than head athletic trainers. Dodge, Mazerolle, and Bowman (2014) concluded the number of clients

served, lack of compensation, and extended working hours contribute to a negative learning environment. It was suggested in most preceptor training and orientations, role strain is not directly addressed. Dodge et al. suggest an addition of this topic to the orientation, strong communication from the Clinical Education Coordinator, and appropriate preceptor-student matching could help to reduce the strain.

Another challenge to the responsibilities of preceptors has been noted as difficulty providing real-time opportunities for students to apply their professional knowledge. When preceptors are evaluating student skills, typically, there are three methods that are utilized: real-time, simulation, or standardized patients (Walker, Weidner, & Armstrong, 2008). The most widely used method is simulation, as some clinical settings do not present with real-time occurrences relating to the practical knowledge the student is attempting to apply (Armstrong, Weidner, & Walker, 2009). Barriers to learning may also relate to the student directly. Nakajima and Freeseemann (2013) found students skilled in help-seeking behaviors were more likely to score higher on evaluations. If a preceptor is not experienced in recognizing avoidance behaviors, the student's outcomes could suffer.

Influence on Students

A positive relationship between preceptor and student can foster a lifelong, authentic commitment to the field of Athletic Training. Content knowledge is an essential component to the education of students. However, learning from a preceptor with daily opportunity to apply skills and knowledge has proven to be crucial in the connection of content to functional skills (Benes, Mazerolle, & Bowman, 2014). Students look to their preceptors to model professional behavior in real-time situations.

The influence of this interaction often shapes the career path of students. Dodge and Mazerolle (2015) found the dynamic nature of athletic training was a positive factor for students. Preceptors, who embraced this and were enthusiastic about the profession, had a lasting positive influence on students. Clinical education coordinators are encouraged to consider the relationship fit between student and preceptor for the most successful outcomes.

Teaching Effectiveness

Measures

Educational programs measure success in numerous ways. Academic outcomes or achievement can usually be related to test scores or successful completion of a task. In higher education, programs often only survive if outcomes are thriving. The question remains, is the academic success of a student due to the teacher's abilities or does he have a natural aptitude for learning? The Measures of Effective Teaching (MET) project was a three-year study answering this question and more. Utilizing over 3,000 teachers and their students, the researchers randomly assigned children to the teachers and analyzed their effectiveness in three ways: (a) classroom observation, (b) student perception surveys, and (c) student achievement gains (Mihaly, McCaffrey, Staiger, & Lockwood, 2013).

The MET project utilized the Tripod Survey for student perception data gathering. This was developed by Dr. Ronald Ferguson (2014) as part of his lifelong passion to create equality in the classroom. The Tripod Survey has been utilized predominantly in the primary and secondary schools' realm, but offers consistent and reliable data applicable to higher education. This survey was based on seven categories called the 7Cs

of Effective Teaching (Ferguson, 2012). The 7Cs were Care, Confer, Captivate, Clarify, Consolidate, Challenge, and Control. Each category offered several related questions for the students to answer as to how their teachers rated. The MET did establish the teacher's ability to challenge them in learning and control the classroom rated as the highest predictors of successful outcomes (Ferguson, 2012; Mihaly, McCaffrey, Staiger, & Lockwood, 2013).

Lauber and Killian (2009) investigated the use of the Clinical Instructor Behavior Instrument (CIBI) for use in athletic training programs. This survey was applied directly to the preceptor for self-evaluation. It divided the behavior traits into five categories: (a) evaluative, (b) instructional, (c) interpersonal, (d) personal, and (e) professional. Programs administrators found this instrument particularly useful in understanding what professional development to plan for the clinical instructors. There is no standardized method in athletic training education to evaluate preceptors or clinical faculty. Each program is bound by the standards set forth by the CAATE and the competencies established by NATA Executive Committee for Education. However, each program sets its own standards for evaluation. In 2004, Weidner and Henning suggested a standardized method for the selection, training, and evaluation of preceptors utilizing seven categories: (a) legal and ethical behavior, (b) communication skills, (c) interpersonal relationships, (d) instructional skills, (e) supervisory and administrative skills, (f) evaluation of performance, and (g) clinical skills and knowledge. This instrument never came to fruition, though it has obvious merit when compared to other measurement tools. The sample size of 44 participants utilized by Weidner and Henning

was relatively small when compared to the Tripod Survey. This tool has potential to be useful and increase BOC positive outcomes as clinical faculty improve.

Instructional Strategies

Efficacious educational programs are founded in competent instructors. The ability to relay information in a manner allowing students to connect and apply knowledge is a skill. In health care education, the amount of content consumed and functionally employed can be overwhelming to students. Arocha and Patel (1995) noted, medical students often experience difficulty in learning as many of the signs and symptoms of disease overlap, making it problematic to draw definitive connections. In this study, it was noted novice students tended to consume content and then attempted to make a direct connection through a singular hypothesis. As students become more advanced, mature learners, the ability to formulate multiple possibilities, as well as connect experiential learning with content, cultivates. In order to improve success, the preceptor would need to understand the level of student they are teaching, and their ability to absorb and apply knowledge.

Collaboration between didactic faculty and clinical faculty has been demonstrated to be another crucial link for improving outcomes (Carr & Drummond, 2002). Athletic training program educators, both in the field or classroom, should have a clear understanding of both theory and skills sets presented in the curriculum. As students struggle to make connections with content knowledge, having a demonstratively united faculty will bridge the theory-practice gap from classroom to application.

Preceptors must also recognize and take advantage of teachable moments or real time opportunities to advance knowledge practice. Role strain often creates barriers to

real-time opportunities; however, utilization of these methods fosters encouragement and solidifies practical knowledge (Rich, 2009). When these opportunities do not openly present, alternative methods should be considered, such as simulation or standardized patients (Armstrong, Weidner, & Walker, 2009).

A preceptor should also consider the method in which students are engaged for knowledge checks. Barnum (2008) found preceptors demonstrated two methods to question students about knowledge during clinical experiences: (a) strategic and (b) non-strategic. Preceptors who utilize a strategic approach encouraged complex thinking from low-to-high cognition. An example of this would be to implement a “what, how, why” approach. Students explain what they know by rote memory, they explain how they are going to apply this knowledge, and then synthesize the situation by understanding why it should be done (p. 288-289). Non-strategic questions, such as, “Do you understand why I am doing this?” do not engage complex levels of learning required for real-time practice (p. 290). Barnum reported students implicitly preferred a strategic approach to learning.

Summary

Athletic Training has been advancing as a profession since the late 1800s. Many people contributed to the development of formalized education, but it was not until the late 1940s and early 1950s the first curricular program was initiated and the National Athletic Trainers’ Association was solidified (Delwiche & Hall, 2007). Entities evolving from this growth, such as the Board of Certification for Athletic Trainers, the Commission on Accreditation of Athletic Training Education, and the Strategic Alliance, assisted in progressing the profession through developing standards and guidelines by which to govern (AT Strategic Alliance, 2016). Student outcomes are of particular

concern, with the current standards now focusing on first-time pass rate of the BOC examination (CAATE, 2016, February 5). Athletic training programs are encouraged by such standards to evaluate teaching models and faculty skills so as to create successful outcomes. Preceptors, as part of the clinical faculty, are of particular interest as students develop cognitive complexity when asked to put content knowledge to functional use (Dodge, Mazerolle, & Bowman, 2014).

CHAPTER THREE

METHODOLOGY

Introduction

As the profession of Athletic Training has moved from infancy to adulthood, its education has undergone many changes. The standards by which programs are measured are under continual review to ensure the production of quality students. Review has been performed in a number of different ways so as to encourage effective teaching and relationships between students, faculty, and administrators. It has been noted the student voice in this review needs to be analyzed in greater depth for a more versatile perspective (Horn, 2014; Kane, Kerr, & Pianta, 2014; Mihaly, McCaffrey, Staiger, & Lockwood, 2013; Wilkerson, Manatt, Rogers, & Maughan, 2000).

Standard 11 of the CAATE Professional Standards requires programs maintain a first-time pass rate of seventy percent or greater for all students who sit for the Board of Certification exam over a three-year period (CAATE, 2015, December). This pass rate relates the athletic training program's compliance or non-compliance. If the pass rate, over three years, falls below seventy percent, the program is considered to be non-compliant with Standard 11. This could result in probation or ultimately withdrawal of accreditation (CAATE, 2016, February 5). The success of this outcome can be related to a number of factors; however, this study focuses on the preceptor and how the preceptor effects student learning.

Research Questions

The following research questions guided this study:

1. Is there a significant difference in athletic training programs preceptors' abilities to consolidate information, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
2. Is there a significant difference in athletic training programs preceptors' contemplation of professional ideas, as perceived by students, between programs in compliance and those no in compliance in accordance with Standard 11?
3. Is there a significant difference in athletic training programs preceptors' ability to inspire professional curiosity, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
4. Is there a significant difference in athletic training programs preceptors' demonstration of nurturing, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
5. Is there a significant difference in athletic training programs preceptors' ability to manage the clinical site, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
6. Is there a significant difference in athletic training programs preceptors' ability to impose rigor, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Conceptual Framework

Athletic Training involves a dichotomous educational process. The engagement of both classroom knowledge and clinical components construct the hands-on based curriculum on which athletic training education was founded (Delforge & Behnke, 1999; Seegmiller, 2003). Students are taught theory and foundational knowledge in the

classroom and implement them immediately at clinical experiences outside of the classroom (Yardley, Teunissen, & Dorman, 2012). Faculty members undergo student assessment of instruction for all courses. Most faculty also participate in promotion and tenure processes, such as peer-teaching assessment. On the didactic side, the evaluative process is extensive (Kreiser, 2001; Seldin, 1980). However, the clinical preceptors receive minimal feedback relative to their performance as field educators (Weidner & Henning, 2005).

Young, Vos, Cantrell, and Shaw (2014) found a disconnection between how preceptors self-assess their success in teaching and how students actually perceive them as educators. Looking at this problem from a positivist's perspective, the question can be pursued regarding the impact the field educator has upon student outcomes. A deductive approach will be applied during analysis for the most appropriate comparisons. Schools are divided into two categories in regard to Standard 11, compliant and non-compliant. The most recent aggregate data were used to determine a program's compliance standing. All institutions maintain a varied number of preceptors for their clinical component. This number can be related to location of institution and convenience of clinical sites.

