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Leadership Curricula of Professional Athletic Training Programs

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Leadership Curricula of Professional Athletic Training Programs

By

Elizabeth A. Drake

This Dissertation is Submitted in Partial Fulfillment

of the Requirements for

the Educational Doctorate Degree

in Educational Leadership

Minnesota State University, Mankato

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This dissertation has been examined and approved.

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Abstract

Nationally-recognized athletic training organizations have identified leadership knowledge, skills, and competencies as essential for athletic trainers to be successful in the current healthcare environment and to help advance the profession of athletic training. However, little is currently known regarding the methods and the extent of leadership development in athletic training professional preparation programs. The purpose of this mixed-methods study was to examine student and faculty perspectives of the extent and ways that athletic training professional preparation programs address leadership in their curricula.

Data were obtained via surveys completed by 71 students and 83 athletic training professional level program directors. Overall, both groups of participants affirmed that it was important that leadership was addressed in athletic training professional programs. Several formal and informal uses of leadership development methods (e.g., peer-learning, professional organizational involvement, textbooks, and workshops) were examined. The many ways in which leadership was addressed within the respondents' athletic training programs suggests that the profession is comparable with other allied health professions when it comes to informal leadership education in both curricular and clinical portions of athletic training programs. Formal leadership training was reported to be at low levels by students and program directors, a deficit that is recommended to be addressed as more programs consider converting from a Bachelor's degree level to a Master's degree level professional program.

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Chapter I

Introduction

Athletic trainers "must utilize management and leadership techniques to compete in today's healthcare market" (Board of Certification, 2010, p. 70).

Background of the Problem

Knowledge of leadership and the skills and competencies involved in leadership are essential for an athletic trainer to be successful in the current healthcare environment. The 6th edition of the *Role Delineation Study/Practice Analysis* (Board of Certification [BOC], 2010) specifically addressed the need for athletic trainers to possess knowledge of leadership styles in order to successfully carry out the required tasks of an athletic trainer in Performance Domain V: Organizational and Professional Health and Well-being (BOC; Kutz, 2012b). Leadership knowledge is essential for the tasks of applying "basic internal business functions to support individual and organizational growth and development" (BOC, p. 70) and for that of applying "basic external business functions to support organizational sustainability, growth, and development" (p. 70).

Leadership is necessary for the successful practice and advancement of athletic training (Kutz, 2010b; Peer & Schlabach, 2009). As healthcare professionals who provide quality services, athletic trainers should possess leadership knowledge, skills and competencies. The National Athletic Trainers' Association (NATA) *Code of Ethics* (2005) and the BOC *Standards of Professional Practice* (2006) address several characteristics of leadership as essential qualities athletic training professionals should possess. Some of these characteristic include: the ability to care, show commitment and

integrity, value professional knowledge, and communicate effectively with others. These characteristics were also found by Raab, Wolfe, Gould, and Piland, (2011) to be necessary across employment settings for others to perceive athletic trainers as quality professionals.

Applying leadership competencies may also benefit athletic training education. Academic program directors who apply transformational leadership to their working relationships with preceptors (i.e., clinical educators) may provide a better educational experience for students (Herzog & Zimmerman, 2009). Preceptors may also influence the educational experience of students by modeling leadership skills because students learn directly and indirectly from preceptors (Platt Meyer, 2002b). Additionally, the leadership training students receive and the leadership competencies they observe during professional preparation may one day be reflected when they attain the role of preceptor.

Leadership qualities and training have been discussed in the athletic training profession on an informal basis throughout the history of the profession. Since the inception of the National Athletic Trainers' Association (NATA) in 1950, mentorship has been the athletic trainer's main method of enhancing and learning about leadership and the skills and competencies associated with it (NATA, 2011a). During the early years, there was not a need for a formal process of leadership development in the profession because the number of members of NATA was small; so connections were fostered and mentorship was natural (Peer & Schlabach, 2009). The current certified membership of NATA is now at over 32,000 (NATA, 2013) and the athletic training profession is

recognizing the need for leaders to emerge throughout the profession (Kutz, 2010b; Peer & Schlabach).

In order to address the need for formal leadership training, NATA has developed “national initiatives such as iLEAD (a student leadership conference sponsored by NATA) and StarTracks (a young professionals [*sic*] leadership group) [which] are focused on developing leadership skills in young professionals” (Peer & Schlabach, 2009, p. 35). Another way to encourage the emergence of leaders in the athletic training profession is to educate future athletic trainers in leadership knowledge, skills and competencies (Kutz, 2010b; Peer & Schlabach). Neither the current professional education program standards maintained by the Commission on Accreditation of Athletic Training Education (CAATE), nor the athletic training education competencies set forth by NATA explicitly address leadership knowledge, skills or competency development. However, a professional preparation program should include leadership in its curricula since the BOC *Role Delineation Study/Practice Analysis* (2010) has found that leadership is necessary to practice at an entry-level in the profession of athletic training.

Suggestions have been made regarding varying methods for developing leadership knowledge, skills, and competencies in athletic training students. Katch, Tomczyk, Shinkle and Berry (2013) identified that being made aware of the opportunity for student leadership roles, having a mentor who is willing to share experiences, and having the opportunity to practice leadership through authentic learning were viable methods for molding students into future leaders. The best method for obtaining this goal may differ based on the needs of different professional programs. Yet there is no

empirical research which identifies which methods are being used or the extent to which leadership is being addressed in professional preparation programs.

Problem Statement

Athletic training specific research supports the need for athletic trainers to possess and utilize leadership knowledge, skills and competencies. Professional programs are required to educate students based on the competencies identified in the 5th edition of the *Athletic Training Education Competencies* (NATA, 2011b). Now included in the 5th edition competencies is a section entitled: Foundational Behaviors of Professional Practice. While this section does not specifically mention leadership, the traits and qualities of leadership resonate throughout. The *Athletic Training Education Competencies* provide a “minimum requirement for a student’s professional education” (NATA, p. 4). This document is derived from the 6th edition *Role Delineation Study/ Practice Analysis* (BOC, 2010) and therefore necessitates that leadership knowledge, skills and competency development be a part of a professional preparation program. While necessary for the practice and advancement of athletic training, little is currently known regarding the methods and the extent of leadership development in athletic training professional preparation programs.

Purpose of the Research

The purpose of this research is to examine student and faculty perspectives of the ways and extent that athletic training professional preparation programs address leadership in their curricula.

Research Questions

The main research questions for this study include:

- To what extent do students of athletic training professional programs perceive leadership is addressed during their athletic training specific education?
- In what ways do athletic training students perceive leadership education is occurring in athletic training professional preparation programs?
- To what extent do faculty of athletic training professional programs perceive leadership is addressed during athletic training specific education?
- In what ways do faculty perceive leadership education is occurring in athletic training professional preparation programs?
- In what ways do the perceptions of students and faculty differ in regards to the extent leadership is addressed during athletic training specific education?
- In what ways do the perceptions of students and faculty differ in regards to the ways leadership education is occurring in athletic training professional preparation programs?

Significance of the Research

Leadership is important to the practice and advancement of the athletic training profession. Yet literature pertaining to what to teach in regards to leadership in athletic training and how to teach and evaluate leadership curricula and competencies is sparse (Kutz, 2012b). With the increasing recognition of leadership as important to the athletic training profession, it is important to determine in what manner and to what extent leadership knowledge, skills and competencies are addressed in professional programs.

Knowledge of this may give athletic training programs and the profession a baseline from which they might work while developing or enhancing leadership related curricula.

Delimitations and Limitations of Study

This mixed-methods study included CAATE accredited professional athletic training programs in the United States. The student participants were limited to students who were NATA members with a self-reported graduation date of Spring 2013 from a CAATE accredited professional athletic training program. The faculty participants were the program directors from CAATE accredited professional programs. These delimitations may affect the generalizability of the study. This study may only be generalizable to CAATE accredited professional athletic training programs in the United States.

Participant self-reporting is a limitation to conducting research with a questionnaire. There is a potential for participants to misunderstand or misinterpret the questions or the response choices (Turocy, 2002). Another limitation to this study was that program directors already have an abundance of responsibilities and may have chosen not to participate if they had already received several questionnaires (Turocy).

Definition of Key Terms

Approved Clinical Instructor. A term formerly used to identify an athletic trainer, certified for one or more years, overseeing the clinical education of students in athletic training programs. The current terminology for this person is preceptor (see below).

Athletic Training Education Competencies. "The knowledge, skills, and clinical abilities to be mastered by students enrolled in professional athletic training education programs" (NATA, 2011b, p.3). Now in its 5th edition, the competencies are published for educational program personnel by the National Athletic Trainers' Association.

Board of Certification (BOC). Independent credentialing body for athletic trainer certification (BOC, 2013).

BOC Standards of Professional Practice. A document which "establish[es] essential practice expectations for all Athletic Trainers" (BOC, 2006, p. 2) and "mandates that BOC credential holders and applicants act in a professionally responsible manner in all athletic training services and activities" (p. 3).

Clinical Education. "The application of athletic training knowledge, skills, and clinical abilities on an actual patient base that is evaluated and feedback provided by a preceptor" (CAATE, 2013b, p. 12).

Clinical Instructor. A term formerly used to identify a certified athletic trainer with less than one year experience or other medical professionals overseeing the clinical education of students in athletic training programs. The current terminology for this person is preceptor (see below).

Commission on Accreditation for Athletic Training Education (CAATE). Accrediting organization for professional, post-professional and residency programs in athletic training which "develop[s], maintain[s], and promote[s] appropriate minimum

education standards of quality athletic training programs” (CAATE, 2013a, About CAATE, para. 1).

CAATE Standards for the Accreditation of Professional Athletic Training Programs. Document which provides minimum academic requirements used for the development, evaluation, analysis, and maintenance of professional athletic training programs which prepare entry-level athletic trainers (CAATE, 2013b).

Foundational Behavior of Professional Practice. As part of the *Athletic Training Education Competencies* this section identifies “the basic behaviors [which] permeate professional practice and should be incorporated into instruction and assessed throughout the educational program” (NATA, 2011b, p. 9).

iLEAD. “A student leadership conference sponsored by NATA” (Peer & Schlabach, 2009, p. 35).

Leadership. For the purpose of this study, leadership will be defined as “a process whereby an individual influences a group of individuals to achieve a common goal” (Northouse, 2010, p. 3).

National Athletic Trainers’ Association (NATA). “The professional membership association for certified athletic trainers and others who support the athletic training profession” (NATA, 2011a, About the NATA, para. 1).

NATA Code of Ethics. A document which “states the principles of ethical behavior that should be followed in the practice of athletic training [and] is intended to establish and maintain high standards and professionalism for the athletic training profession” (NATA, 2005, Preamble, para. 1).

Performance Domains. “Domains are the major areas of responsibilities or activities of a job or profession. They represent the logical groupings of the tasks” (BOC, 2010, p. 5). The 6th edition *Role Delineation Study/Practice Analysis* identifies five performance domains for the profession of athletic training: “1) Injury/illness prevention and wellness protection; 2) Clinical evaluation and diagnosis; 3) Immediate and emergency care; 4) Treatment and rehabilitation; 5) Organizational and professional health and well-being” (p. 33).

Preceptor. “A certified/licensed professional who teaches and evaluates students in a clinical setting using an actual patient base” (CAATE, 2013b, p. 14).

Role Delineation Study/Practice Analysis. “...one of the methods used to identify and prioritize the critical tasks of a job or profession and the essential competencies an individual should possess to perform the required functions satisfactorily” (BOC, 2010, p. 5). A role delineation/practice analysis study is also used for certification purposes “to establish a clearly delineated set of domains, tasks, and associated knowledge and/or skills necessary to carry out the responsibilities of the job to the standards required for certification” (p. 5).

Chapter II

Review of the Literature

Introduction

This chapter will provide a review of the literature that reveals the relationship between athletic training and leadership. It will begin with an introduction to the history of athletic training education as it is essential to understanding the importance of leadership to the profession and the methods of teaching leadership in athletic training used to date. The chapter will explore what leadership is and how leadership is taught. This background information will provide the basis for examining the need for leadership in athletic training, empirical research on leadership in athletic training, and how leadership is taught in professional athletic training education and nursing education programs.

The History of Athletic Training Education

Athletic training education has evolved throughout the decades because of the vision and leadership of dedicated members of the profession. The earliest attempts at uniformity in educating those interested in athletic training can be traced to an announcement in *The Trainers Journal*, in September 1941. The organizers of the first National Athletic Trainers Association announced in the first publication of *The Trainers Journal* their intent to educate students of athletic training at the high school level in order to help reduce athletic injuries at the high school level (Ebel, 1999; Frey, 1941). The program also came at a time to be of service to the nation:

It is of coincidence that our program comes at a time when the nation is in need of physically strong individuals. Therefore, we believe our program to have added significance during the current international crisis. Draft boards the country over have been shocked at the great number of individuals who are not physically fit due to lack of time, knowledge and money on the part of those who are interested in sports and in the youth of the nation. (Frey, 1941, p. 42)

Unfortunately, World War II and regional bickering amongst athletic trainers led to the demise of the first National Athletic Trainers Association in 1944 (Ebel, 1999). After several years, athletic trainers realized the need for a national organization and the current National Athletic Trainers' Association (NATA) was formed in June 1950 in Kansas City, Missouri (Ebel). The purpose of the organization was "to build and strengthen the profession of athletic training through the exchange of ideas, knowledge, and the methods of athletic training" (Newell, 1984, p. 256). The new national organization, under the leadership of William E. "Pinky" Newell began efforts to develop a uniform program of education for the professional preparation of athletic trainers (ATs) (Delforge & Behnke, 1999; Ebel).