Participants

The population of the study included all students within actively accredited professional Athletic Training Programs, present day. Due to accessibility issues, students were engaged via cluster sampling through Athletic Training Program Directors. Cluster sampling is conducted by selecting participants from groups that are established within defined populations who share characteristics that are similar (Ary, Cheser Jacobs, & Sorensen, 2010). The Program Directors were supplied an anonymous link to the

Preceptor Effectiveness Survey (PES) and the researcher asked them to forward the link on to students within individual programs. Program Directors' emails are publically available on the <http://CAATE.net>. Recruitment emails were sent to 40 programs in compliance with Standard 11 and 63 (all possible) programs in non-compliance with Standard 11 utilizing the aggregate data from 2013-2015. Compliant program participants totaled 395, of which 88 students initiated taking the survey and 78 students actually completed. Ten partial responses were recorded and removed from data analysis. Non-compliant program participants totaled 220, of which 30 students initiated taking the survey and 29 students completed. One non-compliant partial response was recorded and removed from data analysis.

Variables

Utilizing the aggregate data from the CAATE's (2015, December) most recent reporting period of 2013-2015, the independent variable in this study was compliance. There are two levels of this variable. First was compliance defined as an Athletic Training Program, within the years of 2013 – 2015 and with a 3-year aggregate first-time pass rate of 70% or greater on the Board of Certification Examination for all students who have taken the test. The second level was non-compliance defined as an Athletic Training Program within the years of 2013 – 2015 and with a 3-year aggregate first-time pass rate of 69% or less on the Board of Certification Examination for all students who have taken the test. The dependent variables are trait characteristics of a quality preceptor: (a) nurturing; (b) contemplative; (c) inspirational; (d) consolidative; (e) rigorous; (f) management. These traits and the reason they were chose are explained below.

Nurturing

A nurturing trait is the measure of a preceptor's "ability to develop supportive relationships with students, paying attention to them as individuals" (Horn, 2014, p. 24).

This particular trait focuses on the emotional connection the preceptor offers to each pupil. Students develop bonds with instructors, enabling them to feel safe with both successes and failures of applying clinical skills. Horn (2014) reported students were more likely to undertake a new skill if the teacher proved to genuinely care for them.

Several characteristics constructed the nurturing quality:

- Availability
- Providing encouragement to students
- Understanding students as individuals
- Making the learning environment feel comfortable
- Able to construct amiable relationships with students and colleagues
- Teaching to the bigger picture, not just the curriculum (Ferguson, 2012; Horn, 2014)

Each of these characteristics is a vital component for students to gain trust in their preceptors. This enables the student to move forward in learning without fear of failure.

Consolidative

Consolidative behaviors relate to the ability of the preceptor to take what has been taught in the classroom and apply the skills or concepts for a cohesive educational experience (Horn, 2014). An important component of this was how the instructor provides feedback to the student and how learning checks are performed. Each behavior was intended to reinforce content knowledge by finding creative ways to commit

knowledge to long-term memory. This characteristic encourages preceptors to provide differing learning opportunities by practicing both their technical skills and problem-solving abilities (Laurent & Weidner, 2001). The most common behaviors reported for this trait were:

- Reviews and summarizes the content, so as to highlight the relationships among ideas
- Requests the students summarize what has been learned, making curricular connections
- Providing constructive feedback
- Reinforced learning through creative means
- Checked for understanding (Ferguson, 2012; Horn, 2014).

Inspirational

A preceptor who is inspirational stimulates curiosity and interest in the profession of Athletic Training and effectively provides a basis for continuing interest. Behaviors focused on the following:

- Each preceptor had the ability to relate classroom knowledge to the real-time or relevant situation
- Learning opportunities were imaginative and resourceful
- Students were prompted to explore deeper meaning of content knowledge
- Preceptors were passionate about teaching
- Preceptor made lessons meaningful to the lives of the student
- Overall, the experience was positive and enjoyable (Dodge & Mazerolle, 2015; Ferguson, 2012; Horn, 2014)

Dodge and Mazerolle (2015) found similar behaviors to have a positive influence on Athletic Training students' opinions about the profession and decreased attrition.

Rigorous

The rigor trait was defined as the ability to academically challenge and press students for precision and consistency in professional knowledge (Horn, 2014). This involves setting a high standard not only for the student, but also for himself or herself. Preceptors test the abilities of students by probing for their best efforts. Trait behaviors are described as:

- Ensures clinical knowledge content is challenging and varied
- Requires students to deeply think about answers and explain responses
- Offers feedback for success and support if needed
- Encourages students to persevere when challenged (Ferguson, 2012; Horn, 2014).

Management

Management was the preceptor's ability to sustain order, garner respect, and focus on student learning and providing health care, at the clinical site between the student, staff, athletes, coaches, parents, and administrators. This behavior allows the student to learn how to act professionally in real-time situations. Displaying the ability to organize and multitask while in stressful situations is a display of calm, confident professionalism. The preceptor is able to manage the education of the student, while completing the tasks of his or her job. Several behaviors are vital trait characteristics.

- The environment is organized and time is used efficiently
- The preceptor respects the clinical students

- The preceptor is able to encourage the clinical student to participate in a real-time event
- The preceptor establishes and hold the student to a high expectation
- The preceptor is preparing for instruction of the clinical skills (Ferguson, 2012; Horn, 2014)

Contemplative

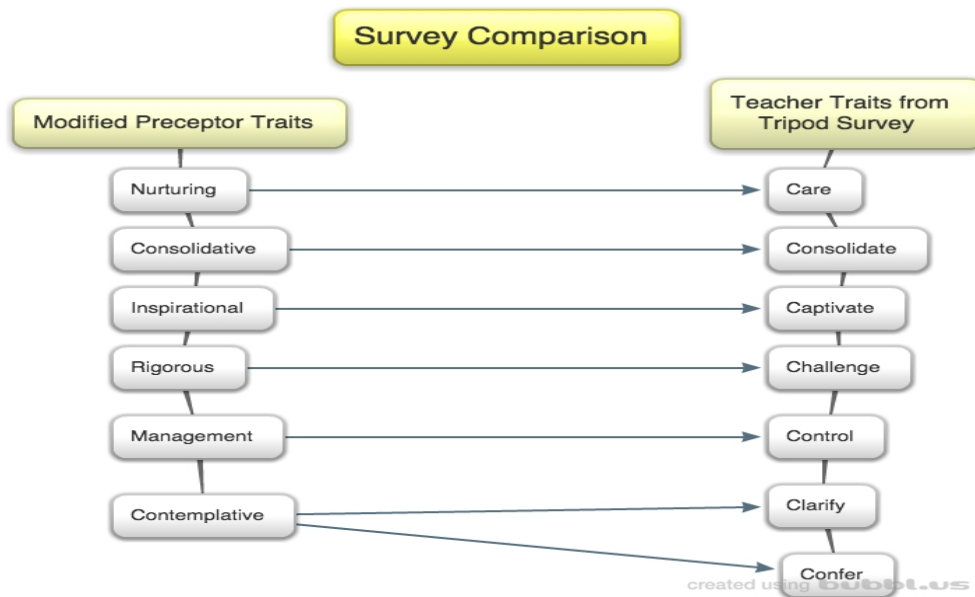
The contemplative trait was a combined trait of the Tripod survey. Due to high correlations, the traits of clarify and confer were combined to create the contemplative trait. This is defined as cultivating understanding, especially on concepts students find difficult. Also, the preceptor invites open discussions about ideas and welcomes feedback. Several important behaviors in this characteristic are as follows:

- Students are encouraged to share their ideas and opinions with the preceptor
- The preceptor is able to concisely describe the topic. All knowledge is shared with clear intent
- Feedback is specific when given, so as to help the student grow in knowledge
- Students are engaged to take an active role in the clinical experience (e.g. cooperative learning, peer assessments, creative problem solving, reciprocal teaching)
- Preceptor models success by providing examples or demonstrations
- The preceptor uses a variety of methods to check for student understanding (Ferguson, 2012; Horn, 2014).

Instrument

Utilizing the Tripod Survey (Ferguson, 2014), the instrument in this study was developed based on its components. The Tripod Survey utilized seven categories as a framework for the measurement of effective teaching as perceived by students. The category names were modified to be more relevant to the young adult learners and compare as follows, with the seven categories of the Tripod survey, known as the 7Cs: (a) Care changed to Nurturing; (b) Confer and Clarify changed to Contemplative; (c) Captivate changed to Inspirational; (d) Consolidate stayed the same as Consolidative; (e) Challenge changed to Rigorous; (f) Control changed to Management. A comparison of trait names can be found in Figure 3.1.

Figure 3.1 *Survey Comparison*



The Preceptor Effectiveness Survey (PES/Modified Tripod) was developed from the seven categories of the Tripod survey. The PES utilized only six trait categories resulting in the combination of confer and clarifies traits. Two of the components, “Confer” and

“Clarify” correlated so highly it could be justified to collapse the category into one (Kane, Kerr, & Pianta, 2014, p. 180).

A positively stated Preceptor Effectiveness Survey was developed based on these 6 characteristic traits, each with a definition attached. For each trait, 6 items were developed, utilizing a five-point response scale. These statements are based on the items from the Tripod survey and modified for the young adult clinical learner (Ferguson, 2014). A total of 36 questions designed to assess the student’s perceptions of their preceptor’s traits are included in the instrument. The student will be asked to complete the PES in regard to the preceptor they have most recently completed a semester with, not the current preceptor. The instrument was developed and distributed through Qualtrics. The Qualtrics modifier known as “ballot box stuffing” was selected. This modifier safeguards against subjects answering the Preceptor Effectiveness Survey more than once. A copy of the instrument and instructions to participants can be found in Appendix A.

Validity

Ary, Cheser Jacobs, and Sorensen (2010) describe validity as the interpretation of scores rendered from the instrument and how this explanation is supported through evidence. Validity was verified through evidence in three manners:

1. Concurrent validity. The PES utilized was based on the Tripod survey.

Raudenbaush and Jean (2014) took an interesting approach with the data from the Measures of Effective Teaching project. Data are traditionally validated in three ways: (a) univariate prediction, (b) multivariate prediction, and (c) composite score. However, this does not offer information in regard to combined predictive

value (Raudenbaush & Jean, 2014). As a result, the researchers believed a multivariate prediction was necessary to all traits in the outcome. Such analyses may lead to inaccurate coefficient estimates and require the third approach of composite score. This approach totals the traits into one single index, which may result in a loss of information. Due to the inherent problems with the three analyses, the researchers also utilized a Multilevel Variable Selection Model (MVSM) and Multilevel Principal Components Regression (MPCR) to complete the analyses. The validity was assessed this way as an alternative to the univariate and multivariate regressions as well, accounting for the high correlations between the traits and large standard errors. Because the instrument is similar to the Tripod survey with changes only made in language to relate to adult learners, it is surmised this retains the established validity (Raudenbaush & Jean, 2014).

2. Content validity is being able to define or describe the variable so it accurately relates each item of the instrument was compared to the definition of each trait (Ary, Cheser Jacobs, & Sorensen, 2010). These definitions were compared by whom that of the Tripod survey to establish content validity.
3. Face validity describes if an expert examining a survey can clearly understand what is being related (Ary, Cheser Jacobs, & Sorensen, 2010). Three experts compared the definitions to the items of the survey, concurring all were appropriately related for face validity. The areas of expertise represented were, athletic training clinical content, curricular assessment and pedagogy, and educational research.

Reliability

The Preceptor Effectiveness Survey addressed multiple traits and, just as the original Tripod survey, Cronbach's alpha was the most appropriate reliability assessment. Mihaly, McCaffrey, Staiger, and Lockwood (2013) stated the Tripod survey traits utilized with the Measure of Effective Teaching Project had Cronbach's alpha scores of 0.80 and higher. Reliability for this study was assessed by use of Cronbach's alpha to examine for internal consistency. This was calculated for the entire sample.

Study Design

The CAATE website publicly lists all professional athletic training program and their program director's contact information. An email was sent to each program professional level program director introducing the study, for a total 365 programs. In turn, the email then asked the program directors to forward the link for the PES to their students for completion. The only response requested from the program director is for the number of students and preceptors in the program. Each link is directly related to the individual institution, so the data can be tracked back to the aggregate pass rate. Differences were observed between each trait characteristics and compliant institutions as opposed to the trait characteristics and non-compliant institutions.

Statistical Design

The data were examined utilizing Statistical Package for the Social Sciences (SPSS 23). Multiple dependent variables were utilized in the study; therefore, a MANOVA method was applied to determine if there were differences between two or more of the dependent variables. This method could be employed simultaneously.

MANOVA would detect if the dependent variables were significantly affected by changes in the independent variables and crosscheck it to the other dependent variables.

Field (2009) stated multiple assumptions must be present for the appropriate usage of MANOVA. The first is the independence of observations. Each group must be independent of themselves and no participant can be a member of more than one group. The second is there are two or more dependent variables measured at the interval or ratio. The third assumes there is normality in the multivariate distribution. Last, homogeneity of covariance is assumed, similar to ANOVA. Not only is the variance assumed to be similar in the distribution, but also any relationship between dependent variables is correlated equally.

There are several additional options to choose from when testing the MANOVA in SPSS. When the initial analysis was performed descriptive statistics, Box's test of equality of covariance matrices, and Bartlett's test of sphericity were implemented. Means and standard deviations were provided by descriptive statistics for both overall and group variables. Box's test assesses the null hypothesis and looked for homogeneity among the entire group; therefore non-significance was the goal. Bartlett's test would be used if Box's test were significant for a univariate repeated-measures design (Field, 2009).

MANOVA is characterized as a regression (Field, 2009). Each of the multivariate tests assesses to see if the means of the groups are similar. Seber (2004) defined the four tests as Pillai's Trace, Hotelling Trace, Wilks' Lambda, and Ray's Largest Root. These tests will largely produce the same result if the $h > 1$. Wilk's Lambda is very commonly used, but Pillai's Trace is also utilized for its robustness.

The analysis assesses univariate results, similar to what would be found in a one-way ANOVA. In the Levene's test of equality of variances, a non-significant result is ideal to demonstrate homogeneity of variance between the dependent variables. The matrices analysis reveals the between-subjects effects.

Summary

Athletic training programs strive for continual improvement in education. Utilizing data gathered directly from students offered perspective in an evaluative area often overlooked. This data was garnered from students who were attending institutions that are both compliant and non-compliant with the CAATE Standard 11. All students were questioned in regard to their experience with their most recent preceptor. The instrument was developed based on the Tripod survey (Ferguson, 2012) utilized in the Measures of Effective Teaching project by the Bill and Melissa Gates Foundation (2012). The statistical procedure was a MANOVA.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF THE DATA

Overview of the Study

The purpose of this study was to compare the student perceptions of preceptors of Athletic Training Programs that are in compliance with the Commission on Accreditation of Athletic Training Education (CAATE) Standard 11 to student's perceptions of preceptors of Athletic Training programs that are not in compliance with CAATE Standard 11. The data were gathered via survey from students who had completed at least one full clinical rotation with a preceptor. This Preceptor Effectiveness Survey was developed from the Tripod Survey (Ferguson, 2012), with the questions adapted for the adult learner. The survey analyzed six characteristic traits of preceptors. Each trait was compared to compliant and non-compliant programs for significant differences.

A total of 103 recruitment surveys were emailed to Program Directors. Forty surveys were sent to program directors of compliant Athletic Training Programs and 63 were sent to program directors of non-compliant Athletic Training Programs. Program directors were asked to distribute the surveys to students in their programs who had completed at least one full clinical rotation with a preceptor. Out of the disseminated surveys active participants initiated or completed surveys in 12 compliant programs and eight non-compliant. Initially, 40 surveys were sent to program directors of compliant programs and 40 to non-compliant programs. However, in an effort to gain a larger non-compliant sample, an additional 23 programs were added to survey dissemination five days after data collection began.

Compliant program participants totaled 395, of which 88 students initiated taking the survey and 78 students actually completed. The response rate for compliant programs was 22.28%. Ten partial responses were recorded and removed from data analysis. Non-compliant program participants totaled 220, of which 30 students initiated taking the survey and 29 students completed. One non-compliant partial response was recorded and removed from data analysis. The response rate for non-compliant programs was 13.64%. The overall response rate was 19.19% (See Table 4.1).

Table 4.1 *Response rate*

	Total # students in program	Total # respondents	Total partial responses	Total completed surveys	Response rate
Compliant ATPs	395	88	10	78	22.28%
Non-Compliant ATPs	220	30	1	29	13.64%
Overall	615	118	11	107	19.19%

Demographics

The initial five questions on the Preceptor Effectiveness Survey collected various demographic data. The sixth question was a safeguard to allow only those students whom had completed a full rotation with a preceptor to continue with the characteristic portion of the survey. The total sample size was 615 participants, of whom 118 actually responded. The total numbers of female respondents were 70 (61.9%) and male respondents were 42 (37.2%). Another gender option was offered with a text write-in stating “My gender is best represented as...”, with one (0.9%) respondent describing their gender as “mixed” (See Table 4.2). Five participants chose “prefer not to answer.”

Table 4.2 *Overall gender*

Gender Option	Frequency	Percent
Male	42	37.2
Female	70	61.9
My gender is best represented as...	1	0.9
Prefer not to answer	5	--

The respondents varied in age from 18 to 45, with the greatest number of respondents answering between the ages of 20 to 24. The mean age was 20.86. Three students preferred not to answer the question regarding their age (see Table 4.3).

Academic ranks included Freshmen, Sophomores, Juniors, Seniors, First Year Master's, and Second Year Master's students (See Table 4.4). Academically more students ranking as Juniors (40 or 33.9%) and Sophomores (37 or 31.4%) participated. Five students did not answer this question.

Table 4.3 *Overall ages*

Age	Frequency	Percent
18	1	.8
19	7	5.9
20	27	22.9
21	23	19.5
22	18	15.3
23	12	10.2
24	7	5.9
25	5	4.2
27	3	2.5
28	1	.8
29	1	.8
30	1	.8
32	1	.8
33	1	.8
45	2	1.7
No answer	3	

Table 4.4 *Overall academic rank*

Academic Rank	Frequency	Percent
Freshman	3	2.5
Sophomore	37	32.7
Junior	40	35.4
Senior	28	24.8
First Year Master's	3	2.7
Second Year Master's	2	1.8
No answer	5	

Student membership in the National Athletic Trainers' Association was acknowledged by 74 (62.7%) of the participants. Thirty-nine stated they did not belong to the organization. Five students did not answer this question. All 10 of the National Athletic Trainers' Association Districts were represented by respondents, with 77% of the respondents coming from Districts 5 and 7 (see Table 4.5).

Table 4.5 *Overall NATA District representation*

NATA District Representation	Frequency	Percent
District 1: CT, ME, MA, NH, RI, VT	3	2.5
District 2: DE, NJ, NY, PA	8	6.8
District 3: SC, MD, NC, VA, WV, Wash. DC	1	.8
District 4: IL, IN, MI, MN, OH, WI	1	.8
District 5: IA, KS, MO, NE, ND, SD, OK	53	44.9
District 6: AK, TX	1	.8
District 7: AZ, CO, NM, UT, WY	38	33.6
District 8: CA, HI, NV, Guam	1	.9
District 9: AL, FL, GA, KY, LA, MS, TN	6	5.3
District 10: AK, ID, MT, OR, WA	1	.9
No answer	5	

The final demographic question was the safeguard, asking if the respondent had completed a clinical rotation with a preceptor. If the respondent answered, “I am currently on my first clinical rotation,” the survey terminated. Four students’ answers ended in survey termination. There were 109 respondents who successfully completed the demographic section of the survey, with 107 who fully completed. Five respondents’ data was not completed past demographics.

Research Questions

The following research questions guided this study:

1. Is there a significant difference in athletic training programs preceptors’ abilities to consolidate information, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
2. Is there a significant difference in athletic training programs preceptors’ contemplation of professional ideas, as perceived by students, between programs in compliance and those no in compliance in accordance with Standard 11?
3. Is there a significant difference in athletic training programs preceptors’ ability to inspire professional curiosity, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
4. Is there a significant difference in athletic training programs preceptors’ demonstration of nurturing, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
5. Is there a significant difference in athletic training programs preceptors’ ability to manage the clinical site, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

6. Is there a significant difference in athletic training programs preceptors' ability to impose rigor, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Analysis of Data

The data were exported via Qualtrics for analysis through SPSS version 23 and analyzed using descriptive statistics and MANOVA. The results revealed some differences between two character traits of the preceptors in the compliant and non-compliant programs. Box's test of equality of covariance matrices was significant, $p = .003$, indicating a violation of the assumption of sphericity. Levene's test of equality of error variances did not reveal significance at the .05 level for any dependent variable.