In 1955, the NATA formed a Committee on Gaining Recognition (Delforge & Behnke, 1999). Delforge and Behnke stated the purpose of the committee to be professional advancement and in this quest the committee pursued AT education and national certification of ATs. In 1959, the Committee on Gaining Recognition "became the committee for professional advancement" (Newell, 1984, p. 257). At this time the first athletic training curriculum was adopted by the NATA and included the

requirements of obtaining a secondary-level teaching license and all the prerequisites necessary for attending physical therapy school at the time (Delforge & Behnke; Newell). Although the first undergraduate curriculum was adopted by the NATA Board of Directors in 1959, it was ten years before the first undergraduate athletic training programs at Mankato State University, Indiana State University, Lamar University, and the University of New Mexico were recognized by the NATA (Delforge & Behnke). At the same time, a national exam was being developed and was first administered. The first graduate athletic training programs at Indiana State University and the University of Arizona were approved by the NATA in 1972. Delforge and Behnke called these efforts “historically significant events in the professionalization of athletic training, especially as related to community recognition and sanction” (p. 55). This is evidenced in the American Medical Association resolution of June 20, 1967 (Hein, 1967) to “...recognize the importance of the role of the professionally prepared athletic trainer...” (p. 284) and to commend the NATA “for its efforts to upgrade professional standards...” (p. 284).

The 1970s. In 1969 the committee for professional advancement was subdivided into two committees, the subcommittee on Professional Education and the subcommittee on Certification. The educational preparation of the athletic trainer continued to progress throughout the 1970s as approved athletic training programs multiplied and the curriculum evolved (Delforge & Behnke, 1999). The curriculum changed from a focus on completing the prerequisites for a physical therapy program to more athletic training specific courses. There was an elimination of the requirement for obtaining a teaching certificate in physical education or health and the addition of a specific number of clinical

education hours. These changes were developed into one of the first guiding documents for NATA approval of athletic training programs, *Guidelines for Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs*. The NATA Professional Education Committee also created behavioral objectives to correspond with specific learning outcomes for students in athletic training programs. During the 1970s graduate programs were also subject to specific standards and guidelines for obtaining NATA approval (Delforge & Behnke).

The 1980s. As the 1970s came to a close, the NATA Professional Education Committee recognized that athletic trainers needed a “broader and more relevant base” (Delforge & Behnke, 1999, p. 56) of education as the expected expertise of athletic trainers as health care professionals grew. Therefore, the NATA Professional Education Committee recommended the NATA Board of Directors adopt the recommendation of their president, Sayers “Bud” Miller, to move from an emphasis or concentration in athletic training to an academic major (Delforge & Behnke). The NATA Board of Directors resolved to require all NATA approved undergraduate athletic training programs to offer a major in athletic training by July 1, 1986. The death of Sayers Miller in 1981 sent the Professional Education Committee’s plans into disarray as a new leader was found and guidelines for an academic major were developed.

This disruption led the NATA Board of Directors to revise their resolution; now NATA approved programs needed to be in the process of developing an academic major by July 1, 1986 with the final implementation of a major occurring by July 1, 1990 (Delforge & Behnke, 1999). Additionally, no initial approval of athletic training

programs would be granted after July 1, 1986 unless they met the standards of an academic major. With the timetable established, the NATA Professional Education Committee focused on developing the necessary components for an athletic training major and produced a new edition of *Guidelines for Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs* in June 1983 (Delforge & Behnke).

The new edition of the *Guidelines* for an athletic training major and for an “equivalent athletic training major” (Delforge & Behnke, 1999, p. 57) outlined specific subject matter requirements for the major as opposed to specific course requirements and developed specific behavioral objectives known as *Competencies in Athletic Training* to replace the behavioral objectives from the 1970s. The *Competencies* were developed based on the performance domains from the first NATA Board of Certification Role Delineation Study conducted in 1982. By the 1990 deadline, two-thirds of the NATA approved athletic training programs were offering academic majors with the remaining programs offering equivalent majors (Delforge & Behnke).

The 1990s, 2000s and accreditation. As a profession, athletic training achieved a major milestone in 1990 with the American Medical Association (AMA) formally recognizing athletic training as an allied health profession on June 22, 1990 (Delforge & Behnke, 1999). The recognition by the AMA allowed academic programs to seek accreditation from the AMA Committee on Allied Health Education and Accreditation (CAHEA) which led to the development of the Joint Review Committee on Education Programs in Athletic Training (JRC-AT). The JRC-AT was co-sponsored by the NATA,

the American Academy of Family Physicians, the American Academy of Pediatrics, and the American Orthopaedic Society for Sports Medicine and contained members from CAHEA and the NATA Professional Education Committee (Delforge & Behnke).

The establishment of the JRC-AT resulted in the production of *Essentials and Guidelines for an Accredited Education Programs for the Athletic Trainer*. CAHEA accreditation of the first two professional programs occurred in February, 1994. The NATA Professional Education Committee no longer provided approval for undergraduate athletic training programs (Delforge & Behnke, 1999). Due to the AMA deciding to establish a new independent accrediting body, CAHEA was disbanded and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) became the accrediting body for athletic training education. On June 30, 2006 the JRC-AT separated from CAAHEP and changed its name to the Commission on Accreditation of Athletic Training Education (CAATE) (2013a). CAATE is now the accrediting body for athletic training programs.

Education and certification guidelines experienced major changes during the 1990s. Graduate athletic training programs faced change as the NATA Professional Education Committee and subsequently NATA Board of Directors implemented a policy which no longer provided NATA approval of graduate athletic training programs unless they offered learning experiences beyond those of a professional (entry-level) program. Additionally, the National Athletic Trainers' Association Board of Certification (NATABOC) "discontinued completion of an NATA-approved graduate program as a route to certification" (Delforge & Behnke, 1999, p. 59). These two acts established a

route of advanced learning for the athletic trainer and distinguished professional education from post-professional education.

The second major change occurred in 1997 when the NATA Board of Directors and the NATABOC adopted a policy recommended by the NATA Education Task Force which standardized athletic training education and the route to certification (Delforge & Behnke, 1999). The new policy stated the only way to take the certification exam beginning in 2004 was to possess a baccalaureate degree and to have completed a CAAHEP accredited professional (entry-level) athletic training program (Craig, 2003; Delforge & Behnke; Weidner & Henning, 2002). This change standardized athletic training education since the other routes to the certification exam, physical therapy programs and the special consideration route, had been eliminated in the 1980s and the graduate program route had been eliminated in 1998 (Delforge & Behnke). The elimination of the internship route also helped to “better prepare athletic trainers to meet the demands of the future, to align themselves with other health-care professionals and their credentialing routes, and to improve the public perception of athletic training” (Ebel, 1999, p. 42).

In addition to this policy change, the NATA Education Task Force made 17 other recommendations that were approved by the NATA Board of Directors (Delforge & Behnke, 1999; Weidner & Henning, 2002). In order to help implement the initiatives and reduce the amount of crossover in education services within NATA education committees, the Professional Education Committee was disbanded and the Education

Council was formed to oversee all issues of education (Delforge & Behnke; Weidner & Henning).

Clinical education. Clinical education plays a vital role in preparing students to enter the athletic training profession. Commission on Accreditation of Athletic Training Education (CAATE) (2013b) defines clinical education as “the application of athletic training knowledge, skills, and clinical abilities on an actual patient base that is evaluated and feedback provided by a preceptor” (p. 12). Laurent and Weidner (2002) surveyed employed entry-level certified athletic trainers who had recently completed an accredited program. The respondents indicated that they believed 53% of their entry-level professional development was from clinical education. Weidner and Henning (2002) stated “clinical practice has always been at the heart of a student’s educational experiences and is of vital importance in the transformation from novice to competent practitioner” (p. S-223). With clinical education occupying such a large role in athletic training education understanding its history is important.

Like the didactic curriculum portion of athletic training education, clinical education requirements have matured with the evolution of the profession. Clinical education in allied health professions can be traced back to the apprenticeship manner in which medical education trained physicians (Weidner & Henning, 2002). The idea behind apprenticeships was that the student learned from the master practitioner. This guiding principle still applies in clinical education today. However, medicine transitioned from apprenticeship based learning to competency based learning and

clinical education in athletic training is well on its way to becoming truly competency based.

Athletic training clinical education was first seen in the 1959 Athletic Training Curriculum Model as “laboratory practices” (Delforge & Behnke, 1999, p. 54). Clinical education was further refined in the 1970’s when the National Athletic Trainers’ Association (NATA) Professional Education Committee developed behavioral objectives based on the 11 courses required for athletic training education (Delforge & Behnke). At this time, they also created a skill competency checklist to monitor the students’ skills and implemented a clinical clock hour requirement (Weidner & Henning, 2002). In 1983, the NATA put forth the *Competencies in Athletic Training* report which replaced the behavioral objectives of the 1970’s (Delforge & Behnke). These *Competencies* were based off of the “performance domains” which came from the Role Delineation Study (see next section).

Clinical education has continued to evolve within the profession of athletic training. The learning experiences of athletic training students have become more focused and the students are treated less like a workforce and more like students while still receiving professional socialization (Weidner & Henning, 2002). The trend away from apprenticeships and toward competency based education continued with Knight’s introduction of “...the modularized concept of athletic training clinical education, in which students focus on prescribed competencies and proficiencies during their clinical-education experiences” (p. S-224). The athletic training students of today receive “...close supervision during their clinical-education experiences” (p. S-224).

The importance of clinical education to the professional preparation of athletic training students should not be overlooked. With the large role that clinical education plays, it is important that the people overseeing the students during their clinical education be well-educated and taught how to work with students. Until recently, the people overseeing the students were called approved clinical instructors (ACIs) or clinical instructors (CIs) depending on their educational background and if an athletic trainer (AT), how many years certified. Now the clinical educators are referred to as preceptors (CAATE, 2013b). No matter their title, clinical educators receive training specific to educating students in a clinical setting because “just by virtue of being clinicians, certified athletic trainers do not have the knowledge or skills regarding the methods for teaching and evaluating the students under their supervision” (Weidner & Henning, 2002, p. S-225 – S-226). This training does not guarantee the quality of the preceptor nor the quality of the educational experience the student receives. Preceptors do, however, play an important role in the education of professional program students.

Certification and the role delineation study. Over the decades while changes in education were occurring, the NATA Professional Advancement subcommittee on certification was also hard at work. Led by Lindsay McLean, the Certification Examination Committee developed and proposed *Procedures of Certification for Active Members of the National Athletic Trainers’ Association* which was approved by the NATA Board of Directors on June 6, 1969 and developed content areas for the first certification examination (Grace, 1999). In order to receive guidance in developing and scoring the first certification examination, the NATA contracted with Professional

Examination Services in 1969. The first exam was administered in Waco, TX in 1969 to 15 candidates (Grace).

The Carter administration brought significant changes to the realm of professional certification for all health professions when it organized and supported a “private sector-driven organization that would develop and administer criteria for certifying agencies” (Grace, 1999, p. 287). The National Commission for Health Certifying Agencies (NCHCA) was formed in 1977 “to develop standards of excellence for voluntary certification programs” (Institute for Credentialing Excellence, 2013). According to Grace “to ensure the quality and fairness of the certification program and to obtain recognition for the certification program, the NATA applied for NCHCA accreditation in 1981” (p. 287). Until this point, the NATA Board of Certification (NATABOC) had been overseen by the NATA Board of Directors. In order to comply with NCHCA’s criteria for accreditation, the NATA Board of Directors gave the NATABOC administrative independence in 1982 (Grace). In 1989 the Board of Certification separated completely from the NATA and is now an independent credentialing body (Board of Certification, Inc., 2013; Grace).

Compliance with NCHCA standards required that the method of appointment to the NATABOC be changed so each NATA district had one representative on the board and that two non-athletic trainers, one of whom was to be a physician, appointed to the Board (Grace, 1999). Additionally, NCHCA required that the testing tools used to evaluate competence in a profession be objective, fair, job-related, and “based on the knowledge and skills needed to function in the discipline” (p. 289). In March 1982, the

NATABOC put together a Role Delineation Panel consisting of certified athletic trainers. The panel created the first performance domains for athletic training, linked tasks to the domains, and identified the knowledge and skills necessary to carry out these tasks. The panel then determined the importance of the tasks, the frequency of the tasks, and how critical each task was to safe practice. This important work was then validated “by a national sample of certified athletic trainers” (p. 289) and resulted in the first Role Delineation Study. Thus the content of the certification exam was linked to the tasks performed by entry-level athletic trainers and the NCHCA granted the NATABOC accreditation.

The *Role Delineation Study* was then used as a resource for the formation of the first version of the *Competencies in Athletic Training* which was used for curriculum development and program approval (Grace, 1999). As of 2013, the *Role Delineation Study/Practice Analysis* is in its 6th edition and still used as a basis for the *Standards for the Accreditation of Entry-level Athletic Training Education Programs* and the *Athletic Training Education Competencies* which have evolved from the original *Competencies in Athletic Training*.

The *Role Delineation Study/Practice Analysis* (RDS) (Board of Certification, Inc., 2010) provides professional education with a basis for its purpose and content. As such, it is important to note that the RDS specifically mentions the importance of leadership to the athletic training profession. “ATs [athletic trainers] must utilize management and leadership techniques to compete in today’s healthcare market” (p. 70). Therefore, it is important to examine leadership to see how it relates to athletic training.

Premise for Leadership in Athletic Training

Leadership is a concept for which there is not one agreed upon definition. Bass and Bass (2008) stated that the definition of leadership has changed throughout time as theories of leadership have developed. With such variation, the search for one single definition is futile. Bass grouped the varying definitions into groups which focus on “the leader as a person, on the behavior of the leader, on the effects of the leader, and on the interaction process between the leader and the lead” (p. 15). These groupings provided a good starting point for understanding leadership as a concept, but they did not yield one single definition.

In agreement with Bass, Northouse (2010) suggested leadership has different meanings for different people. He stated the process of defining leadership led us to discover that there are as many different meanings as there are people. Although the exact definition of leadership may change with the theory of leadership being examined, Northouse has identified several central ideas common to leadership. These components are reflective of Bass’ groupings and include: “(a) Leadership is a process, (b) leadership involves influence, (c) leadership occurs in groups, and (d) leadership involves common goals” (2010, p. 3). Given the commonality of these components to the many different concepts of leadership, Northouse has proposed the following as a definition of leadership: “Leadership is a process whereby an individual influences a group of individuals to achieve a common goal” (p. 3). This definition is similar to what is suggested in athletic training literature.

Leadership defined. While the published literature on defining leadership specific to athletic training is sparse, three definitions have been suggested. The first definition suggested by Harrelson, Gardner, and Winterstein (2009) was from renowned speaker and author, John Maxwell, and given as “the ability to influence others” (p. 3). Kutz (2010a) has defined leadership as “the ability to facilitate and influence superiors, peers, and subordinates to make recognizable strides toward shared or un-shared objectives” (p. 64). And lastly, Ray and Konin (2011) have defined leadership as “the process of influencing the behavior and attitudes of others to achieve intended outcomes” (p. 5).