Findings within the between-subjects' effects revealed a significant difference in one trait, with another trait approaching significance. There was a statistically significant difference in ratings of how rigorously preceptors behaved in Standard 11 compliant Athletic Training Programs versus Standard 11 non-complaint Athletic Training Programs, $F(1, 105) = 7.210, p = .008$. The difference in ratings of the consolidative trait approached significance in compliant Athletic Training Programs versus non-compliant programs, $F(1, 105) = 3.897, p = .051$ (see Table 4.6).

Students rated trait characteristics of Athletic Training Program preceptors. Students were designated from programs either compliant or non-compliant with CAATE's current Standard 11. Preceptor trait characteristics were compared to programs in compliance and non-compliance with Standard 11. A multivariate analysis of variance was conducted to assess differences. The MANOVA failed to result in a significant multivariate effect at $p < .05$, Pillai's $T(6, 100) = 1.45, p = .203$.

Table 4.6 *Tests of Between-Subjects Effects*

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Nurturing	.551 ^a	1	.551	1.110	.294	.010
	Contemplative	.869 ^b	1	.869	1.748	.189	.016
	Inspirational	1.291 ^c	1	1.291	2.139	.147	.020
	Consolidative	2.203 ^d	1	2.203	3.897	.051	.036
	Rigor	3.175 ^e	1	3.175	7.210	.008	.064
	Management	.540 ^f	1	.540	1.081	.301	.010
Intercept	Nurturing	1480.452	1	1480.452	2980.300	.000	.966
	Contemplative	1382.842	1	1382.842	2781.476	.000	.964
	Inspirational	1382.288	1	1382.288	2290.441	.000	.956
	Consolidative	1152.911	1	1152.911	2039.488	.000	.951
	Rigor	1363.560	1	1363.560	3096.144	.000	.967
	Management	1496.187	1	1496.187	2993.792	.000	.966
Compliance	Nurturing	.551	1	.551	1.110	.294	.010
	Contemplative	.869	1	.869	1.748	.189	.016
	Inspirational	1.291	1	1.291	2.139	.147	.020
	Consolidative	2.203	1	2.203	3.897	.051	.036
	Rigor	3.175	1	3.175	7.210	.008	.064
	Management	.540	1	.540	1.081	.301	.010
Error	Nurturing	52.158	105	.497			
	Contemplative	52.202	105	.497			
	Inspirational	63.368	105	.604			
	Consolidative	59.356	105	.565			
	Rigor	46.243	105	.440			
	Management	52.475	105	.500			

Table 4.6 *Tests of Between-Subjects Effects continued*

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Total	Nurturing	1959.278	107				
	Contemplative	1843.278	107				
	Inspirational	1863.056	107				
	Consolidative	1579.400	107				
	Rigor	1851.917	107				
	Management	1979.333	107				
Corrected Total	Nurturing	52.710	106				
	Contemplative	53.071	106				
	Inspirational	64.659	106				
	Consolidative	61.559	106				
	Rigor	49.418	106				
	Management	53.016	106				

- a. R Squared = .010 (Adjusted R Squared = .001)
- b. R Squared = .016 (Adjusted R Squared = .007)
- c. R Squared = .020 (Adjusted R Squared = .011)
- d. R Squared = .036 (Adjusted R Squared = .027)
- e. R Squared = .064 (Adjusted R Squared = .055)
- f. R Squared = .010 (Adjusted R Squared = .001)

Data Analysis by Research Question

Descriptive statistics show the mean of contemplative and rigor characteristics varied on a larger scale than other traits (See Table 4.7). Mean scores ranked slightly different between compliant, non-compliant, and total respondent scores. Rigor was noted to be lower in the non-compliant schools when compared to the other categories (Table 4.8). Overall, non-compliant programs presented lower mean scores on all characteristic traits than compliant schools.

Table 4.7 *Descriptive statistics*

Compliance with Standard 11		Mean	SD	N
Nurturing	Compliant	4.27	.68	78
	Non-Compliant	4.10	.76	29
	Total	4.22	.71	107
Contemplative	Compliant	4.15	.73	78
	Non-Compliant	3.94	.64	29
	Total	4.09	.71	107
Inspirational	Compliant	4.17	.75	78
	Non-Compliant	3.92	.86	29
	Total	4.10	.78	107
Consolidative	Compliant	3.85	.72	78
	Non-Compliant	3.53	.85	29
	Total	3.77	.76	107
Rigor	Compliant	4.21	.63	78
	Non-Compliant	3.82	.76	29
	Total	4.10	.68	107
Management	Compliant	4.29	.68	78
	Non-Compliant	4.13	.78	29
	Total	4.24	.71	107

Table 4.8 *Ranked Descriptive Statistics*

Rank	Total		Compliant Programs		Non-Compliant Programs	
	Trait	Mean	Trait	Mean	Trait	Mean
1	Management	4.24	Management	4.29	Management	4.13
2	Nurturing	4.22	Nurturing	4.27	Nurturing	4.10
3	Rigor	4.104	Rigor	4.21	Contemplative	3.94
4	Inspirational	4.099	Inspirational	4.17	Inspirational	3.92
5	Contemplative	4.090	Contemplative	4.15	Rigor	3.82
6	Consolidative	3.77	Consolidative	3.85	Consolidative	3.53

Research Question 1

Is there a significant difference in athletic training programs preceptors' abilities to consolidate information, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Consolidative behaviors relate to the ability of the preceptor to take what has been taught in the classroom and apply the skills or concepts for a cohesive educational experience (Horn, 2014). The overall means (Table 4.7) demonstrated a difference of 3.85 in compliant (.71 *SD*) and 3.53 in non-compliant (.85 *SD*) programs. The largest differences were seen in the following questions: (a) my preceptor reviews what we learned or experienced at the end of the day and (b) my preceptor asks me to summarize what I have learned (Table 4.9).

Table 4.9 *Consolidative Frequencies*

	My preceptor reviews what we learned or experienced at the end of the day.		My preceptor gives feedback that helps me understand how to improve.		My preceptor asks me to summarize what I have learned.		My preceptor reminds me about things that I have already learned and integrates them into a learning opportunity.		My preceptor works to ensure I understand skills and information I am learning.	
Compliant/Non-Compliant	C	NC	C	NC	C	NC	C	NC	C	NC
Mean	3.51	2.83	4.19	4.07	3.46	3.01	4.01	3.79	4.11	3.83
SD	1.06	1.07	.79	.84	.95	1.13	.84	1.08	.89	.89

C: Compliant

NC: Non-Compliant

Research Question 2

Is there a significant difference in athletic training programs preceptors' contemplation of professional ideas, as perceived by students, between programs in compliance and those no in compliance in accordance with Standard 11?

Contemplation is a trait of cultivating understanding, especially on concepts that students find difficult. This includes open discussions about ideas and welcomes feedback (Horn, 2014). The overall means (Table 4.7) demonstrated a difference of 4.15 in compliant (.73 *SD*) and 3.94 in non-compliant (.64 *SD*) programs. The largest differences were seen in the following questions: (a) my preceptor invites ideas outside of his/her own, (b) my preceptor allows me to make choices about my daily clinical education, and to a lesser degree (c) my preceptor is skilled at explaining a concept in multiple ways (Table 4.10).

Table 4.10 *Contemplative Frequencies*

	My preceptor invites ideas outside of his/her own.		My preceptor is skilled at explaining a concept in multiple ways.		My preceptor recognizes when I do not understand a concept.		My preceptor allows me to make choices about my daily clinical education.		My preceptor admits if he/she is uncertain or wrong.		My preceptor is competent with the professional knowledge I am practicing.	
Compliant /Non-Compliant	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Mean	4.21	3.86	4.15	3.93	4.01	3.86	4.04	3.72	3.91	3.97	4.33	4.31
SD	.91	.74	.96	.92	.86	.92	1.05	.84	1.11	.82	.84	.81

C: Compliant

NC: Non-Compliant

Research Question 3

Is there a significant difference in athletic training programs preceptors' ability to inspire professional curiosity, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Inspirational trait fosters curiosity and interest in the profession and effectively provides a basis for continuing interest (Horn, 2014). The overall means (Table 4.7) demonstrated a difference of 4.17 in compliance (.75 *SD*) and 3.92 in non-compliant (.86 *SD*) programs. The largest differences were seen in the following questions: (a) my preceptor relates my classroom knowledge to real-time or relevant, clinical situations; and (b) my preceptor makes me want to continue in the profession (Table 4.11).

Table 4.11 *Inspirational Frequencies*

	My preceptor relates my classroom knowledge to real-time or relevant, clinical situations.		My preceptor finds a way to make topics interesting.		My preceptor motivates me to want to learn more than what is required.		My preceptor makes my clinical experience fun.		My preceptor works to give me a positive view of athletic training.		My preceptor makes me want to continue in the profession.	
Compliant /Non-Compliant	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Mean	4.24	3.93	4.10	3.90	4.09	3.86	4.16	3.90	4.11	4.03	4.27	3.90
SD	.78	.92	.73	.86	.91	1.06	1.03	1.05	.92	.94	.90	.98

C: Compliant
NC: Non-Compliant

Research Question 4

Is there a significant difference in athletic training programs preceptors' demonstration of nurturing, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Nurturing is a measure of a preceptor's "ability to develop supportive relationships with students, paying attention to them as individuals" (Horn, 2014, p. 24). The overall means (Table 4.7) demonstrated a difference of 4.27 in compliant (.68 *SD*) and 4.10 in non-compliant (.76 *SD*) programs. The largest differences were seen in the following questions: (a) my preceptor tries to understand how I feel about things and (b) my preceptor cares deeply about the athletic training profession (Table 4.12).

Table 4.12 *Nurturing Frequencies*

	My preceptor is available to me when I need him/her.		My preceptor is amiable when I ask questions.		My preceptor provides encouragement to me while at my clinical experience.		My preceptor makes me feel welcomed at my clinical experience.		My preceptor tries to understand how I feel about things.		My preceptor cares deeply about the athletic training profession.	
Compliant /Non-Compliant	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Mean	4.30	4.21	4.31	4.21	4.23	4.10	4.25	4.21	3.89	3.62	4.55	4.28
SD	.79	.77	.69	.73	.87	1.05	.86	1.05	1.06	1.05	.67	.92

C: Compliant

NC: Non-Compliant

Research Question 5

Is there a significant difference in athletic training programs preceptors' ability to manage the clinical site, as perceived by students, between programs in, compliance and those not in compliance in accordance with Standard 11?

Management trait enables preceptors to sustain order, respect, and focus at the clinical site between the student, staff, athletes, coaches, parents, and administrators. The overall means (Table 4.7) demonstrated a difference of 4.29 in compliant (.68 *SD*) and 4.13 in non-compliant (.78 *SD*) programs. The largest differences were seen in the following questions: (a) my preceptor is calm in the face of chaos; (b) my preceptor encourages me to participate in real-time events; and (c) my preceptor is respected by his/her athletes, coaches, and administrators (Table 4.13).

Table 4.13 *Management Frequencies*

	My preceptor is calm in the face of chaos.		My preceptor is able to manage the duties of teaching students and treating athletes.		My preceptor runs the athletic training facility as an organized environment.		My preceptor maintains professionalism when confronted by unprofessional conflict.		My preceptor encourages me to participate in real-time events.		My preceptor is respected by his/her athletes, coaches, and administrators	
Compliant /Non-Compliant	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Mean	4.35	4.24	4.29	4.00	4.13	4.00	4.13	4.14	4.40	4.17	4.42	4.21
SD	.84	.83	.89	1.10	.92	.93	1.01	.95	.63	.85	.77	.86

C: Compliant

NC: Non-Compliant

Research Question 6

Is there a significant difference in athletic training programs preceptors' ability to impose rigor, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

The rigorous trait of preceptors academically challenges and presses students for precision and consistency. The overall means, as seen in Table 4.7, demonstrate a difference of 4.21 in compliant (.63 *SD*) and 3.82 in non-compliant (.75 *SD*) programs. Five out of six questions reveal significant differences. The largest differences were seen in the following questions: (a) my preceptor uses questions to engage learning feedback, (b) my preceptor requires me to synthesize concepts, (c) my preceptor requires me to expand on answers that I give to his/her questions, and (d) my preceptor does not let me give up in difficult situations (Table 4.14).

Table 4.14 *Rigor Frequencies*

	My preceptor accepts nothing less than my best effort.		My preceptor uses questions to engage learning feedback.		My preceptor doesn't let me give up in difficult situations.		My preceptor requires me to synthesize concepts.		My preceptor requires me to expand on answers that I give to his/her questions.		My preceptor presents me with clinical knowledge that is challenging and varied.	
Compliant /Non-Compliant	C	NC	C	NC	C	NC	C	NC	C	NC	C	NC
Mean	4.08	3.90	4.32	3.86	4.24	3.83	4.18	3.69	4.27	3.83	4.17	3.83
SD	.82	.90	.63	1.03	.81	1.07	.73	.85	.70	.89	.84	.93

C: Compliant

NC: Non-Compliant

Reliability

Reliability was compared to that of the Tripod survey via Cronbach's alpha. The Tripod survey presented with a Cronbach's of .80. The Preceptor Effectiveness Survey consisted of 35 items ($\alpha = .97$) and found to be highly reliable (Table 4.15).

Table 4.15 Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.974	.975	35

Summary

This study compared preceptor characteristics between Athletic Training Programs that were compliant and non-compliant with CAATE Standard 11. The respondents were active students in Athletic Training Programs who had completed at least one clinical rotation. The study was conducted via survey. The data were exported from Qualtrics to SPSS and analyzed utilizing descriptive and MANOVA statistics. The MANOVA results were significant in demonstrating that rigor was an important characteristic for compliant programs and to a lesser degree, consolidative.

CHAPTER FIVE

DISCUSSION

Introduction

Accredited Athletic Training Programs have utilized a variety of assessment tools to measure outcomes from the beginning of formalized education (Schelhase, 2010; Walker, Weidner, & Armstrong, 2008). Minimum Board of Certification Examination pass rates will continue to be the norm among accreditation standards, even as the profession makes the imminent shift from bachelor to master degree programs in 2022 (CAATE, 2015, May 20). Increasing success of student outcomes from all components of programs is a necessity.

Preceptor assessments from the student perspectives are underrepresented in current research. Students are the most valuable assets in Athletic Training Programs and can offer valuable feedback. Mazerolle, Bowman, and Thomas (2014) found many preceptors had no pedagogical training and though they may be skilled athletic trainers, this by itself does not constitute success as preceptors. The need for a standardized assessment, in which students measure the effective teaching abilities of preceptors, was apparent. The Preceptor Effectiveness Survey was developed as a modified Tripod survey to standardize the assessment of preceptors as effective clinical teachers.

Research Questions

The following research questions guided this study:

1. Is there a significant difference in athletic training programs preceptors' abilities to consolidate information, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

2. Is there a significant difference in athletic training programs preceptors' contemplation of professional ideas, as perceived by students, between programs in compliance and those no in compliance in accordance with Standard 11?
3. Is there a significant difference in athletic training programs preceptors' ability to inspire professional curiosity, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
4. Is there a significant difference in athletic training programs preceptors' demonstration of nurturing, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
5. Is there a significant difference in athletic training programs preceptors' ability to manage the clinical site, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?
6. Is there a significant difference in athletic training programs preceptors' ability to impose rigor, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Summary of Findings

Recruitment surveys were emailed to 103 program directors asking for permission to access their students and forward the email on with a survey link and study information attached. Forty programs were from Commission on Accreditation of Athletic Training Education (CAATE) Standard 11 compliant programs and 63 were from non-compliant programs. Twelve compliant programs actively participated in the study, as well as 8 non-compliant. Response rates were relatively low with 22% compliant response (88 respondents out of 395), 14% non-compliant response (30

respondents out of 220), and 19% overall (118 respondents out of 615). One reason for the low response rate may be that the survey had to be dispersed through a gatekeeper (program director). Demographically, 59% females, 39% males, and 1% unknown gender represented the valid participants. Comparatively, the National Athletic Trainers' Association membership demographics were listed as 54% female, 45% male, and 0.2% unknown gender (NATA, 2016a). Respondents varied from ages 18-45, with the average age of 20.86. More Junior ranking students answered the survey than any other class rank. Sixty-three percent of all participants were members of the National Athletic Trainers' Association. All ten districts of the NATA were represented, however the majority of respondents were from Districts 5 and 7.

Research Questions Answered

Research Questions 1 – 6. The MANOVA failed to produce a significant multivariate effect; however, the univariate results indicated a significant difference between compliant and non-compliant programs for rigor. Overall, non-compliant program preceptors demonstrated lower average scores in every trait category.

Research Question 1. Is there a significant difference in athletic training programs preceptors' abilities to consolidate information, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Though the consolidative trait did not prove to be statistically significant, the univariate between-subjects effect for consolidative scores was approaching significance. The following are survey statements that revealed the largest mean differences between compliant and non-compliant programs for each trait:

1. My preceptor reviews what we learned or experienced at the end of the day (compliant $M = 3.51$ and non-compliant $M = 2.83$).
2. My preceptor asks me to summarize what I have learned (compliant $M = 3.46$ and non-compliant $M = 3.01$).

Non-compliant program preceptors demonstrated lower average scores in this trait category. Though the difference was not significant, the results suggested a difference in trends between Standard 11 compliant and non-compliant Athletic Training Program preceptors. The overall mean difference was 3.85 compliant programs and 3.53 non-compliant programs.

Research Question 2. Is there a significant difference in athletic training programs preceptors' contemplation of professional ideas, as perceived by students, between programs in compliance and those no in compliance in accordance with Standard 11?

A large difference in the average between programs was noted in the contemplative characteristics. Individual categories revealed specific questions indicating problematic areas of the trait, which decreased the overall average score of the characteristic. The following are survey statements that revealed the largest differences between compliant and non-compliant programs for each trait:

1. My preceptor invites ideas outside of his/her own (compliant $M = 4.21$ and non-compliant $M = 3.86$).
2. My preceptor allows me to make choices about my daily clinical education (compliant $M = 4.40$ and non-compliant $M = 3.72$).

Though the difference was not significant, the results suggested a difference in trends between Standard 11 compliant and non-compliant Athletic Training Program preceptors. The overall mean differences were 4.15 compliant programs and 3.94 non-compliant programs.

Research Question 3. Is there a significant difference in athletic training programs preceptors' ability to inspire professional curiosity, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Individual categories revealed specific questions indicating problematic areas of the inspirational trait that were clearly problematic and decreased the overall average score of the characteristic. The following are survey statements that revealed the largest differences between compliant and non-compliant programs for each trait:

1. My preceptor relates my classroom knowledge to real-time or relevant, clinical situations (compliant $M = 4.24$ and non-compliant $M = 3.93$).
2. My preceptor makes me want to continue in the profession (compliant $M = 4.27$ and non-compliant $M = 3.90$).

Though the difference was not significant, the results suggested a difference in trends between Standard 11 compliant and non-compliant Athletic Training Program preceptors. The overall mean for compliant programs was 4.17 and non-compliant 3.92.

Research Question 4. Is there a significant difference in athletic training programs preceptors' demonstration of nurturing, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Individual categories revealed specific questions indicating problematic areas of the nurturing trait which decreased the overall average score of the characteristic. The following are survey statements that revealed the largest differences between compliant and non-compliant programs for each trait:

1. My preceptor tries to understand how I feel about things (compliant $M = 3.89$ and non-compliant $M = 3.62$).
2. My preceptor cares deeply about the athletic training profession (compliant $M = 4.55$ and non-compliant $M = 4.28$).

Though the difference was not significant, the results suggested a difference in trends between Standard 11 compliant and non-compliant Athletic Training Program preceptors. The overall mean differences were 4.27 for compliant programs and 4.10 for non-compliant programs.