Within athletic training the commonality between the definitions is influence. Each of the previously mentioned authors agreed that influence played a major role in defining leadership within the profession. Therefore, for the purposes of this study, Northouse’s (2010) definition of leadership will be used “Leadership is a process whereby an individual influences a group of individuals to achieve a common goal” (p. 3).

Empirical leadership research in athletic training. The need for leadership skills and behaviors in the profession of athletic training is clearly supported by the literature. The possession of leadership competencies can enable athletic trainers to remain competitive in a fast changing health care system (BOC, 2010; Kutz, 2008), and to be quality professionals who provide quality healthcare (Amato & Warner, 1996; BOC, 2006; NATA, 2005; Nellis, 1994; Raab, Wolfe, Gould, & Piland, 2011). Leadership competencies may also be used to monitor and improve athletic training

education (Herzog & Zimmerman, 2009; Laurent & Bradney, 2007, Platt Meyer, 2002a, Platt Meyer 2002b). Additionally, the application of leadership competencies may contribute to developing leaders of professional organizations (Katch, Tomczyk, Shinkle, & Berry, 2013).

Having leadership competencies can enable athletic trainers to be competitive in the healthcare arena. Several studies have examined the qualities employers look for when hiring athletic trainers. The common qualities identified include: professional knowledge and confidence (Carr & Volberding, 2013; Kahanov & Andrews, 2001), communication (Carr & Volberding; Hazelbaker, 2013; Kahanov & Andrews), and leadership (Hazelbaker; Kahanov & Andrews) including the specific leadership skills of decision making and the ability to learn from mistakes (Carr & Volberding). Without knowledge of leadership and the qualities and skills involved in leadership, an athletic trainer cannot be successful in the changing healthcare arena (BOC, 2010). Lacking these qualities may also exclude athletic trainers from obtaining jobs in a highly competitive healthcare market.

The characteristics necessary to be a quality athletic trainer have also been examined and further support the need for leadership qualities in athletic trainers. Raab, Wolfe, Gould, and Piland (2011) interviewed athletic trainers across employment settings and determined that the ability to care, show commitment and integrity, value professional knowledge, and communicate effectively with others were characteristics which led to the perception of a quality athletic trainer. All of these characteristics are leadership competencies. These findings are supported by the National Athletic Trainers'

Association *Code of Ethics* (2005) which stated “the principles of ethical behavior that should be followed in the practice of athletic training” (para. 1) and addressed each of the Raab et al. findings through out the document. The *BOC Standards of Professional Practice* (Board of Certification, Inc., 2006) also addressed these qualities in the code of professional responsibility section of the document. Additional support for the finding by Raab et al. can be seen in Amato and Warner’s (1996) application of Kouzes and Posner’s qualities people look for and admire in leaders to the profession of athletic training. Nellis (1994) also identified leadership characteristics which should be employed to run an effective healthcare facility. These included knowing yourself, setting good examples, maintaining competence in the profession, understanding the people with whom you work, developing loyalty within followers, encouraging followers and knowing when and how to reprimand followers (Nellis). Clearly leadership competencies are believed necessary for practitioners to be successful within the athletic training profession.

Having leadership competencies will also enable athletic trainers to monitor and improve athletic training education. Laurent and Bradney (2007) examined the leadership practices of program directors and head athletic trainers and determined that both groups used transformational leadership practices, but that program directors used them more often. Laurent and Bradney posited that this may be due to the program directors holding faculty positions where as head athletic trainers were usually staff members who also functioned as a preceptor for athletic training programs. Program directors were identified as having the position and leadership opportunities to influence

the success of the programs and student learning. Head athletic trainers were believed to also have the ability to influence the quality of education programs through their use of leadership competencies as preceptors and as mentors, but were often given less opportunity for leadership in the higher education setting.

Herzog and Zimmerman (2009) suggested that program directors should use transformational leadership to build positive working relationships with preceptors and thereby create a quality educational experience for students. They offered the following leadership qualities as important for a program director to use while building a positive working relationship: “a sustained pattern of positive interaction, mutual trust, shared vision, and respect” (p. 41). Additionally, preceptors need to model leadership for students under their supervision. Platt Meyer (2002b) stated that “it is vitally important for clinical instructors to develop and refine leadership skills, because students learn these professional skills, both directly and indirectly from their clinical instructors [preceptors]” (p. 34).

A method for refining leadership skills among preceptors is continuous self-reflection (Platt Meyer, 2002b). The author posited that there is a link between leadership competencies and preceptor effectiveness. It was suggested that preceptor effectiveness can be evaluated by assessing professional attitudes, professional actions, and communication skills of the preceptor. Platt Meyer (2002a) proposed that preceptors should employ situational leadership with students because “situational leaders carry a substantial responsibility to lead and give power away as they encourage their followers in attaining their greatest potential” (p. S-264). The use of situational leadership in a

clinical setting allowed preceptors to adapt their leadership style to the level of the student with whom they were working (Platt Meyer, 2002a). With the implication that leadership skills are related to preceptor effectiveness, it is important to educate not only the students in professional preparation programs who may one day become preceptors, but also the preceptors who work with students enrolled in professional preparation programs. Given the important role that clinical education has in the professional preparation of students, having preceptors who are able to identify and adapt their leadership styles to match the needs of the learner is important to the quality of education students receive.

Katch, Tomczyk, Shinkle and Berry (2013) reflected on the importance of developing leadership skills in students enrolled in professional preparation programs in order to ensure future quality leadership of professional organizations. In their reflections, the authors identified being made aware of the opportunity for student leadership roles, developing leadership characteristics, having a mentor who is willing to share experiences, and having the opportunity to practice leadership through authentic learning as methods for molding students into future leaders. Being able to engage in leadership practices as a student enhances the student's chance of obtaining a job and taking a leadership role in the profession (Katch et al.).

While the literature clearly supports the need for leadership in athletic training, there have been few empirical studies conducted examining leadership in athletic training. This paucity of leadership research clearly places the profession of athletic training at a disadvantage for advancing leadership education and practice within the

profession. To date, the empirical research found in athletic training literature includes studies which focus on different areas of leadership within the profession. However, all of the studies demonstrate the need for leadership development within athletic training programs.

Laurent and Bradney (2007) carried out an investigation to identify leadership practices of program directors and head athletic trainers. The participants completed Kouzes and Posner's 2003 Leadership Practices Inventory. The results showed that both program directors and head athletic trainers practiced transformational leadership in their jobs with program directors more frequently employing leadership behaviors. Laurent and Bradney suggested that this may be due to the role programs directors have as faculty members at institutions of higher education and that the accreditation process may have made program directors more aware of the need to model leadership behaviors. Laurent and Bradney (2007) concluded that "athletic trainers exhibit leadership behaviors similar to those of leaders in other fields" (p. 125). This conclusion provides a basis from which to apply leadership to athletic training. Additionally, the fact that both program directors and head athletic trainers utilize leadership behaviors in their work emphasizes the need for leadership training during the professional preparation of athletic training students.

Another setting in which leadership behaviors are needed by athletic trainers is in the role of healthcare managers. Hazelbaker (2013) conducted an exploration of the knowledge skills and abilities needed by athletic trainers to practice in the role of healthcare management. Hazelbaker found that "effective healthcare managers need a strong understanding of business and management tools along with more interpersonal

skills in communication and leadership” (p. 87). While this study did not specifically look at leadership behaviors needed, the findings indicated that transformational leadership was important in healthcare organizations with communication and contextual intelligence being necessary competencies to possess for success. Hazelbaker acknowledged that these areas were already included in athletic training program curriculum but suggested that the focus on management and leadership be expanded to better prepare students for roles in emerging practice settings within the profession of athletic training.

Peer and Schlabach (2009) contributed to the athletic training literature on leadership with their focus on professional values. They argued that developing a professional identity and professional values took place through enculturation via mentoring. In order to determine which professional values students viewed as core to athletic training, Peer and Schlabach conducted a survey which contained 15 values that were implicit in the National Athletic Trainers’ Association *Code of Ethics*. The results revealed that honesty/truth, respect, and accountability received the highest rankings among students and suggested that students have an interest in professional values. Peer and Schlabach suggested that “the discovery and articulation of explicit professional values during the development of leadership skills will provide a framework for the athletic training profession to be sustained” (p. 38). The professional values of honesty/truth, respect, and accountability are leadership behaviors and as such should be developed in conjunction with leadership education in athletic training programs.

Kutz and Scialli (2008) used the Delphi technique in order to determine leadership content important to professional preparation in athletic training. The findings of this study indicated that 35 leadership content areas were viewed as at least moderately important with 22 of the 35 being very or extremely important. Through this study Kutz and Scialli have shown that both athletic training faculty and practitioners identified leadership content as important in athletic training programs. The implication was that leadership may be important to the athletic training profession and that “it is possible that intentional leadership development can help to establish a profession more firmly in society” (p. 210). Therefore, it may be implied that leadership education needs to be specifically included in athletic training programs to continue the advancement of the profession.

While the idea of including leadership in athletic training programs is supported in the literature, what to teach in regards to leadership presents a difficulty since leadership is such a diverse topic. In response to the lack of research in the identification of leadership competencies specific to athletic training, Kutz (2010b) conducted a Delphi study to identify such competencies. Kutz’ findings included 49 leadership competencies which were then organized into four constructs. These constructs can be used as a basis for leadership curriculum development in athletic training programs at all levels.

The final piece of empirical research in relation to leadership and athletic training was conducted to examine the relationship between leadership behaviors and clinical behaviors in athletic training students; the change of student behavior over time; and the preceptors’ evaluation of the students’ leadership skills compared to the students’

evaluation of their own leadership skills (Kutz, 2012a). The results of this study demonstrated “that there is a positive relationship between demonstrated leadership behaviors and clinical behaviors of ...” (Kutz, 2012b, p. 98) athletic training students in professional preparation programs and that the demonstrated leadership behaviors of the athletic training students increased as their academic level in the program increased. This study also revealed that the evaluations completed by preceptors showed a stronger relationship between the students’ clinical and leadership skills than the students’ self-evaluations showed. This may indicate that there is a need to more clearly educate the students on the role leadership plays in clinical practice. Again this study identified that more focused leadership education is necessary in professional preparation programs in order to assist students in making the link between leadership behaviors and clinical practice.

Leadership Development Practices in Healthcare Professions

The development of students as leaders in higher education began in the arena of student affairs but has since been incorporated into many other academic programs (Komives, Dugan, Owen, Slack, & Wagner, 2011). The information which may be gained from examining leadership development programs in student affairs and other professions provides valuable tools for teaching leadership to university students. However, healthcare professional preparation programs contain a clinical education component not often found in other professional preparation programs. Clinical education commonly occurs in tandem with traditional courses. This combination may allow for a unique approach to leadership development.

The need for leadership skills and competencies is well presented in athletic training literature. Yet the best methods and time for learning about and developing leadership skills and competencies have not seen the same level of investigation. Kutz (2012b) provided a conceptual framework for integrating leadership development into athletic training education (see following section). However, other athletic training literature has not addressed the best methods of leadership development for the profession. Athletic training may benefit from examining and implementing the leadership development methods used in another healthcare profession. Nursing is a healthcare profession with a similar educational process to athletic training and a multitude of information on leadership in the field. Therefore, the leadership development process in nursing will be examined to supplement the paucity of leadership development information in athletic training.

In athletic training. Kutz (2012b) has presented a conceptual framework for incorporating leadership into athletic training education. This framework includes two areas of education which should include leadership. The first area is “formal education” (p. 26). Included in formal education are knowledge of leadership behaviors, theories, styles and skills and the relation of these components of leadership to other content areas of the education program. The second area of the framework is “clinical application” (p. 26). In this area students are encouraged to apply the knowledge learned in the first area to the clinical setting where they can receive feedback from preceptors and self-reflection activities to adjust their leadership behaviors as necessary. This conceptual framework

provides a starting point for examining what is currently being practiced in professional athletic training programs.

Although there are various methods of leadership development, the methods which have been historically employed in athletic training have been more informal. Formal leadership development in athletic training has only recently been implemented by the National Athletic Trainers' Association (NATA). NATA conducts two programs to promote the leadership development of members and future members. The StarTracks program is "a program of self-study for athletic trainers wishing to create, improve, or refine their leadership skills" (NATA, 2014b). This program is intended to be completed over two years and was established to assist members in gaining leadership skills to provide volunteer service to the profession at the state, district and national levels. Any NATA member may participate; however, some members may be nominated by their district and provided a scholarship to offset the costs of participation.

The second leadership development program sponsored by the NATA is iLead. The iLead program is held every other year. Participants are junior and senior athletic training students. The purpose of iLead is to teach students more about leadership and to prepare them to transition from a student to a professional (NATA, 2014a).

Peer and Schlabach (2009) proposed that developing a professional identity and the enculturation process were both key to developing future leaders. They supported the national initiatives taken to invest in leadership development; however, they stated "more importantly, an athletic training program should strive to develop leaders throughout its curriculum" (p. 35). They viewed leadership development as occurring through the

enculturation process. They also stated that mentoring and role modeling by athletic training faculty and clinicians serve as the basis for creating tomorrow's leaders through the process of character development.

Katch et al. (2013) offered the perspective of students on leadership development. Their suggestions for leadership development included having students who were interested in leadership roles pursue them while enrolled in an academic program. They pointed out that students should “model the professional behavior of mentor(s), preceptor(s) and other well-respected professionals” (p. 26). Lastly, they suggested that athletic training educators inform students about leadership through “(1) sharing individual experiences; (2) helping students evolve their existing leadership qualities; (3) informing students of local, state, district, and national student leadership opportunities; and (4) engaging students in service learning” (p. 26). The authors suggested educators should provide opportunities for project-based activities which include opportunities to use leadership skills. However, the main focus of leadership development was left to students participating in extracurricular activities such as student senate or other programs offered through professional organizations or the institution of higher education the student was attending.

The importance of education as a vehicle for developing leaders is not debatable. Education can provide knowledge of leadership. It also provides a time and place during which leadership development may occur.

In nursing. Given the scarceness of research in athletic training related to when and how to teach leadership skills and competencies, reviewing the subject in the field of

nursing may provide some insights which may be adaptable to the athletic training profession. Nursing has similar professional preparation program components to athletic training with both didactic and clinical education contributing to students' educational experiences. This combination of learning environments is unique to healthcare professions. It presents both opportunities and challenges for integrating leadership skills and competencies into leadership training, post-professional and professional preparation programs.

The call for preparing nurse leaders is abundant in nursing literature (see Aduddell & Dorman, 2010; Bellack et al., 2001; Curtis, de Varis, & Sheerin, 2011; Lacasse, 2013; Swearingen, 2009). The need for leadership training has led to the implementation of leadership programs for practicing nurses at various organizations (Schwarzkopf, Sherman & Kiger, 2012; Swearingen). The development of graduate nursing programs which specifically include leadership is another method used to address the need for leadership in nursing (Gerard, Grossman & Godfrey, 2012). A call to expand leadership training at the baccalaureate level has also been made in response to developing nurse leaders (Heller et al., 2004; Manfredi & Valiga, 1990). Lastly, the implementation of leadership training opportunities through professional organizations has also been seen as an appropriate method for enhancing leadership training for nurses (Lacasse; Sportsman, Wieck, Yoder-Wise, Light, & Jordan, 2010).

Each type of leadership training program provides opportunities for developing leadership skills and competencies. However, the implementation of enhanced leadership training at the baccalaureate level may provide students with the opportunity to be better

prepared to understand and take on leadership roles in a fast changing healthcare environment (Institute of Medicine, 2010; Lacasse, 2013). According to Hendricks, Cope and Harris (2010):

the importance of leadership, beginning at the undergraduate level, has been recognized by many university nurse preparation programs, but typically discussion of leadership is often par se and offered during the last semester of the final year, when there is little time for students to integrate the skills they could use in the classroom and in practice. (p. 252)

Manfredi and Valiga (1990) conducted a study to determine how nurse leaders were being prepared in baccalaureate programs. Through an examination of self-study reports they attempted to answer some basic questions regarding leadership and management curricula and development in the didactic portion of baccalaureate programs. Their findings indicated that many of programs reviewed made no distinction between leadership and management. In fact, the majority of the programs focused on management concepts and skills. Although the study only included ten programs, it provided valuable information about what was actually being taught to prepare leaders at the baccalaureate level. This early study emphasized the importance of determining whether or not educational programs are differentiating between leadership and management in their curricula.

In an attempt to “enhance beginning leadership competencies of baccalaureate nursing student” (Bellack et al., 2001, p. 23) the Helene Fuld Leadership Initiative in Nursing Education program was designed. This program used a novel approach to

enhancing leadership education at the baccalaureate level. The program focused on educating the educator and clinician together. In order to apply to and participate in the program, a commitment from both an academic in a leadership role and from a clinical partner in a leadership role was required. Given leadership competencies to incorporate into their curriculum, each academic/clinical partnership was allowed time to develop the best methods for incorporation of these competencies into their curriculum specific to their situation. The impact of this program had far reaching potential. Students from the represented programs might be exposed to greater leadership potential and the variety of curricula developed allowed for a curricular repository with an assortment of curricula to meet the needs of varied programs.

Heller et al. (2004) developed an elective course for students at the registered nurse (RN) to Bachelor of Science in Nursing (BSN) and RN to Master of Science in Nursing (MSN) levels. The goals of the project included establishing leadership competencies and content for a constantly changing healthcare environment, bridging the gap between education and practice by using an advisory panel and providing a prototype leadership course for other schools to utilize. While the targeted population was nurses already in the workforce, the authors stated “this course, including the didactic content and exercises, also provides a vehicle for developing the leadership skills of all students, not just those who may be interested in pursuing management careers” (p. 210). The development of leadership programs at the baccalaureate program level should be encouraged to include both didactic and clinical components. Additionally, the development of such courses should not be left solely to academics. The panel involved

in the development of this course noted that the inclusion of clinicians in the development of this course was innovative and representative of best practices (Heller et al.).

Hendricks et al. (2010) provided a different type of leadership experience for undergraduate students. The leadership program they implemented was an extracurricular program. The program mainly focused on three aspects of leadership. Leadership knowledge was addressed using a one day leadership retreat. Leadership skills were incorporated through a one half day leadership foundation session followed by six two hour sessions. Lastly, leadership -in-action was addressed by placing a student with a mentor who was a leader local health care organization. The student then needed to provide leadership for a community development project with a minimum of 30 hours of work on the project. The participants demonstrated a gain in all areas related to leadership after completing the program. This was yet another example of the successful implementation of leadership programs at the baccalaureate level.

It is clear that leadership knowledge, skills and competencies need to be developed at many different levels. However, providing a basis during baccalaureate and professional preparation programs is essential. Many may argue that the methods for teaching leadership remain ambiguous. Without research to support the most commonly used methods to develop leadership knowledge, skills and competencies in athletic training the gold standard remains elusive.

Summary

The history of the athletic training profession provides insight into the relationship between athletic training and leadership. Under the leadership of William

“Pinky” Newell the National Athletic Trainers’ Association (NATA) began as a small meeting of men and has developed into an organization which promotes the advancement of the profession. The leadership and members of the NATA played a vital role in developing and improving the educational requirements for students of athletic training. Even though approving and monitoring athletic training programs now falls under the purview of Commission of Accreditation for Athletic Training Education (CAATE), without the strong leaders the profession has seen over the last decades, athletic training would not be where it is today.

One of the vital aspects of athletic training education is the clinical education component. This component allows students to practice information and skills they have learned in the classroom on a patient while under the direct supervision of a preceptor. As clinical educators, preceptors are often viewed as leaders in the clinical setting by students. They provide students with the opportunity to begin their professional socialization and often become mentors for the students. The role of clinical education in the development of leadership should not be overlooked.

The role of leadership in athletic training is further supported by the Role Delineation Study (RDS). Without leadership knowledge and skills, athletic trainers (ATs) are not ready for entry-level practice. Additionally, ATs will not be competitive in today’s healthcare market without leadership knowledge and skills.

The literature clearly supports the need for leadership in athletic training. There have been few empirical studies conducted examining leadership in athletic training which places the profession at a disadvantage for advancing leadership education and

practice within the profession. The leadership related research found in athletic training literature includes studies which focus on many aspects of leadership within the profession. The common theme emerging with the current empirical research in regards to athletic training and leadership is that more needs to be done during professional preparation to expose and educate students in leadership competencies. Leadership competencies are important for obtaining and progressing in practice settings, clinical practice, and the advancement of the athletic training profession. Focusing efforts on exposing students to leadership during their early professional preparation will allow their leadership competencies to grow over time just as their clinical competencies grow over time.

Monitoring and improving athletic training programs will enable athletic trainers to remain competitive in a fast changing health care system and become quality professionals who provide quality healthcare. Practicing leadership competencies at all levels of the profession and during the professional preparation process will benefit the profession in the future. Hence, leadership should be included in professional athletic training programs.

Developing one definition of leadership is an elusive task. Each construct of leadership seems to bring its own definition with it. Even within the athletic training literature there is not one agreed upon definition of leadership. However, all of the athletic training related definitions have the concept of influence as important. Therefore, for the purposes of this study, Northhouse's (2010) definition of "Leadership is a process

whereby an individual influences a group of individuals to achieve a common goal” (p. 3) will be used.

The need for athletic trainers to possess leadership knowledge, skills, and behaviors is clearly demonstrated in athletic training related literature. Without leadership competencies such as the ability to care, demonstrate commitment and integrity, value professional knowledge, and communicate effectively, athletic trainers will not be able to remain competitive in the current health care arena. These competencies can be used to monitor and improve the didactic and clinical portions of athletic training programs and to foster relationships among academic athletic trainers and preceptors. Developing and employing leadership competencies will also contribute to the development of the future leaders of the National Athletic Trainers’ Association (NATA). Additionally, the NATA *Code of Ethics* addresses leadership competencies as essential to the ethical practice of athletic training.

Although leadership is clearly necessary for the preparation to practice and the practicing of athletic training, few empirical studies have been conducted which examine leadership in athletic training. The studies conducted have examined different roles within athletic training which require leadership competencies. These roles include that of program directors, head athletic trainers, health care managers, practicing athletic trainers, preceptors, and athletic training students.

With leadership competencies playing such an important role at all levels of athletic training practice, including preparation, the question of how leadership is developed should be examined. The discipline of student affairs initiated leadership

development in higher education, but it has spread to other disciplines. While the information related to leadership development learned from student affairs and other professions is useful, healthcare professions contain a unique clinical education component.

Athletic training literature supports the need for the development of leadership knowledge, skills and competencies; yet there is a paucity of leadership development specific research in athletic training. Kutz' (2012b) conceptual framework suggests that leadership development needs to be incorporated into both formal and clinical education. He suggested introducing leadership behaviors, theories, styles and skills and their relationship to leadership in the formal portion of education. During the clinical portion of education, the students can then apply the information learned in the formal education and receive feedback from preceptors and self-reflection activities.

Other forms of leadership development suggested in athletic training literature vary. The StarTracks and iLEAD programs conducted by the National Athletic Trainers' Association for professionals and students are proposed methods of leadership development. Another method suggests instilling a professional identity and enculturating students during their clinical education. Having educators and mentors share experiences and guide students in recognizing and developing their leadership skills and competencies is yet another method. Students then can practice these competencies through student leadership roles and service learning. The variety of methods suggested may prove beneficial but lack research to support their use.

Another allied health profession, nursing, also has a clinical component to their education programs. Unlike athletic training, nursing has a wealth of literature suggesting different methods for developing leadership knowledge, skills and competencies. Some of the areas in which leadership preparation occurs include post-educational training, during graduate education, baccalaureate education and through professional organizations.

Without question leadership is important to the profession of athletic training. The lack of empirical research addressing when and how leadership knowledge, skills and competencies are developed needs to be addressed. Therefore, this study will examine student and faculty perspectives of the ways and extent that athletic training professional preparation programs address leadership in their curricula.

Chapter III

Methodology

Introduction

The purpose of this research was to examine student and faculty perspectives of the ways and extent that athletic training professional preparation programs address leadership in their curricula. Athletic training literature clearly establishes a need for leadership development within the profession, yet there is little research examining how leadership is included in professional athletic training programs. Therefore, this study attempted to provide a starting point from which athletic training programs and the profession might implement or continue to develop leadership training opportunities.

The main research questions for this study included:

- To what extent do students of athletic training professional programs perceive leadership is addressed during their athletic training specific education?
- In what ways do athletic training students perceive leadership education is occurring in athletic training professional preparation programs?
- To what extent do faculty of athletic training professional programs perceive leadership is addressed during athletic training specific education?
- In what ways do faculty perceive leadership education is occurring in athletic training professional preparation programs?
- In what ways do the perceptions of students and faculty differ in regards to the extent leadership is addressed during athletic training specific education?

- In what ways do the perceptions of students and faculty differ in regards to the ways leadership education is occurring in athletic training professional preparation programs?

Selection of Sample and Participants

The sample for this mixed-methods study included Commission on Accreditation for Athletic Training Education (CAATE) accredited professional athletic training programs in the United States. A list of the 364 accredited professional programs is publically available on the CAATE website. The sample was purposefully selected based on the regulation of accredited programs by CAATE. Participants in the study, described below, were faculty and students involved in CAATE accredited professional programs.

Faculty participants. The faculty participants for this study encompassed the program directors from 361 of the 364 CAATE accredited professional programs. Three programs were excluded due to their program status not being active. The excluded programs' statuses were listed on the CAATE website as either closing, not accepting students or on probation. Additionally, any program director used as an expert consultant for the questionnaire development was excluded from the sample. Therefore the total sample size for program directors was 359. The program director of each accredited program was chosen as the faculty participant due to the level of knowledge program directors have about what is being taught within each program. Additionally, the desired participants were certified athletic trainers. By using program directors as the faculty participants, the questionnaires were most likely completed by certified athletic trainers who are very knowledgeable about their particular professional athletic training program.

A list of the program directors for each program was obtained from the CAATE website. Consent for participation in the study was determined by each participant's completion of the questionnaire after viewing the invitation information.

Student participants. The student participants for this study included National Athletic Trainers' Association (NATA) members who were students who had just completed a CAATE accredited professional program with a self-reported Spring 2014 graduation date. All student participants were over the age of 18. A sample size of 1000 students was used. The sample was obtained through NATA's research survey service. Student consent for participation in the study was determined by each participant's completion of the questionnaire after viewing the invitation information.

Data Collection Procedures

The primary data for this study was collected through two questionnaires conducted in an electronic format. The questionnaires were administered concurrently. The NATA research survey service sent out the student questionnaire. The researcher administered the faculty questionnaire via the Qualtrics survey software. One reminder was sent to participants as described below.

Questionnaires. Two electronic questionnaires were constructed by the researcher and administered via Qualtrics online survey software (see Appendices A and B). The purpose of the questionnaires was to collect information regarding student and faculty perspectives of the ways and extent leadership is addressed in CAATE accredited professional programs. The questionnaires attempted to determine whether CAATE accredited professional programs offer and/or require leadership education for their

students. The questionnaires examined the extent to which leadership education is incorporated through out the students' curriculum and clinical education experiences. Whether leadership is addressed as separate from management or if one is addressed as a subset of the other was explored, and where the majority of leadership education occurs was also inquired about. Lastly, the formality of the different methods which are used to teach leadership knowledge, skills, and competencies were examined.

The questionnaires also collected demographic data on the participating program directors, programs and students. The questions consisted of both closed-ended and open-ended questions. The closed-ended questions were categorical in nature and included on a 5 point Likert scale questions. Both questionnaires were reviewed by expert consultants for quality and content validity prior to administering the instruments. The expert consultants included current and former program directors and current senior athletic training students. The expert consultants were excluded from the final sample selection for both the faculty and student participants.

The faculty questionnaires consisted of 25 questions. The first ten questions collected demographic information. The remainder of the questions addressed the extent and ways each program addresses leadership. The student questionnaire consisted of 23 questions. The first eight were demographic questions. The questionnaires took up to 15 minutes to complete. The questionnaires were available for participants to complete over a one month time frame. The participants received an electronic reminder to complete the survey after the second week.