Research Question 5. Is there a significant difference in athletic training programs preceptors' ability to manage the clinical site, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

Individual categories revealed specific questions indicating problematic areas of the management trait, which were clearly problematic and decreased the overall average score of the characteristic. The following are survey statements that revealed the largest differences between compliant and non-compliant programs for each trait:

1. My preceptor is calm in the face of chaos (compliant $M = 4.35$ and non-compliant $M = 4.24$).

2. My preceptor encourages me to participate in real-time events (compliant $M = 4.40$ and non-compliant $M = 4.17$).

Though the difference was not significant, the results suggested a difference in trends between Standard 11 compliant and non-compliant Athletic Training Program preceptors. The overall mean differences were 4.29 for compliant programs and 4.13 for non-compliant programs.

Research Question 6. Is there a significant difference in athletic training programs preceptors' ability to impose rigor, as perceived by students, between programs in compliance and those not in compliance in accordance with Standard 11?

The research clearly established data that demonstrated a significant difference in the rigor trait between Standard 11 compliant and non-compliant Athletic Training Program preceptors. Findings within the between-subjects effects revealed a significant difference in how rigorously preceptors behaved in Standard 11 compliant Athletic Training Programs versus Standard 11 non-complaint Athletic Training Programs, $F(1, 105) = 7.210, p = .008$

Ranking of trait characteristic from best demonstration to worst, rated rigor lower than compliant schools (Table 4.8). A large difference in the average between programs was noted in the rigor characteristics. Individual categories revealed specific questions indicating problematic areas of the trait, which decreased the overall average score of the characteristic. The following are survey statements that revealed the largest differences between compliant and non-compliant programs for each trait:

1. My preceptor uses questions to engage learning feedback (compliant $M = 4.32$ and non-compliant $M = 3.86$).

2. My preceptor requires me to synthesize concepts (compliant $M = 4.18$ and non-compliant $M = 3.69$).

The research clearly established data that demonstrated a significant difference in the rigor trait between Standard 11 compliant and non-compliant Athletic Training Program preceptors. The overall mean differences were 4.21 for compliant programs and 3.82 for non-compliant programs.

Discussion

This study was conducted with one focus in mind: How can Athletic Training Programs help students become more successful students? In the realm of Athletic Training, the best Athletic Trainers (AT) do not necessarily make the finest teachers. Most who go into this career field do so because of a passion for the work, and many never consider themselves teachers. Teaching is usually a secondary component that often presents itself as the AT moves into years of experience. Ultimately, Athletic Training education offers academic and clinical programming that is preparing the next generation of professionals for the career field. The students of Athletic Training Programs (ATP) are the true value. Educators are expected to foster and produce the continuing generations of professionals who will safeguard Athletic Training. Relying on educators to maintain, develop, and assess a program does keep them current in the trends of Athletic Training, however they do rely on the symbiotic relationships with clinical faculty to close the real-time gap and bring significance to content learning. The profession needs competent and trained didactic and clinical educators to teach students for continuity of instruction.

Board of Certification Examination outcomes are one of the components Program Directors and Clinical Education Coordinators currently are required to utilize to measure the success of their programs (CAATE, 2015, October 12). Analyzing each component of programmatic education is a tedious process. Athletic Training Programs offer a complex medical model education, with both didactic and clinical faculty. There is a deficiency of empirical research concerning the student's ability to voice concerns about clinical experiences. This deficiency exists because there is no centralized method by which to contact Athletic Training Students without going through the Program Director or Clinical Education Coordinator. This slows the research process and decreases participation.

Every possible Program Director of a non-compliant program (63 programs) was contacted and only eight programs actively participated. It is interesting that out of the 40 compliant programs, 12 participated and ultimately had almost three times the number of participants. It has to be questioned if there could have been generalized apathy among the students of non-compliant program students. Conversely, the students whom were most satisfied may have been more likely to want to respond about their preceptors and program. Bowman and Dodge (2013) found that students' levels of frustration significantly increased if their clinical experiences were "monotonous" leaving them to feel unchallenged (p.81).

The demographics were generally as expected. The gender summary was similar to what the National Athletic Trainers' Association (NATA) demonstrates as the current breakdown of membership nationwide. Women currently outnumber the men in the profession. The ages revealed the standard college-aged student participated; however,

what should be considered is that the traditional graduate is 21 years old. In this survey, 51% of the participants were aged 22 and older. The argument for teaching to the adult learner is solidified by this disbursement of ages. Using a combination approach of pedagogy and experiential (hands-on) learning allows students to feel like partners in their education and enhances their internal motivation (Clapper, 2010; Knowles, Holton, & Swanson, 2015).

It was surprising to see 63% of the Athletic Training Students as members of the National Athletic Trainers' Association. The cost of membership for students in the current year is \$99 annually (NATA, 2016b). This is a heavy burden for many students. Students involved with the national organization do not utilize the same professional development discounts the certified members employ, as they do not have the same professional requirements. Certified Athletic Trainers must obtain 50 continuing education units every two years to remain active in the profession (BOC, 2016). Engaging in the national organization is a networking opportunity for students and a means to stay abreast of current trends and issues in the profession.

Lancaster, Myers, Nichols and Webb (2014) found if Athletic Training Programs encouraged early student involvement in professional organizations, these students would ultimately become members in such groups once they graduated and began their professional career. It is essential for programs to encourage and model active involvement with organizations at the national, regional, state, and local levels. In fact, in the draft of the curricular content standards for the new Master's degree, two standards propose direct involvement for the profession through legislative processes (Standard 9)

and engagement in research, community, or service (Standard 14) (CAATE, 2016, June 9).

The MANOVA did not find a significant multivariate effect between compliant Athletic Training Program preceptors as opposed to non-compliant. The differences were found in single trait analysis. Out of six traits, rigor proved to be the only characteristic that showed a significant difference between types of programs. Students who reported being from a compliant program consistently rated their preceptors as setting the expectation high and presenting varied learning opportunities. Peer (2015) reminds us that "...just because we are teaching, learning is not always guaranteed" (p. 3). AT educators should engage students at a level appropriate to their education, always encouraging a critical review that scaffolds knowledge, such as described in the consolidative trait.

The pressing question is why there was a significant difference in rigor. As discussed in Chapter 2, there are a number of standards that establish the responsibilities of a preceptor; however, there is a great deal of institutional autonomy. The experience of a preceptor can vary from new graduate to veteran proficiency. Each program has the right to set individual rules about experience levels of preceptors. Also, the Clinical Education Coordinator (CEC) is the main contact for preceptors. The CEC provides training and manages each student experience at the clinical site. If the CEC is overtaxed or uninvolved, this may leave the preceptor with unanswered questions and little guidance. The location of the program may also limit the number of clinical sites or preceptors for a particular program. Urban programs typically have a large number of clinical sites and preceptors, while rural programs have considerably smaller numbers.

Overall, the mean scores were lower on all six characteristics for non-compliant schools. This means students from these programs felt their preceptors had a lesser ability to fully demonstrate the traits. When the means were ranked, rigor was five out of six for non-compliant schools, whereas it ranked third for compliant. A number of different hypotheses could be considered as explanation. As seen in the demographics, students vary considerably. Age, socioeconomics, relationships, and family situations may greatly affect the students' ability to be present and ready to learn at clinical experiences. Some schools have traditional students (18-22) who have graduated directly from high schools and entered into higher education. Young students may not have the maturity to accept and discern the importance of skills being taught to them. Other locations are commuter schools with predominantly non-traditional students who have families and work at least part-time. Splitting time between work, school, and family often causes conflict. Urban institutions will typically offer students a large variety of clinical placements, keeping options fresh and exciting. Preceptor assignments at these institutions are rarely repeated. Programs located in more rural locations may not have access to the same variety, possibly creating a monotonous experience.

These clinical instructors or preceptors are regarded as the experts in the field. In terms of preceptors, demonstrating lower mean scores could relate to a number of different causes. They are expected to not only perform all of the duties of their job, but also skillfully teach and assess a student at the same time. Athletic Training is serious business. Athletic Trainers acting as preceptor are responsible for the healthcare of their assigned athletes, including when there is a potentially catastrophic injury. Imagine being a preceptor and having an athlete with a potential cervical spine injury. This

athlete can die. It is the role and duty of that preceptor, first and foremost, to take care of this athlete. At the same time, preceptors are teaching students who could, in a very short time, be in the same situation. It is stressful and difficult to hand off an injury to allow for learning to occur. If the student never addresses the injury in real-time under supervision, how can it be realistically secured they are competent to perform this skill on their own?

Athletic Training is a profession of passion and a labor of love. It is very rewarding to those who embrace the principles of healthcare. However, burnout is very real and does exist in the career. Many researchers have pointed to work-family conflict, organizational support, and overload as dominating factors (Kahanov, L. & Eberman, L.E., 2011; Mazerolle, Bruening, Casa, & Burton, 2008; Mazerolle, Pitney, & Eason, 2015;). Preceptors are not exempt from these demands and may be more susceptible due to the role strain of teaching, assessing, and performing the duties of athletic training.

There is a generational component that cannot be ignored. As Athletic Training education has evolved, so has the student. In the early years of education, the students put in long hours not only in the classroom, but at the clinical site as well. There was a certain rigorous standard that was expected and modeled. No standards were in place to mandate student supervision, other than the few states that were governed by licensure. As Athletic Training education has evolved, so have the rules and standards. Fewer and fewer preceptors of yesteryear are actively practicing in the field and the culture of old is diminishing. This is not the fault of the preceptors or the students, but rather a sign of the times and the changing generations.

Limitations and Design Control

The limitations of this study are addressed so as to advance the use of the evidence and further the benefit of its use. One limitation was that access to the students was through a gatekeeper. There is no centralized database with student contact information that can be utilized for research purposes. The National Athletic Trainers' Association does offer a means to access anonymous email addresses of its members; however, not all students are affiliated. The gatekeeper utilized in this study was the Program Director, as his or her email was publically available on the Commission on Accreditation of Athletic Training Education's (CAATE) website. The use of this gatekeeper limited access to students and the return rate was ultimately low, more so for non-compliant programs. Clinical Education Coordinators would be a more appropriate contact due to their relationship with the preceptors and clinical sites; however, this information was not as readily accessible.

Another limitation could be from the students' disposition. The non-compliant schools ranked all six traits lower than compliant schools. This could be due to apathy or lack of morale. The small sample in a single aggregate cohort may not provide enough data to give a consistent report for a program. The particular lens through which one student may view a preceptor could, in fact, be quite different for another.