The student questionnaire was sent to members of the NATA who were students of CAATE accredited professional programs with a self-reported graduation date of Spring 2014. This was accomplished through NATA's research survey service. A reminder email was sent by NATA research services to the students at the end of the second week of the month long period.

Data Analysis

The quantitative data collected from the demographic and closed-ended questions was statistically analyzed. All statistical analyses were performed using the program Statistical Package for the Social Sciences (SPSS) version 22. Descriptive statistics were used to analyze the demographic data. Descriptive statistics were also used to analyze categorical responses from each participant group separately. After separate analysis, the data between the two groups was compared using a Chi-square test for categorical data. A t-test was performed for interval data.

The qualitative open-ended questions were analyzed using the software package NVivo 10. First the text was organized into sections by participant, faculty or student, and then by question number or comment. Next the researcher read through all of the data to become familiar with it. Then, the researcher thematically coded the data and created categories as needed. This data transformation allowed the qualitative data to be merged with and compared to the quantitative data (Creswell, 2009).

Finally, the merged data was organized and reported in a coherent format to best address the main research questions. The quantitative data was presented in tables with text to further interpret the statistical analyses. The qualitative data was reported with

researcher interpretations and narrative excerpts from the participant responses to support the themes found.

Chapter IV

Results

Introduction

The purpose of this research was to examine student and faculty perspectives of the ways and extent that athletic training professional preparation programs address leadership in their curricula. This mixed methods study was conducted using two questionnaires, one for faculty participants and one for student participants, to gather the perspectives on how athletic training programs address leadership. The main research questions for this study included:

- To what extent do students of athletic training professional programs perceive leadership is addressed during their athletic training specific education?
- In what ways do athletic training students perceive leadership education is occurring in athletic training professional preparation programs?
- To what extent do faculty of athletic training professional programs perceive leadership is addressed during athletic training specific education?
- In what ways do faculty perceive leadership education is occurring in athletic training professional preparation programs?
- In what ways do the perceptions of students and faculty differ in regards to the extent leadership is addressed during athletic training specific education?
- In what ways do the perceptions of students and faculty differ in regards to the ways leadership education is occurring in athletic training professional preparation programs?

The results of the study presented in this chapter are organized by Faculty Results, Student Results and Differences Between Student and Faculty Results.

Student Results

Response Rates

A total of 1000 student participants were invited to participate in this research via the National Athletic Trainers' Association (NATA) research survey service. The NATA research survey service was unable to track bounce backs or the number of emails opened. After a reminder email was delivered, the number of student respondents was 72 which is equivalent to a response rate of 7.2%

Demographic Data

A total of 72 questionnaires were submitted. Of the 72 questionnaires submitted, one respondent chose not to answer any of the questions. This respondent's questionnaire was excluded from the sample ($n = 71$). Of the 71 respondents, 53 (74.6%) were female and 18 (25.4%) were male. The mode for age was 22 years.

The majority of respondents ($n = 68$) attended a Bachelor's degree level professional preparation program. Three respondents reported attending a Master's degree level professional preparation program. The self-reported date of graduation for 87.3% ($n = 62$) of respondents was May, 2014. The remaining respondents reported graduating in April ($n = 6$), June ($n = 2$), and August ($n = 1$). Of the 71 respondents, 93% ($n = 66$) indicated they had taken the Board of Certification (BOC) examination. The remaining five respondents indicated that they intended to take the exam. However, only 91.4% ($n = 64$) reported that they intended to practice athletic training. When asked if

they had held or currently held a leadership position in an athletic training organization, 61.4% (n = 43) reported negatively and 38.6% (n =27) reported in the affirmative.

Research Question 1 Extent That Leadership Is Addressed

Respondents were asked to indicate if their athletic training professional preparation program addressed leadership in any way. An affirmative answer was indicated by 86.8% (n = 59) and a negative response was given by 13.2% (n = 9). Three respondents chose not to answer the question and did not continue with the questionnaire. Additionally, the nine respondents who answered negatively were directed to the end of the survey. The sample size for the remainder of the questionnaire was therefore 59 respondents.

Formality and informality. The next section of the questionnaire was designed to discover if leadership content and leadership opportunities were incorporated into the classroom / laboratory portions of the professional programs. Participants who had indicated that leadership was addressed in their program (n = 58) were asked to rate their level of agreement with four statements addressing the formality of leadership content education occurring in the classroom / laboratory portion of the athletic training program. Of the student respondents, 50 % (n = 29) agreed or strongly agreed that leadership education formally occurred in the classroom / laboratory. However, 75.9% (n = 44) agreed or strongly agreed that leadership content education occurred informally. Leadership opportunities were seen by a majority of respondents (79.3%) as occurring informally during classroom / laboratory portions of the athletic training program with only 37.9% indicating they agreed or strongly agreed that leadership opportunities were a

formal requirement of the classroom / laboratory portion of the athletic training program. Since participants were allowed to select more than one option, the reported respondent figures may exceed 100%. Table 4.1 shows the mean scores for the formality of leadership education occurring in the classroom / laboratory portion of the athletic training program. These findings indicate that the student respondents generally perceived that the extent of leadership being addressed was occurring informally in their athletic training programs.

Table 4.1

Student View of Formality of Leadership Education in Classroom / Laboratory Portion of the Athletic Training Education Program

Statement	Mean	SD
Leadership content is a formal requirement of the curriculum portion of the ATEP.	3.55	1.16
Leadership content occurs informally / incidentally throughout the curriculum portion of the ATEP.	4.0	0.99
Leadership opportunities are a formal requirement of the curriculum portion of the ATEP.	3.31	1.19
Leadership opportunities occur informally / incidentally throughout the curriculum portion of the ATEP.	3.98	0.78

Likert Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor Disagree, 4 = Agree, 5 = Strongly Agree

Purposefulness. Another portion of the questionnaire inquired as to the purposefulness of leadership education in the clinical education portion of the professional athletic training program. When asked if they believed leadership was purposefully incorporated throughout the clinical portion of the athletic training program, 75.8% (n = 44) agreed or strongly agreed that this was occurring. When asked to rate their agreement as to whether or not leadership was occurring incidentally throughout the

clinical portion of the program 87.9% (n = 51) agreed or strongly agreed. Similar levels of agreement were seen when students were asked about leadership opportunities. The statement regarding purposeful incorporation of leadership opportunities in the clinical portion of the athletic training program was agreed or strongly agreed with by 70.7% (n = 41). However, 86.2% (n = 50) of students agreed or strongly agreed that leadership opportunities occurred incidentally throughout the clinical portion of the athletic training program. Therefore, the students seemed to perceive that the extent of leadership education in the clinical setting was limited to incidental occurrences. Table 4.2 shows the means and standard deviations for each of the clinically related statements.

Table 4.2

Student View of Purposefulness of Leadership Education in Clinical Portion of Athletic Training Program

Statement	Mean	SD
Leadership is purposefully incorporated throughout the clinical portion of the ATEP.	3.97	0.90
Leadership occurs incidentally throughout the clinical portion of the ATEP.	4.10	0.69
Leadership opportunities are purposefully incorporated throughout the clinical portion of the ATEP.	3.88	0.98
Leadership opportunities occur incidentally throughout the clinical portion of the ATEP.	4.14	0.74

Likert Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor Disagree, 4 = Agree, 5 = Strongly Agree

Research Question 2 Ways That Leadership Education Occurs

In order to examine the ways in which students perceived leadership education was occurring in their programs, they were asked to identify whether or not their program

included one or more leadership courses or workshops. A majority of respondents answered in the negative for both leadership courses (n = 50) and for leadership workshops (n = 56). The affirmative responses for leadership course (n = 9) and workshops (n = 3) and the corresponding numbers of courses and workshops reported can be viewed in Table 4.3. Therefore, in relation to the second research question, neither leadership courses nor workshops were commonly perceived by students as ways in which leadership education occurred.

Table 4.3

Student Reported Leadership Courses Included in Athletic Training Programs

Type of Inclusion	Leadership Courses		Leadership Workshops	
	#	n	#	n
Required	1	6	0	3
	3	1		
	4	1		
Recommended (as opposed to required)	0	5	0	1
	2	2	3	1
	4	1	5	1
Offered by department providing program	0	2	0	2
	1	4	1	1
	2	1		
	4	1		
Offered by department other than one offering program	0	4	0	2
	1	1	4	1
	2	2		
	4	1		
Specific to athletic training	0	2	0	1
	1	4	3	2
	3	1		
	4	1		

Leadership and management. With the intent of determining if leadership was addressed as a topic of its own or under the broader area of management, respondents were asked to rate their agreement with four statements. There were 58 respondents to this portion of the questionnaire. The majority of respondents (69.7%) did not believe that leadership and management were one and the same. However, 48.2% agreed that leadership was addressed as a subset of management and 26.8% agreed that management was a subset of leadership. Table 4.4 identifies the statements and the means and standard deviations for each. In sum, students perceived that leadership and management were intertwined when learning about both in athletic training programs.

Table 4.4

Student View of Leadership and Management Distinctions

Statement	Mean	SD
Leadership and management are one in the same.	2.30	0.95
Leadership is addressed as a subset of management.	3.18	0.97
The majority of leadership education occurs informally in the clinical education portion of the ATEP.	4.0	0.81
Management is addressed as a subset of leadership.	3.48	1.16

Likert Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor Disagree, 4 = Agree, 5 = Strongly Agree

In order to provide additional insight in to the ways students perceive leadership education is occurring in athletic training professional preparation programs, student participants were presented with many teaching method options. They were then asked to identify the teaching methods they perceived as being used to teach leadership knowledge, leadership skills, or leadership application. The participants were then asked

to specify if the methods were used formally, informally, in both ways, or not at all. The teaching methods were presented in groups based on where or how they might be used.

Curricular methods. Tables 4.5, 4.6, and 4.7 include teaching methods that may commonly be used as a part of curricular education. The total respondents for this portion of the questionnaire ranged between 44 and 60. As seen in Table 4.5, lecture (34%) and textbook (28%) were the most commonly chosen formal curricular teaching methods for leadership knowledge. Self-reflection (57.1%) and peer-learning (56%) were the most commonly indicated informal teaching methods used for leadership knowledge. Table 4.6 shows the most commonly chosen formal curricular method for educating students in leadership skills. Lecture (29.5%) was the most commonly perceived formal method and peer learning (57.8%) was the most commonly perceived informal method for educating students in leadership skills. Table 4.7 illustrates that peer learning (47.7%) was used more often than other teaching methods for informal curricular leadership application education. Student perception of formal curricular teaching methods for leadership application was approximately evenly dispersed across all categories.

Table 4.5

Student Perceptions of Curricular Teaching Methods for Leadership Knowledge

Teaching Method	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Textbook	28	14	18	9	20	10	34	17
Lecture	34	17	34	17	24	12	8	4
Self-reflection	14.3	7	57.1	28	22.4	11	6.1	3
Peer-Learning	12	6	56	28	30	15	2	1
Service learning	18	9	34	17	30	15	18	9

Table 4.6

Student Perceptions of Curricular Teaching Methods for Leadership Skills

Teaching Method	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Textbook	18.2	8	18.2	8	27.3	12	22.5	16
Lecture	29.5	13	20.5	9	36.4	16	13.6	6
Self-reflection	17.8	8	44.4	20	33.3	15	4.4	2
Peer-Learning	11.1	5	57.8	26	28.9	13	2.2	1
Service learning	22.2	10	33.3	15	31.1	14	13.3	6

Table 4.7

Student Perceptions of Curricular Teaching Methods for Leadership Application

Teaching Method	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Textbook	20.0	9	24.4	11	15.6	7	40.0	18
Lecture	17.8	8	33.3	15	28.9	13	20.0	9
Self-reflection	20.5	9	40.9	18	34.1	15	4.5	2
Peer-Learning	13.6	6	47.7	21	38.6	17	0	0
Service learning	20.0	9	33.3	15	33.3	15	13.3	6

Workshop methods. Tables 4.8, 4.9, and 4.10 address different college or university units delivering leadership workshops to students as a means of educating students in leadership knowledge, leadership skills, and allowing them leadership application. The number of student participants who responded to this subdivision of the questionnaire varied from 45 to 49. Overall, students did not perceive leadership workshops as being used often as a means for education in leadership knowledge, skills, or application.

Table 4.8

Student Perceptions of Leadership Workshops Used as a Teaching Method for Leadership Knowledge Development

Leadership Workshop	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Through ATEP	4.1	2	4.1	2	8.2	4	83.7	41
Through Department	4.1	2	10.2	5	14.3	7	71.4	35
By college / university	20.4	10	8.2	4	24.5	12	46.9	23

Table 4.9

Student Perceptions of Leadership Workshops Used as a Teaching Method for Leadership Skills Development

Leadership Workshop	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Through ATEP	2.2	1	13.3	6	15.6	7	68.9	31
Through Department	4.3	2	8.7	4	19.6	9	67.4	31
By college / university	19.6	9	8.7	4	28.3	13	43.5	20

Table 4.10

Student Perceptions of Leadership Workshops Used as a Teaching Method for Leadership Application

Leadership Workshop	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Through ATEP	4.4	2	15.6	7	17.8	8	62.2	28
Through Department	2.2	1	17.8	8	22.2	10	57.8	26
By college / university	13.3	8	13.3	8	28.9	13	44.4	20

Leadership involvement methods. Tables 4.11, 4.12, and 4.13 illustrate the use of different forms of leadership involvement for students as a means of teaching method for leadership knowledge and skills acquisition and allowing them leadership application experiences. The number of participants responding to this segment of the questionnaire varied from 45 to 49. Students believed that maintaining a leadership role in organizations, both athletic training related and other is used both formally and informally by athletic training programs to develop leadership knowledge, skills, and application. Student involvement in iLEAD (see Key Terms, pp. 8) was frequently indicated as not being used as a method to develop leadership knowledge, skills, or as a method for application.

Table 4.11

Student Perceptions of Leadership Involvement Used as a Teaching Method for Leadership Knowledge Development

Leadership Involvement	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Student leadership role in AT professional organization	32.7	16	18.4	9	42.9	21	6.1	3
Student leadership role in other organization	24.5	12	18.4	9	44.9	22	12.2	6
Student involvement in iLEAD	10.2	5	6.1	3	6.1	3	77.6	38

Table 4.12

Student Perceptions of Leadership Involvement Used as a Teaching Method for Leadership Skills Development

Leadership Involvement	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Student leadership role in AT professional organization	22.2	10	15.6	7	51.1	23	11.1	5
Student leadership role in other organization	20.0	9	17.8	8	48.9	22	13.3	6
Student involvement in iLEAD	10.9	5	2.2	1	8.7	4	78.3	36

Table 4.13

Student Perceptions of Leadership Involvement Used as a Teaching Method for Leadership Application

Leadership Involvement	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Student leadership role in AT professional organization	21.7	10	13.0	6	63.0	29	2.2	1
Student leadership role in other organization	19.6	9	15.2	7	54.3	25	10.9	5
Student involvement in iLEAD	10.9	5	2.2	1	8.7	4	78.3	36

Mentoring, practical application, and other teaching methods. For the last grouping of teaching methods, students were asked to indicate their perception of the athletic training program's use of mentoring, practical application and other teaching methods to teach leadership knowledge, leadership skills, or allow for leadership application. The number of student participants who responded varied between 36 and 48 according to the method they were selecting. The "other teaching methods" option for leadership knowledge, skills and application received responses from 36 participants. The remaining categories of teaching methods had greater respondent participation with 44 to 48 respondents. The results for leadership knowledge are presented in Table 4.14. The results for leadership skills are exhibited in Table 4.15; and Table 4.16 offers the results for leadership application.

Table 4.14

Student Perceptions of Mentoring, Practical Application and other Teaching Methods for Leadership Knowledge Development

Teaching Method	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Mentoring by peers	10.4	5	35.4	17	54.2	26	0	0
Mentoring by faculty	16.7	8	16.7	8	60.4	29	6.3	3
Mentoring by preceptors	12.5	6	12.5	6	72.9	35	2.1	1
Practical application	16.7	8	14.6	7	66.7	32	2.1	1
Other	5.6	2	5.6	2	27.8	10	61.1	22

Table 4.15

Student Perceptions of Mentoring, Practical Application and other Teaching Methods for Leadership Skills Development

Teaching Method	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Mentoring by peers	8.9	4	31.1	14	60.0	27	0	0
Mentoring by faculty	18.2	8	15.9	7	56.8	25	9.1	4
Mentoring by preceptors	15.9	7	11.4	5	70.5	31	2.3	1
Practical application	20.5	9	15.9	7	59.1	26	4.5	2
Other	8.3	3	5.6	2	25.0	9	61.1	22

Table 4.16

Student Perceptions of Mentoring, Practical Application and other Teaching Methods for Leadership Application

Teaching Method	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Mentoring by peers	13.6	6	29.5	13	54.5	24	2.3	1
Mentoring by faculty	11.4	5	18.2	8	59.1	26	11.4	5
Mentoring by preceptors	13.6	6	15.9	7	68.2	30	2.3	1
Practical application	20.5	9	11.4	5	61.4	27	6.8	3
Other	11.1	4	5.6	2	25.0	9	58.3	21

Other ways leadership is addressed. After viewing the various suggested teaching methods and being asked to identify if the methods were used formally, informally, in both ways or not used, student participants were asked to expound upon other ways leadership was taught in their athletic training programs. The themes emerging from this open-ended question were similar in nature to the methods already addressed in the questionnaire.

Lead by example. Many of the student respondents reported leadership was taught informally through example between student and preceptor as well as student to student. One student respondent explained,

Unfortunately, leadership is not formally addressed in many cases. Informally it is expected that the older students will mentor the younger students. Many opportunities for leadership and mentorship are available but the student must be proactive in seeking them out. The program does not have an overall vision of

pushing students to build leadership skills. It is more dependent on who the preceptor is and the motivation of the student.

Another student stated, “Leadership is developed more through supervision of interns who provide greater leadership opportunities... This causes most leadership to be built outside of the program and volunteering on own.” Lastly, a respondent reported,

In an inadvertent way we lead by example. We may not be aware that there are other students and/or faculty that are observing our every action, and I believe that this type of leadership is the most important and impactful.

Club or organization involvement. Although club and organizational involvement was addressed in the questionnaire, this theme also developed from respondents. Several participants responded with brief answers such as, “Club organization officer positions,” “Through the athletic training club on campus,” and “Jobs outside of school / Involvement in the community.” One student reported,

Our professors are always encouraging us to be involved in our profession either by stepping up and being leaders and practicing evidence based medicine. Our professors hold us to a higher standard compared to a lot of other programs and because we are held to that standard, it shows. They not only teach us athletic training, they also teach us how to be professionals, leaders, and people who are invested and involved in what we do.

Importance of leadership being addressed. Finally, student participants were asked to rate how important it was to them that leadership was addressed in their professional athletic training program. The responses used a Likert type scale with

choices ranging from very important to very unimportant. Of the 48 respondents, 35.4% (n = 17) felt that it was very important, 47.9% (n = 23) selected important, 12.5% (n = 6) gave a neutral response, and 4.2% (n = 2) indicated that it was very unimportant.

Why leadership is important or unimportant. After having indicated the level of importance (above) students were asked to explain why they felt leadership was important or unimportant. The open-ended responses were coded by the researcher which led to the development of two themes. These thematic categories included: *important for the profession* and *important skill for an athletic trainer*.

Important for the profession. Many respondents commented on the need for athletic trainers to be leaders to promote and improve the profession of athletic training. One respondent stated,

I think that it is important to address leadership in a program because it gets people thinking how they can be an advocate for athletic training by being involved. While people may not hold a leadership role they are still involved with the overall athletic training community and therefore can be a leader.

Another respondent explained,

Leadership is an important skill regardless of whether or not one chooses to stay in the field or not. For those choosing to continue in athletic training, leadership skills are necessary as many go on to be graduate assistants, teaching assistants, preceptors, etc., in which good leadership is essential to help guide and shape younger students. Furthermore, the profession is always in need of those that can

take leadership roles on the professional level to advocate for our field and defend our interests.

A third respondent said,

The field of athletic training is still a young profession and in order for us to be able to continue to progress in a manner that will make evident our skills and proficiencies to all the other professions that we work side by side with, we need to let them see and know that we are knowledgeable and not afraid to lead when the time is appropriate to do so.

Important skill for an athletic trainer. Several respondents to this portion of the questionnaire also commented on how leadership is an important skill for an athletic trainer to have to practice the profession. One participant stated, “Leadership is a necessary attribute that athletic trainers should have to be successful in our field.” Another explained, “As a profession in which rapport means a lot to patients, knowing and practicing good leadership skills can help create that rapport and make clinicians better.”

Additional respondents continued to build on this theme of leadership being important for athletic training with their comments of, “To help develop a set of skills to address issues and situations in the professional setting (i.e. dealing with coaches/parents and beginning or introducing programs)” and “It prepares a student for the real life issues of managing and leading students/employees under you.” A different respondent stated,

As athletic trainers it is our job to ensure that the athletic training room and all who work in it runs smoothly. A leader needs to be able to take control, be calm

under stress, and have people listen to him/her. When leadership is addressed we are able to learn how to become these types of leaders. We learn the proper way of becoming a leaders and how to become an effective leader.

This theme was generated based on the difference between leadership being necessary for the practice of athletic training and leadership being necessary for the advancement of the profession.

Faculty Results

Response Rates

Invitations to participate in this research were sent to 355 athletic training professional level program directors via the Qualtrics survey software. Five emails were bounced back to the sender. Of the 350 delivered email invitations, 132 of the emails were opened (37.7%). Of the 132 emails opened, 60 surveys were completed (45%).

A reminder email was sent to the 355 athletic training program directors two weeks after the initial invitation. Three emails were bounced back to the sender after this distribution. Of the 352 delivered invitations, 111 emails were opened (31.5%). After the reminder email there were an additional 25 surveys completed (22.5%).

Overall the Qualtrics Survey software reported that 34% of the invitation emails were opened. The total number of surveys completed was 84. The response rate based on the number of email invitations opened was 30.76%.

Demographic Data

A total of 84 questionnaires were completed and submitted. Of the 84 submitted questionnaires, one contained answers to only five questions and was excluded from the

sample ($n = 83$). Of the 83 participants, 45 were female, 37 were male, and one chose not to report gender.

The median number of years spent as a program director was 8 years. All program directors reported holding an advanced degree. The number holding a Doctoral degree was 55 (66.3%) and 28 (33.7%) reported holding a Master's degree. Of the 83 respondents, 57.8% ($n = 48$) worked at a public institution and 42.2% ($n = 35$) worked at a private institution.

The respondents included 79 program directors of Bachelor's degree level professional athletic training programs and four program directors of Master's degree level athletic training professional programs. The average length of athletic training program existence was 20.99 years ($SD = 11.49$ years) with a minimum of 0 years and a maximum of 43 years. The average graduating class was 10.6 students ($SD = 5.15$).

A majority of the respondents, 74.7% ($n = 62$), indicated they have held or currently held a leadership position in an athletic training organization. The remaining 25.3% ($n = 21$) of respondents indicated that they did not nor had they ever held a leadership position in an athletic training organization. When asked about experiencing formal leadership training, 53% ($n = 44$) had not had any formal leadership training and 47% ($n = 39$) had experience in formal leadership training.

Types of formal leadership training. Participants were asked to describe the type of formal leadership training they had received. There were 39 responses to this portion of the questionnaire. After coding the responses thematically, three main groupings of formal leadership training emerged.

Programs or coursework. A majority of the respondents indicated that programs or course work in higher education were the source of their formal leadership training. Many of the respondents stated they were currently enrolled in or had obtained a doctorate in Educational Leadership. One participant stated, “I obtained my doctorate degree through the ‘Department of Educational Leadership.’ As a result, there was *[sic]* 1-2 graduate classes I took specifically related to leadership and leadership theory.” Others simply commented “doctorate in educational leadership” or “Organizational Leadership doctorate.”

Workshops, conferences, or seminars. Another common theme emerged as the participants having attended a workshop, conference or seminar that was specific to leadership. One respondent indicated attending leadership workshops specific to and not specific to athletic training programs. This respondent explained, “I have attended many leadership workshops over the years both specific to AT and not, but probably the best leadership training I completed was a 2 year long leadership curriculum within my community.”

A variety of leadership workshops and seminars were identified as a source of formal leadership training. These included “Steven Covey’s multiple various training seminars...,” “Carnegie,” “...Entreleadership...,” “Attended two John Maxwell leadership workshops...” “Workshop lectures at conferences.” Overall, workshops, conferences, and seminars were reported as a major source for formal leadership training for program directors of athletic training programs.

Application through organizational involvement. The third theme to evolve was that of leadership skill use and development through various organizations. One participant said “As a member of a national board, I received leadership training from the HR staff and from a consultant that was brought in to train the board prior to strategic planning.”

Another participant indicated involvement in various non-athletic training and athletic training related organizations over several years as a source for participating in formal leadership trainings. The participant stated, “In each case I have participated in leadership trainings, strategic planning sessions, and similar activities.”

Other participant responses included “NATA Committee Leadership,” “Site Visitor Training...,” and “As part of NATA and district level committees.” Direct involvement in professional and community organizations provided athletic training program faculty with many opportunities to receive formal leadership training.

Books and teaching. Two final types of formal leadership training were reading books on leadership and teaching leadership courses. While not themes, since these were indicated by only one respondent respectively as a method for receiving formal leadership training, it was relevant to mention them because of their distinctiveness. However, it is also important to note that these two methods were not isolated means for the formal leadership training these particular participants had received as indicated by one of them, “Leadership topics were presented in administrative courses during my graduate and post-graduate degrees; I have attended professional development workshops on leadership; I have read books on leadership.”

Research Question 3 Extent That Leadership Is Addressed

The first question on the questionnaire addressing this issue was: Does your program address leadership in any way? A majority of respondents, 81.9% (n = 68) answered in the affirmative. The remaining 18.1% (n = 15) indicated that leadership was not addressed in anyway in their athletic training professional program. Those answering in the negative were directed to the end of the questionnaire.

Formality and informality. The next portion of the questionnaire was used to discover how extensively leadership was incorporated into the clinical and curricular/didactic aspects of athletic training professional programs. Participants who had indicated that leadership was addressed in their program (n = 68) were asked to rate their level of agreement with four statements addressing the formality of leadership education occurring in the curriculum/didactic portion of the athletic training program. Table 4.17 shows the results for the formality of leadership education occurring in the curriculum/didactic portion of the athletic training program. Overall respondents showed their agreement with leadership content and opportunities being an informal part of the curriculum / didactic portion of athletic training programs, and therefore not extensively addressed in the curriculum.

Table 4.17

Faculty View of Formality of Leadership Education in Curriculum Portion of Athletic Training Education Program

Statement	Mean	SD
Leadership content is a formal requirement of the curriculum portion of the ATEP.	3.69	1.2
Leadership content occurs informally / incidentally throughout the curriculum portion of the ATEP.	4.44	0.58
Leadership opportunities are a formal requirement of the curriculum portion of the ATEP.	3.04	1.28
Leadership opportunities occur informally / incidentally throughout the curriculum portion of the ATEP.	4.49	0.56

Likert Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor Disagree, 4 = Agree, 5 = Strongly Agree

Purposefulness. Participants (n = 68) were then asked to rate their level of agreement with four statements addressing the purposefulness of leadership occurring in the clinical portion of their athletic training programs. Table 4.18 shows the responses for the purposefulness of leadership education occurring in the clinical education portion of the athletic training program. Overall respondents indicated that leadership and leadership opportunities were more frequently incidental occurrences in athletic training programs.

Table 4.18

Faculty View of Purposefulness of Leadership Education in Clinical Portion of Athletic Training Program

Statement	Mean	SD
Leadership is purposefully incorporated throughout the clinical portion of the ATEP.	3.62	1.03
Leadership occurs incidentally throughout the clinical portion of the ATEP.	4.23	0.62
Leadership opportunities are purposefully incorporated throughout the clinical portion of the ATEP.	3.48	1.17
Leadership opportunities occur incidentally throughout the clinical portion of the ATEP.	4.30	0.61

Likert Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor Disagree, 4 = Agree, 5 = Strongly Agree

Research Question 4 Ways That Leadership Education Occurs

In an attempt to identify ways that leadership was addressed in athletic training professional programs, respondents were asked to identify whether or not their professional program included one or more leadership courses. Of the 68 respondents one person did not respond and 80.6% (n = 54) indicated that no leadership courses were included in the program. There were 19.4% (n = 13) who indicated that leadership courses were a part of the athletic training program.