Survey data also demonstrates a number of limitations. The way the questions are written or the types of analysis administered on the data have a significant effect on results. Response level is often low; therefore surveys must be kept short to keep the participant engaged. Respondent may also become bored with the survey and begin to

answer questions untruthfully or without thought. Validity is a significant concern as many questions are generalized to encompass a larger population.

Implications for Practice

The research conducted in the study was initiated to provide evidence for ways to support students for a more successful academic career in Athletic Training. It would be useful to engage the use of a centralized student research database. With the four pillars of the Strategic Alliance working together, the National Athletic Trainers' Association Research Foundation should be able to work with Program Directors to opt-in students for participation in research studies. The students could opt-in annually, provide their email, and any researcher looking for student information could provide a donation for access to the student's contact information. This could even be utilized as a fundraiser for the NATA Research Foundation. As researchers desire to contact students, they "donate" a certain fee for a designated number of opted-in emails. This decreases the number of emails the administrators of Athletic Training Programs are already inundated with for research requests.

A review of the between-test subjects showed a significant difference in the category of rigor, with consolidative close, but not meeting the significance threshold. The demands of preceptors are extensive. They are balancing their jobs as athletic trainers with teaching. This creates role strain. Some preceptors are better than others at delegating. Rigor is essentially allowing students to learn through their failure, setting the standard high and expecting them to meet it. If that goal is not met, then it is the preceptor's responsibility to find a constructive way to guide the student toward the

correct path. Preceptors need more guidance on what appropriate rigor is and how to implement it.

Every trait characteristic of preceptors on the survey was shown descriptively (mean) to be different between the compliant and non-compliant programs. It is easy to infer that they are all important, while rigor just proved to be the one that was significantly different. The ultimate goal is to aid preceptors in becoming better teachers. Their time is very precious, so long, drawn out training sessions would not be appropriate. Short, 5-minute multimedia modules with key points to help guide their teaching would be a phenomenal start for creating new and meaningful training for preceptors.

Looking at individual traits, though not statistically significant, the research supported many constructive suggestion founded on previous research and can offer excellent teaching advice. Preceptors have the responsibility to help students improve and practice the important skills needed to become an outstanding Athletic Trainer. Ideas for preceptors are as follows:

- Offer students a short review or breakdown at the end of the day. This allows them to ask any lingering questions, summarize what they learned and for the preceptor to offer construct feedback.
- Ask for the students' thoughts on a controversial or ambiguous topic and be open to their ideas.
- After you teach them a skill, ask them to teach it back in a different way.
- Be honest with the students, but if you are no longer positive about the profession...it is time to no longer be a preceptor.

- You do not have to be their friend. You are their teacher. Do try to remember what it is like to be a student and empathize with them.
- Calm in chaos is key. Students need to see this. Be honest, you're only human, but look collected.
- Get your students in the middle of real-time events if at all possible! A majority of your students are shy and scared. Remember what it felt like to be in their position.
- Give respect. Get respect. A small demonstration of leadership will travel light-years with students. Show others (parents, athletes, coaches, etc.) respect, even when they are in chaos.
- Make students synthesize, not regurgitate. Ask scenario-based questions. Give them pieces of a puzzle they have to put together in their mind.
- Once the student answers your question, make them expand on it.
- NEVER EVER, EVER let the student give up. Always end on a positive! Find a way.

Another possible use of the Preceptor Effectiveness Survey would be to establish appropriate student-preceptor ratios. In 2006, CAATE standards used to define the specific number of students a preceptor could manage. In recent standards, this has been left to institutional autonomy to define appropriate ratios. Often Clinical Education Coordinators make this decision, based on their knowledge of the clinical site, preceptor observations, and students' characteristics. Utilizing the scores of the PES would aid the CEC in objectively establishing appropriate student-preceptor ratios for each clinical site. This could also lead to the possibility of establishing hiring standards for preceptors,

making it a centralized process in conjunction with the Athletic Training Centralized Application System (ATCAS) that student utilize to apply to programs.

An identified issue among Athletic Trainers has been burnout. It is very common due to role strain, work-family conflict, and lack of organizational support. If a preceptor is consistently scoring low on the Preceptor Effectiveness Survey, it may be beneficial to have them take a survey such as the Athletic Training Burnout Inventory (Clapper & Harris, 2008). This could help determine if they are developing burnout, and ultimately recommend an appropriate break from being a preceptor to allow the Athletic Trainer to reenergize. This would maintain the relationship with the program and the preceptor, but give the AT time to revitalize.

Recommendations for Future Research

In future research, this study should be conducted over multiple years. This would engage the same preceptors with different students. Ideally, this would provide more feasible scores than a one-time snapshot. Utilizing the Clinical Education Coordinators for student recruitment may yield a higher sample response. Another thought would be to complete a baseline Preceptor Effectiveness Survey and then train preceptors with the suggestions as discussed above. A follow-up survey could be administered to see if their scores improved. Geographic location of programs in relationship to Board of Certification (BOC) Examination pass rates: urban vs. rural, as well as how many clinical sites are offered their students may provide meaningful insight to BOC outcome success. The inclusion of a qualitative box under each trait data box may yield richer, thicker data about the academic preparation of the student.

Summary

Athletic Training Program education has come a long way and continues to evolve. Maintaining competent and skilled clinical faculty is crucial to the success of medical model programs. Out of the six trait characteristics (consolidative, contemplative, inspirational, nurturing, management, and rigorous), rigor presented as the most crucial for successful preceptors. The study did have limitations, such as small sample and access to students. The data identified that there were many things a preceptor could do to improve their skills as a teacher. Improving engaged preceptor training, setting standardized ratios of student-preceptor for individuals, and identifying preceptors with signs of burnout are all possibilities for improvement based on the present study. In the future, it is recommended this research be conducted over a longer period of time, compare geographic locations, and add a qualitative component for richer data collection.

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APPENDIX A

Instrument

Preceptor Effectiveness Survey

Dear Athletic Training Student:

- **Identification of Researchers:** My name is Jennifer Huseman and I am a doctoral student with the Department of Educational Leadership & Policy Analysis at the University of Missouri - Columbia conducting this research.
- **Purpose of the Study:** The purpose of this research is to explore student perceptions of athletic training preceptor traits and their effect on Board of Certification examination outcomes.
- **Request for Participation:** I am inviting you to participate in the research of student perceptions on preceptor traits. It is up to you whether you would like to participate. If you decide not to participate, you will not be penalized in any way. You can also decide to stop at any time without penalty. If you do not wish to answer any of the questions, you may simply skip them.
- **Exclusions:** You must be an active student in a CAATE Professional Athletic Training Program. Students will answer questions in regard to the last preceptor in which they have completed a semester.
- **Description of Research Method:** The research will be conducted as a survey via Qualtrics that will take approximately 10-15 minutes to complete. The data will be analyzed with SPSS and secured in a password-protected computer throughout the analysis. The information gained from this research will be shared with my committee chair, Dr. Sandy Hutchinson. She can be reached at (816) 405-9306 or by email at Hutchinson@ucmo.edu.
- **Privacy:** All of the information I collect will be anonymous.
- **Explanation of Risks:** The risks to this study are similar to the risks of everyday life.
- **Explanation of Benefits:** This research will assist athletic training programs in identifying positive trait characteristics in clinical faculty, which may result in improving student outcomes.
- **Questions About Your Rights:** If you have any questions about your rights as a research participant, please contact the University of Missouri - Columbia Institutional Review Board at (573) 882-9585. If you would like to participate, please indicate by clicking on the electronic survey link.

Jennifer Huseman (417) [770-4017](tel:770-4017)/jhuseman@msudenver.edu

Dr. Sandy Hutchinson (816) 405-9306 [/hutchinson@ucmo.edu](mailto:hutchinson@ucmo.edu)/Program Coordinator

This study will examine student perceptions of athletic training preceptor traits and their effect on student outcomes. All data collected will remain anonymous. Do you agree to participate in this study?

Yes (1)

No (2)

If No Is Selected, Then Skip To End of Survey

What is your gender?

- Male (1)
- Female (2)
- My gender is best represented as (3) _____
- I prefer not to answer (4)

What is your age?

- My age is... (1) _____
- Prefer not to answer (2)

What academic rank are you?

- Senior (1)
- Junior (2)
- Sophomore (3)
- Freshman (4)
- First year Master's (5)
- Second year Master's (6)

Are you currently a member of the National Athletic Trainers' Association?

- Yes (1)
- No (2)

In what NATA District is your school located?

- District 1: CT, ME, MA, NH, RI, VT (1)
- District 2: DE, NJ, NY, PA (2)
- District 3: SC, MD, NC, VA, WV, Wash. DC (3)
- District 4: IL, IN, MI, MN, OH, WI (4)
- District 5: IA, KS, MO, NE, ND, SD, OK (5)
- District 6: AK, TX (6)
- District 7: AZ, CO, NM, UT, WY (7)
- District 8: CA, HI, NV, Guam (8)
- District 9: AL, FL, GA, KY, LA, MS, TN (9)
- District 10: AK, ID, MT, OR, WA (10)

Have you completed a clinical rotation/experience with a preceptor?

- Yes, I have completed a full clinical rotation with a preceptor (1)
- I am currently on my first clinical rotation (2)
- No (3)

If No Is Selected, Then Skip To End of Survey

Score the following statements based on the preceptor in which you most recently COMPLETED a clinical rotation. This survey should not be answered in regard to the

preceptor you are currently assigned. Please score the statements based on the scale below.

1. Strongly disagree 2. Disagree 3. Neither agree nor disagree
4. Agree 5. Strongly Agree

Nurturing: Nurturing is defined as the measure of a preceptor's "ability to develop supportive relationships with students, paying attention to them as individuals", devotion and/or commitment to students and the profession.

My preceptor:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
is available to me when I need him/her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is amiable when I ask questions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
provides encouragement to me while at my clinical experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
makes me feel welcomed at my clinical experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
tries to understand how I feel about things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cares deeply about the athletic training profession.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Contemplative: Contemplative is defined as the trait of cultivating understanding, especially on concepts that students find difficult. This person also invites open discussions about ideas and welcomes feedback.