Of those 13 people who responded in the affirmative, 12 respondents indicated that one leadership course was required for the professional program and one respondent indicated that two leadership courses were required. Seven respondents indicated that no leadership courses were recommended as opposed to required. Three respondents indicated that one leadership course was recommended as opposed to required and one respondent indicated that two courses were recommended as opposed to required.

When asked how many of the leadership courses included in the program were offered by the department that provides the program, nine respondents indicated one and one respondent indicated two. That was distinguished from programmatically included leadership courses offered by other departments. One respondent indicated that three leadership courses which were included by the athletic training program were offered by other departments. One other respondent indicated that two leadership courses which were included by the athletic training program were offered by other departments. Two respondents indicated that one of the leadership courses which were included by the athletic training program were offered by other departments. And six respondents indicated that none of the required leadership courses were offered by other departments.

Finally, respondents were asked how many of the leadership courses included in the program were athletic training specific. One respondent indicated that two of the leadership courses required in the professional program were athletic training specific. Nine respondents indicated that one of leadership courses required in the professional program were athletic training specific. And one respondent indicated that none of the leadership courses required in the professional program were athletic training specific.

To further identify ways that leadership was addressed in athletic training professional programs, respondents were asked to identify whether or not their professional program included one or more leadership workshops. Of the 68 respondents two people did not respond and 86.4% (n = 57) indicated that no leadership workshops were included in the program. There were 13.6% (n = 9) indicating that leadership workshops were a part of the athletic training program.

Of the nine respondents that indicated that one or more leadership workshops were included in the professional athletic training program, one person specified that zero workshops were required. Seven people detailed that one workshop was required, and one person designated that three workshops were required. Three people specified that no workshops were recommended as opposed to required. Two respondents indicated that one workshop was recommended as opposed to required. Two other respondents identified that two workshops were recommended as opposed to required. And one respondent reported that four workshops were recommended as opposed to required.

Of the nine people indicating that leadership workshops were included in the program, one person reported zero leadership workshops being offered by the department that provides the athletic training program. Six respondents specified that one leadership workshop was offered by the department that provides the athletic training program. One respondent designated two and another respondent indicated three leadership workshops were offered by the department that provides the athletic training program.

The number of leadership workshops offered by departments other than the one that provides the athletic training program included: zero ($n = 4$), one ($n = 1$), two ($n = 2$), and three ($n = 1$), with one person not answering. The number of leadership workshops included in the program that were specific to athletic training included zero ($n = 1$), one ($n = 7$) and three ($n = 1$). Faculty did not perceive leadership courses or workshops as methods formally used for leadership education in athletic training programs which helps to answer research question four.

Leadership and management. In order to try to distinguish if leadership had its own niche or fell under the broader topic of management, participants were asked to rate their level of agreement with several statements as indicated in Table 4.19. Of the 68 questionnaire respondents who indicated that their athletic training program addressed leadership in some way one chose not to respond to this section of the questionnaire (n = 67). The majority of respondents (92.5%) indicated that leadership and management were two different concepts and that neither was addressed as a subset of the other.

Table 4.19

Faculty View of Leadership and Management Distinctions

Statement	Mean	SD
Leadership and management are one in the same.	1.76	0.63
Leadership is addressed as a subset of management.	2.79	1.24
The majority of leadership education occurs informally in the clinical education portion of the ATEP.	3.30	0.99
Management is addressed as a subset of leadership.	3.42	1.11

Likert Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor Disagree, 4 = Agree, 5 = Strongly Agree

The attempt at answering in what ways faculty perceive leadership education is occurring in athletic training professional preparation programs involved faculty participants being presented with many teaching method options to teach leadership knowledge, leadership skills, or leadership application. The participants were then asked to specify if the methods were used formally, informally, in both ways, or not at all. The teaching methods were presented in groupings based on where they might be employed.

Curricular methods. Tables 4.20, 4.21, and 4.22 address teaching methods which are commonly used as a part of curricular education. The total respondents for this

portion of the questionnaire varied from 62 to 64. As seen in Table 4.20, lecture (41.3%) and textbook (37.5%) were the most commonly chosen formal curricular teaching methods for leadership knowledge. Service learning (32.8%) and peer-learning (31.3%) were the most commonly indicated informal teaching methods used for leadership knowledge. Table 4.21 shows that the most commonly chosen formal curricular method for educating students in leadership skills was lecture (33.3%) and the most commonly indicated informal curricular method for educating students in leadership skills was service learning (47.6%). Table 4.22 illustrates that service learning (45.3%) was used more often than other teaching methods for informal curricular leadership education. Faculty use of formal curricular teaching methods for leadership application was low with less than 26% respondents indicating use for any one category.

Table 4.20

Faculty Perceptions of Curricular Teaching Methods for Leadership Knowledge

Teaching Method	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Textbook	37.5	24	4.7	3	32.8	21	25.0	16
Lecture	41.3	26	11.1	7	46.0	29	1.6	1
Self-reflection	28.1	18	25.0	16	32.8	21	14.1	9
Peer-Learning	28.1	18	31.3	20	29.7	19	10.9	7
Service learning	23.4	15	32.8	21	25.0	16	18.8	12

Table 4.21

Faculty Perceptions of Curricular Teaching Methods for Leadership Skills

Teaching Method	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Textbook	23.8	15	14.3	9	31.7	20	30.2	19
Lecture	33.3	21	15.9	10	44.4	28	6.3	4
Self-reflection	23.4	15	28.1	18	34.4	22	14.1	9
Peer-Learning	21.9	14	40.6	26	31.3	20	6.3	4
Service learning	15.9	10	47.6	30	22.2	14	14.3	9

Table 4.22

Faculty Perceptions of Curricular Teaching Methods for Leadership Application

Teaching Method	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Textbook	19.4	12	17.7	11	19.4	12	43.5	27
Lecture	24.2	15	29.0	18	33.9	21	12.9	8
Self-reflection	20.6	13	36.5	23	27.0	17	15.9	10
Peer-Learning	25.4	16	33.3	21	34.9	22	6.3	4
Service learning	18.8	12	45.3	29	21.9	14	14.1	9

Workshop methods. Tables 4.23, 4.24, and 4.25 address different methods for delivering a workshop to students as a means of educating them in leadership knowledge, leadership skills, and allowing them opportunities for leadership application. The number of participants responding to this segment of the questionnaire varied from 60 to 63. Faculty overwhelmingly did not employ leadership workshops as a method for teaching leadership knowledge, skills, or application.

Table 4.23

Leadership Workshops Used as a Teaching Method for Leadership Knowledge Development

Leadership Workshop	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Through ATEP	7.9	5	4.8	3	6.3	4	81.0	51
Through Department	3.2	2	9.7	6	3.2	2	83.9	52
By college / university	14.3	9	6.3	4	4.8	3	74.6	47

Table 4.24

Leadership Workshops Used as a Teaching Method for Leadership Skills Development

Leadership Workshop	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Through ATEP	11.1	7	7.9	5	6.3	4	74.6	47
Through Department	1.6	1	11.3	7	3.2	2	83.9	52
By college / university	14.3	9	6.3	4	4.8	3	74.6	47

Table 4.25

Leadership Workshops Used as a Teaching Method for Leadership Application

Leadership Workshop	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Through ATEP	9.5	6	7.9	5	7.9	5	74.6	47
Through Department	1.7	1	10.0	6	1.7	1	86.7	52
By college / university	9.5	6	9.5	6	6.3	4	74.6	47

Leadership involvement methods. Tables 4.26, 4.27, and 4.28 address using different forms of involvement for students to pursue as a means of teaching method for leadership knowledge and leadership skills acquisition and allowing them leadership

application. The number of participants responding to this segment of the questionnaire varied from 61 to 64. Faculty utilize students' participation in leadership roles in athletic training (AT) professional organizations or other organizations informally as method for teaching leadership knowledge, skills, or application. iLEAD (see Key Terms, pp. 8) was frequently indicated as not being used by faculty as a method to develop leadership knowledge, skills, or as a method for application.

Table 4.26

Leadership Involvement Used as a Teaching Method for Leadership Knowledge Development

Leadership Involvement	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Student leadership role in AT professional organization	14.1	9	48.4	31	31.3	20	6.3	4
Student leadership role in other organization	9.4	6	45.3	29	29.7	19	15.6	10
Student involvement in iLEAD	15.9	10	23.8	15	14.3	9	46.0	29

Table 4.27

Leadership Involvement Used as a Teaching Method for Leadership Skills Development

Leadership Involvement	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Student leadership role in AT professional organization	12.5	8	50.0	32	29.7	19	7.8	5
Student leadership role in other organization	11.5	7	49.2	30	26.2	16	13.1	8
Student involvement in iLEAD	11.1	7	28.6	18	15.9	10	44.4	28

Table 4.28

Leadership Involvement Used as a Teaching Method for Leadership Application

Leadership Involvement	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Student leadership role in AT professional organization	14.1	9	48.4	31	29.7	19	7.8	5
Student leadership role in other organization	12.5	8	46.9	30	26.6	17	14.1	9
Student involvement in iLEAD	12.7	8	27.0	17	14.3	9	46.0	29

Mentoring, practical application, and other teaching methods. For the final grouping of teaching methods, faculty were asked to indicate their use of mentoring, practical application and other teaching methods to teach leadership knowledge, leadership skills, or allow for leadership application. The number of participants responding to this segment of the questionnaire varied greatly according to the method they were selecting. The other teaching methods response for leadership knowledge received responses from 40 participants, while the same category for leadership skills had 39 and for leadership application had 38. The other categories of teaching methods had greater respondent participation with 63 to 64 respondents. The results for leadership knowledge can be found in Table 4.29. The results for leadership skills are displayed in Table 4.30; and Table 4.31 presents the results for leadership application.

Table 4.29

Faculty Perceptions of Mentoring, Practical Application and other Teaching Methods for Leadership Knowledge Development

Teaching Method	Leadership Knowledge							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Mentoring by peers	25.0	16	35.9	23	34.4	22	4.7	3
Mentoring by faculty	26.6	17	26.6	17	42.2	27	4.7	3
Mentoring by preceptors	25.0	16	29.7	19	42.2	27	3.1	2
Practical application	14.1	9	37.5	24	43.8	28	4.7	3
Other	5.0	2	12.5	5	12.5	5	70.0	28

Table 4.30

Faculty Perceptions of Mentoring, Practical Application and other Teaching Methods for Leadership Skills Development

Teaching Method	Leadership Skills							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Mentoring by peers	26.6	17	34.4	22	35.9	23	3.1	2
Mentoring by faculty	25.0	16	31.3	20	40.6	26	3.1	2
Mentoring by preceptors	21.9	14	35.9	23	40.6	26	1.6	1
Practical application	12.5	8	40.6	26	42.2	27	4.7	3
Other	5.1	2	15.4	6	12.8	5	66.7	26

Table 4.31

Faculty Perceptions of Mentoring, Practical Application and other Teaching Methods for Leadership Application

Teaching Method	Leadership Application							
	Formally		Informally		Both		Not Used	
	%	n	%	n	%	n	%	n
Mentoring by peers	25.4	16	36.5	23	34.9	22	3.2	2
Mentoring by faculty	25.0	16	32.8	21	39.1	25	3.1	2
Mentoring by preceptors	23.4	15	31.3	20	43.8	28	1.6	1
Practical application	9.5	6	39.7	25	46.0	29	4.8	3
Other	2.6	1	13.2	5	15.8	6	68.4	26

Other ways leadership is addressed. After reviewing the various teaching methods and indicating if they were used formally, informally, both, or not used, faculty participants were given the opportunity to identify other ways leadership was addressed in their programs. The open-ended responses yielded a variety of methods through which leadership was focused on in different programs. Some of the teaching methods identified previously in the questionnaire were reiterated and some new and unique methods of teaching leadership were described.

Club or organizational involvement. Although this facet for teaching and developing leadership was previously mentioned in the questionnaire, many participants echoed that club or organizational involvement was a method they utilized. One faculty participant stated,

Leadership information is taught both formally and informally in a small portion in the healthcare administration course. However, multiple opportunities are provided to the students in both the didactic and clinical settings allowing students

to discuss and apply various leadership skills. Students also have multiple opportunities to serve in various leadership roles within the student association on campus and other campus student organizations. Students also are encouraged to become involved at the state, regional and national level.

The views of this participant seem to be supported and even practiced by other professional level athletic training program faculty. Another participant wrote,

Leadership is primarily used informally through opportunities to get involved. Students can choose to participate in service learning initiatives like Special Olympics, professional conferences, and AT organizations...Therefore, we did start AT societies that put students into small groups of 4-5 students each. These Societies then compete for a “Cup”. The Societies earn points for attending conferences, webinars, and performance on academic markers....

Other faculty participants had similar statements on clubs and organizations. One participant simply stated, “Involvement in state organization and club activities.” This sentiment was shared repeatedly with the primary involvements being club, university organizations and athletic training organizations.

Lead by example. Another theme to emerge from the answers to the question about other ways in which leadership was addressed in programs was again a repetition of what was previously identified in the questionnaire. Two different types of leading by example were identified by the faculty participants. The first related directly to athletic training program faculty, staff, and preceptors being the examples. One participant stated, “examples set by faculty and preceptors and involvement...” while another wrote

“demonstrated by all staff” and yet another participant identified, “Senior ATS with each sport work with preceptor.”

The second type of leading by example which was also mentioned in the questionnaire was peer mentoring. Peer mentoring was often identified in combination with other methods of teaching leadership. One participant stated, “Program peer mentoring program, Student AT organizations, state/district organization involvement.” Another participant explained, “We encourage participation with student organizations; assign upperclass students to leadership roles clinically, develop a ‘family’ structure where underclass students are assigned to a group, upperclass students in the group mentor and guide their ‘family.’”