My Preceptor:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
invites ideas outside of his/her own. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is skilled at explaining a concept in multiple ways. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
recognizes when I do not understand a concept. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
allows me to make choices about my daily clinical education. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
admits if he/she is uncertain or wrong. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is competent with the professional knowledge I am practicing. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Inspirational: Inspirational is defined as stimulates curiosity and interest in the profession of Athletic Training and effectively provides a basis for continuing interest.

Q6 My Preceptor:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
relates my classroom knowledge to real-time or relevant, clinical situations. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
finds a way to make topics interesting. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
motivates me to want to learn more than what is required. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
makes my clinical experience fun. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
works to give me a positive view of athletic training. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
makes me want to continue in the profession. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Consolidative: Consolidative is defined as the ability to integrate ideas and make learning coherent with classroom knowledge.

My Preceptor:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
reviews what we learned or experienced at the end of the day. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gives feedback that helps me understand how to improve. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
asks me to summarize what I have learned. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
reminds me about things that I have already learned and integrates them into a learning opportunity. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
works to ensure I understand skills and information I am learning. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rigor: Rigor is defined as academically challenging and presses students for precision and consistency.

My Preceptor:

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
accepts nothing less than my best effort. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
uses questions to engage learning feedback. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
doesn't let me give up in difficult situations. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
requires me to synthesize concepts. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
requires me to expand on answers that I give to his/her questions. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
presents me with clinical knowledge that is challenging and varied. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Management: Management is defined as able to sustain order, garner respect, and focus at the clinical site between the student, staff, athletes, coaches, parents, and administrators.

My Preceptor

	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
is calm in the face of chaos. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is able to manage the duties of teaching students and treating athletes. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
runs the athletic training facility as an organized environment. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
maintains professionalism when confronted by unprofessional conflict. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
encourages me to participate in real-time events. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is respected by his/her athletes, coaches, and administrators (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX B

Transmittal Letter



Dear Athletic Training Student:

My name is Jennifer Huseman and I am a doctoral student at the University of Missouri, Columbia. For my dissertation, I am examining student perceptions of preceptor traits. Because you are currently an active student in an athletic training program, I am inviting you to participate in this research study by completing the attached survey.

The following questionnaire will require approximately 10-15 minutes to complete. There is no compensation for responding nor is there any known risk. In order to ensure all information will remain confidential, please *do not* include your name.

If you choose to participate in this project, please answer all questions as honestly as possible. Participation is strictly voluntary and you may refuse to participate at any time. Thank you for taking the time to assist me in my educational endeavors.

The data collected will provide useful information regarding how preceptor traits affect program outcomes. Completion of the survey will indicate your willingness to participate in this study. If you require additional information or have questions, please contact me at the number listed below.

If you are not satisfied with the manner in which this study is being conducted, you may report any complaints to the University of Missouri-Columbia Institutional Review Board at (573) 882-3181

Sincerely,
Jennifer Huseman
(417) 770-4017/jhuseman@msudenver.edu

Program Coordinator
Dr. Sandy Hutchinson
(816) 405-9306/hutchinson@ucmo.edu

Survey link: <http://individual.links.will.differ.com>

APPENDIX C

Informed Consent

Identification of Researchers: Jennifer Huseman, who is a doctoral student with the Department of Educational Leadership & Policy Analysis at the University of Missouri - Columbia is conducting this research.

Purpose of the Study: The purpose of this research is to explore student perception of preceptor traits and its effect on Board of Certification pass rate.

Request for Participation: I am inviting you to participate in the research of student perceptions on preceptor traits. It is up to you whether you would like to participate. If you decide not to participate, you will not be penalized in any way. You can also decide to stop at any time without penalty. If you do not wish to answer any of the questions, you may simply skip them.

Exclusions: You must be an active student in a CAATE Professional Athletic Training Program. Students will answer questions in regard to the last preceptor in which they have completed a semester.

Description of Research Method: The research will be conducted as a survey via Qualtrics and will take approximately 10-15 minutes to complete. The data will be analyzed with SPSS and secured in a password-protected computer throughout the analysis. Pseudonyms will be used to protect the identity of the participants and the participant's institution. The information gained from this research will be shared with my committee chair, Dr. Sandy Hutchinson. She can be reached at (816) 405-9306 or by email at Hutchinson@ucmo.edu.

Privacy: All of the information I collect will be confidential.

Explanation of Risks: The risks to this study are similar to the risks of everyday life.

Explanation of Benefits: This research will assist athletic training programs in identifying positive trait characteristics in clinical faculty, which may result in improving student outcomes.

Questions About Your Rights: If you have any questions about your rights as a research participant, please contact the University of Missouri-Columbia Institutional Review Board at (573) 882-3181. If you would like to participate, please indicate by clicking on the electronic survey link.

Sincerely,
Jennifer Huseman
(417) 770-4017/jhuseman@msudenver.edu

APPENDIX D

University of Missouri—Columbia Institutional Review Board Approval



Institutional Review Board
University of Missouri-Columbia

190 Galena Hall; Dc074.00
Columbia, MO 65212
573-882-3181
irb@missouri.edu

April 20, 2016

Principal Investigator: Jennifer J Huseman
Department: Educational Leadership-EDD

Your Exempt Application to project entitled Student Perceptions of Athletic Training Preceptor Traits and their Effect on Board of Certification Examination Outcomes was reviewed and approved by the MU Institutional Review Board according to the terms and conditions described below:

IRB Project Number	2005373
IRB Review Number	214552
Initial Application Approval Date	April 20, 2016
IRB Expiration Date	April 20, 2017
Level of Review	Exempt
Project Status	Active - Open to Enrollment
Exempt Categories	45 CFR 46.101b(2)
Risk Level	Minimal Risk
Internal Funding	Personal funds

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the approval:

1. No subjects may be involved in any study procedure prior to the IRB approval date or after the expiration date.
2. All unanticipated problems, adverse events, and deviations must be reported to the IRB within 5 days.
3. All changes must be IRB approved prior to implementation unless they are intended to reduce immediate risk.
4. All recruitment materials and methods must be approved by the IRB prior to being used.
5. The Annual Exempt Form must be submitted to the IRB for review and approval at least 30 days prior to the project expiration date. If the study is complete, the Completion/Withdrawal Form may be submitted in lieu of the Annual Exempt Form
6. Maintain all research records for a period of seven years from the project completion date.
7. Utilize all approved research documents located within the attached files section of eCompliance. These documents are highlighted green.

If you are offering subject payments and would like more information about research participant

APPENDIX E

Copyright Permission for Figure 1.2

Tuesday, August 9, 2016 at 10:43:45 AM Mountain Daylight Time




Subject: Re: Request for copyright permission
Date: Tuesday, August 9, 2016 at 9:45:14 AM Mountain Daylight Time
From: CAATE Support
To: Huseman, Jennifer

Good Morning,

The Commission on Accreditation of Athletic Training Education (CAATE) has approved the request of researcher, Jennifer Huseman to use the "Standard 11 Accreditation Action Flow Chart."

Sincerely,



Ashley Ahearn, MS, ATC
CAATE Manager of Stakeholder Services
6850 Austin Center Blvd., Suite 100, Austin, TX 78731-3184
Office: 512-733-9700 ext 702
Ashley@caate.net
www.caate.net  
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From: Huseman, Jennifer <jhuseman@msudenver.edu>
Sent: Wednesday, August 3, 2016 11:02:30 PM
To: CAATE Support
Subject: Request for copyright permission

To whom it may concern,

Attached is the request of the researcher, Jennifer Huseman, is to receive copyright permission to utilize the "Standard 11 Accreditation Action Flow Chart" figure from: <http://caate.net/wp-content/uploads/2016/02/CAATE-Professional-Standard-11.pdf> in my dissertation. Please let me know if require anything further.

Thank you,

Jenn Huseman

APPENDIX F

Copyright Permission for Table 2.1

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Thank you,
Jenn Huseman



Jennifer J.H. Huseman, MS, ATC
Assistant Professor, Athletic Training
Clinical Education Coordinator

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Dear Jenn

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APPENDIX H

Program Director Recruitment Email

Dear (*Program Director*),

My name is Jennifer Huseman and I am a doctoral student at the University of Missouri-Columbia. A vital component of my research requires access to students for a brief survey that will take approximately 10-15 minutes to complete. I would like to ask for your assistance with this piece by forwarding my recruitment statement and survey link on to your students for their possible participation. My study is focused on Athletic Training Program outcomes with regard to student perceptions of trait characteristics of their assigned preceptor and how this relates to BOC outcomes. If you would like to know more, I'm happy to discuss it with you. I would really appreciate your help. Thank you so much for your consideration. The anonymous link below will allow students access to this research study. This study has been approved by University of Missouri - Columbia Institutional Review Board who can be reached at (573) 882-9585.

Please reply to my email as an affirmation of your consent to forward my recruitment information and link to your students.

Thank you,

Jenn Huseman

Please forward the following:

Dear Athletic Training Student,

My name is Jennifer Huseman and I am a doctoral student at the University of Missouri – Columbia. I would like to invite you to participate in a study about what traits you feel your preceptors best demonstrate. I will be relating this data to Board of Certification outcomes. This survey will take approximately 10-15 minutes to complete. I sincerely appreciate your feedback. This study has been approved by University of Missouri - Columbia Institutional Review Board who can be reached at (573) 882-9585.

Thank you,

Jenn Huseman

Survey Link: <http://surveylink.com>

VITA

Jennifer J.H. Huseman was born in Jackson, Michigan, but lived a majority of her life in the Kansas City, Missouri area. In 1996, she earned her Bachelor of Science degree in Physical Education, Fitness and Wellness at the previously titled, Central Missouri State University. In 1998, her Master of Science in Exercise Science with an emphasis in Athletic Training was earned at the University of Central Missouri. Jenn then earned her Doctorate in Educational Leadership and Policy Analysis from the University of Missouri – Columbia in 2016.

Jenn began her career as an outreach Athletic Trainer. She worked for 8 years with secondary school athletics and as an outpatient clinician. After two years overseas and away from the profession, she returned to work for the University of Central Missouri as an instructor and Assistant Athletic Trainer. It was during this time, that she found her true passion for education. Currently, she holds the position of Assistant Professor and Clinical Education Coordinator in the Department of Human Performance and Sport, at Metropolitan State University of Denver.

Jenn Huseman currently resides in Denver, Colorado with her husband, Benjamin, and daughter, Tristan. In her free time, she enjoys camping with her family and dogs in the mountains of Colorado.