Leadership across the curriculum. A previously unmentioned method for teaching leadership by incorporating it throughout the curriculum was also identified by faculty respondents. One participant explained,

Leadership is addressed day one in our first class and is carried throughout our program. Clinical evaluations (from preceptors) all have leadership questions on them, students are assigned peer mentors, solicit peer evaluations, are evaluated in groups, and have both assigned learning groups and student-chosen groups. We rotate students often to allow everyone a chance to step up an[d] lead. It is on all of our code of ethics, code of conduct, handbook, etc...

This uniquely mentioned teaching method is a collection of previously mentioned teaching methods put into practical application with an opportunity for students to experientially learn leadership with faculty guidance.

Importance of leadership being addressed. Lastly, faculty participants were asked to rate how important it was that leadership was addressed in their athletic training program using a Likert type scale with choices from very important to very unimportant. Of the 64 respondents, 37.5% (n = 24) felt that it was very important, 54.7% (n = 35) selected important, 34.7% (n = 3) gave a neutral response, 1.6% (n = 1) indicated that it was very unimportant, 1.6% (n = 1) indicated that they did not know.

Why leadership is important or unimportant. After indicating how important it was that leadership was addressed in the program, faculty were asked to explain why they felt leadership was important or unimportant. The many and varied responses participants gave were coded thematically by the researcher and yielded the following thematic categories: *better clinician*, *employability*, *for the profession*, and *too many other requirements*.

Better clinician. One faculty respondent explained, “Leadership helps students become better clinicians, better young professionals, and better co-workers.” Another respondent stated, “ATs [athletic trainers] are health care professionals. Leadership is vital to professionals. However, formal classroom learning is not the way to teach leadership. Experiencing it in the clinical setting and at professional meetings is.” The theme was continued when a different respondent wrote, “As a healthcare provider, we must step up and step in and speak for those who cannot. Learning early and often how to lead by example, by voice and by ethics is critical to our program.” Generally, it appeared that the respondents felt that being a good leader would result in better interpersonal relationships during clinical work.

Employability. Some faculty respondents indicated through their comments that leadership would help students with the issue of employability. One participant explained,

I believe it's important for sustainability as a professional and personally as well. Leadership affords you the opportunity to have a job some where that might not normally consider athletic training as an essential piece. But by conveying the qualities and displaying the qualities of a good leader, you now possess a skill set that most, if not all, employers find extremely valuable.

Another respondent supported the sentiment, "It is critical that no matter where a student ends up, s/he must understand leadership and its many facets – not just the traditional idea of what leadership is." A third participant believed,

Students now have a very different sense of interacting with peers. It is important that they learn professional interactions and how to lead as being a leader is important in not only AT [athletic training], but, life. Leadership doesn't need to be in formal positions, but, you can be a good leader by emulating the desired actions to everyone around you.

For the profession. The third emergent theme was *for the profession*. One respondent stated,

An organization cannot function without its next generation of leaders. It is important to mentor the future. Also if the profession is to expand or in some cases survive, the bulk of the profession's members need to be involved. It takes future leaders to promote this involvement and make it happen.

Another respondent supported this with,

To continue to advance the profession, students must understand how to effectively work with others, communicate with others, and develop professional goals and commitment. Strong leaders will help the profession grow and retain committed and talented professionals.

Additional responses supported this theme. One program director explained, “One part of our program mission statement is to produce the future leaders of our profession.”

Another participant replied, “To give back to the profession and to promote the profession.” Many of the respondents included the importance of leadership to the maintenance and advancement of the athletic training profession.

Too many other requirements. This final emergent theme was found to be associated with respondents who were either neutral or who thought that leadership was important. One respondent stated,

It is important but not a purposeful, formal topic. Not everyone has the capacity to be a good leader. Not everyone wants to be a leader. The ones that have the capacity and the want typically step up to become leaders. It would take a great deal of time to address leadership skills, abilities, etc. in the formal education and there isn't a great deal of room to do so after covering all of the topics we cover.

This was supported by another respondent who explained, “Neutral, it is important but we have not had the space to incorporate leadership training into the curriculum.

Definitely something we would like to improve on in the future.” The thought that leadership is an important topic was seen throughout the faculty responses; however, they

also indicated awareness of the other important topics that must be covered in athletic training curricula.

Comparison of Student and Faculty Results

Research Question 5 Extent That Leadership Is Addressed

The student responses and the faculty responses were compared to identify differences between the participant groups. A chi-square test of independence was calculated comparing the frequency of student and faculty reports of their professional athletic training programs addressing leadership in any way. No significant deviation from the expected frequencies was detected ($\chi^2_{(1)} = 0.65, p = 0.42$). Overall, 15.9% of the total sample of faculty and students combined indicated that leadership was not addressed in any way within their professional athletic training programs (see Appendix C).

An independent-samples *t*-test was calculated comparing the mean score of student and faculty responses to statements about the formality and informality of leadership content and leadership opportunities in the curricular portion of athletic training programs. A Bonferroni correction ($p \leq 0.004$) was used to account for Type I error with all independent samples *t*-tests. A Bonferroni correction is an adjustment of the alpha (p) level to make it more stringent (Jackson, 2012). In this case, the desired alpha level was divided by the number of tests, 12, to adjust the p value from 0.05 to 0.004. A Type I error is when one or more false positives occur due to running several tests on the same data sets. In other words, something appears to be significant or different, but it really is not (Jackson, 2012). No significant differences were found between the student and faculty responses to the statements about the formality ($t(123) = 0.23, p = 0.82$) or

informality ($t(75.43) = -0.99, p = 0.32$) of leadership education in the curricular setting (see Appendix D).

An independent-samples t -test was also calculated comparing the mean score of student and faculty responses to statements about the purposefulness of leadership education in the curricular portion of athletic training programs. No significant differences were found regarding the purposefulness ($t(121.98) = 1.99, p = 0.05$) or incidentality ($t(122) = -1.04, p = 0.29$) of leadership education in the clinical setting (see Appendix E).

Research Question 6 Ways That Leadership Education Occurs

The responses from the student and faculty participant groups were also compared to determine if there was a difference between student and faculty perceptions of the ways in which leadership education occurs. Leadership and management distinctions were examined by using an independent-samples t -test to compare the mean score of student and faculty responses for the statements related to leadership and management. A significant difference was found between the two groups for the statement, "Leadership and management are one in the same" ($t(92.31) = 3.65, p = 0.00$) (see Appendix F). The mean of the faculty group ($M = 1.76, SD = 0.63$) was significantly lower than the mean of the student group ($M = 2.30, SD = 0.95$).

Another significant difference between the student and faculty groups ($t(120.97) = 4.34, p = 0.00$) was found in relation to the statement, "The majority of leadership education occurs informally in the clinical education portion of the ATEP." Again, the mean of the faculty group ($M = 3.30, SD = 0.99$) was significantly lower than

the mean of the student group ($M = 4.00$, $SD = 0.81$). The other two statements, “Leadership is addressed as a subset of management” ($t(120.6) = 1.94$, $p = 0.05$) and “Management is addressed as a subset of leadership” ($t(121) = 0.31$, $p = 0.76$), did not have significant results with the Bonferroni correction ($p \leq 0.004$).

Curricular methods. A chi-square test of independence was calculated comparing student and faculty reports of the formality of incorporation of different curricular methods athletic training programs used to teach leadership. The first method examined for teaching leadership knowledge was a textbook (see Appendix G). A Bonferroni correction ($p \leq 0.003$) was used to account for Type I error. The Bonferroni p value for the chi-square tests of independence is different from that of the independent samples t – tests because 16 chi-square tests were run on the data and only 12 t -tests were run on that data. No significant deviation from the expected frequencies was detected ($\chi^2_{(3)} = 7.97$, $p = 0.05$). Nor was there a significant deviation from the expected count for using a textbook as a method of teaching leadership skills ($\chi^2_{(3)} = 1.11$, $p = 0.78$) or leadership application ($\chi^2_{(3)} = 0.87$, $p = 0.83$). In fact, none of the following teaching methods showed any significant deviation between the student and faculty groups: lecture, self-reflection, peer-learning, service learning (see Appendices H through K).

Workshop methods. A chi-square test of independence was calculated comparing student and faculty reports of the formality of incorporation of different workshop methods athletic training programs used to teach leadership. The first method examined for teaching leadership knowledge was a workshop lead by the athletic training program. No significant deviation from the expected frequencies was detected ($\chi^2_{(3)} =$

0.84, $p = 0.84$). Nor was there a significant deviation from the expected count for using a workshop conducted by the athletic training program as a method of teaching leadership skills ($\chi^2_{(3)} = 5.85, p = 0.12$) or leadership application ($\chi^2_{(3)} = 4.98, p = 0.17$) (see Appendix L).

The same statistical test was used to examine student and faculty participant responses for the formality of use of teaching leadership application through a workshop run by the department in which the athletic training program was located. There was a significant deviation from the expected count ($\chi^2_{(3)} = 14.47, p = 0.002$) (see Appendix M). Of the 60 faculty respondents, 52 (49.5%) indicated that leadership application was not taught through a workshop run by the department. This was higher than the expected count of 44.6. Of the 45 student respondents, 26 (24.8%) specified that leadership application was not taught through a workshop run by the department. This was lower than the expected count of 33.4.

When a chi-square test of independence was used to examine the differences between the student and faculty populations for the formal use of teaching leadership skills through a workshop by the college / university, there was a significant deviation from the expected count ($\chi^2_{(3)} = 14.84, p = 0.002$). The student participants ($n = 13$) indicated more often than expected ($n = 6.8$) that leadership workshops run by the institution of higher learning were used both formally and informally to teach leadership application. Whereas faculty participants ($n = 47$) indicated more often than expected ($n = 38.7$) that this method of teaching leadership application was not used (See Appendix N).

Leadership involvement methods. A chi-square test of independence was calculated comparing student and faculty reports of the formality of use of student leadership roles in an athletic training professional organization, other organizations, or through iLEAD to teach leadership knowledge, skills and allow for application. The first type of leadership involvement examined for teaching leadership knowledge was a student leadership role in an athletic training professional organization. No significant deviation from the expected frequencies was detected ($\chi^2_{(3)} = 12.46, p = 0.006$) (see Appendix O).

However, there was a significant deviation from the expected count for using a student leadership role in an athletic training professional organization as a method of teaching leadership skills ($\chi^2_{(3)} = 13.73, p = 0.003$). There were seven student participants who indicated that a student leadership role in an athletic training professional organization was informally used as a teaching method for leadership skills. This was lower than the expected count of 16.1. The faculty participant count for using this method informally was 32. This was higher than the expected count of 22.9.

There was also a significant deviation from the expected count for leadership application being taught through student leadership roles in an athletic training professional organization ($\chi^2_{(3)} = 19.27, p = 0.00$) (see Appendix O). Of the 46 student participants for this question, six participants indicated that this method for teaching leadership application was used informally. This was lower than the expected count of 15.5. Whereas 31 of the faculty participants indicated that student leadership roles were

used informally to teach leadership application. This was higher than the expected count of 21.5.

A chi-square test of independence was used to examine the differences between the student and faculty populations for the formality of use of teaching leadership skills through other organizations. There was not a significant deviation from the expected count for leadership knowledge ($\chi^2_{(3)} = 11.97, p = 0.008$) nor for leadership skills ($\chi^2_{(3)} = 12.08, p = 0.007$) (see Appendix P). However, there was a significant deviation from the expected counts for using other organizations for leadership application ($\chi^2_{(3)} = 14.47, p = 0.002$). The count of 30 for faculty using student leadership roles in non-athletic training related organizations informally was higher than the expected count of 21.5. This was different from the student count of 7 which was lower than the expected count of 15.5.

The same statistical test was used to examine student and faculty participant responses for the formality of use of teaching leadership knowledge, skills and application through iLEAD. There was not a significant deviation from the expected counts for using iLEAD to teach leadership knowledge ($\chi^2_{(3)} = 12.32, p = 0.006$) (See Appendix Q).

A chi-square test of independence with a Bonferroni correction ($p \leq 0.003$) did reveal a significant deviation from the expected counts for the formality of the use of iLEAD for teaching leadership skills ($\chi^2_{(3)} = 16.88, p = 0.001$). The faculty count of 18 was higher than the expected count of 11. This differed from the student group. The expected count for the student group was eight. The actual count was one.

The chi-square test of independence also revealed a significant deviation from the expected counts for teaching leadership application ($\chi^2_{(3)} = 15.31, p = 0.002$). The count of 17 for faculty participants who viewed the informal use of student involvement in iLEAD for teaching leadership application was higher than the expected count of 10.4. The student count of one was lower than the expected count of 7.6.

Mentoring, practical application, and other teaching methods. A chi-square test of independence was calculated comparing student and faculty reports of the formality of the incorporation of different mentoring, practical application and other methods of athletic training programs used to teach leadership. The first method examined for teaching leadership knowledge was mentoring by peers. No significant deviation from the expected frequencies was detected ($\chi^2_{(3)} = 7.87, p = 0.05$). Nor was there a significant deviation from the expected count for using peer mentoring as a method of teaching leadership skills ($\chi^2_{(3)} = 9.11, p = 0.03$) or leadership application ($\chi^2_{(3)} = 4.51, p = 0.21$). None of the other teaching methods involving mentoring from faculty or from preceptors showed any significant deviation between the student and faculty groups. Likewise, neither the use of practical application nor the category of "other methods" for teaching leadership revealed any significant differences from the chi-square predictions (see Appendices R through V).

Summary

The results from this mixed-methods study were thoroughly reported in this chapter. The question of the extent that leadership is addressed revealed that the majority of student respondents perceived leadership education did happen in their professional

athletic training programs. This was also true for the faculty respondents. The largest number of student and faculty respondents indicated that leadership education occurred informally in the curricular portion of their professional athletic training programs and incidentally in the clinical portion of the programs.

The question regarding the ways that leadership education occurs in athletic training programs yielded additional insight into how leadership education is occurring. These results showed very few of the student or faculty respondents believed that a leadership course or workshop was required in their program. The issue of leadership versus management was also examined. It is important to note that most of the student and faculty respondents felt that leadership and management were different concepts however, the comparison between the two groups yielded statistically significant differences in the mean scores.

Additionally, the formality of inclusion of many leadership teaching methods was examined. Overall, students and faculty felt that many of the teaching methods for leadership education were used on an informal basis in their programs. The methods with high levels of formal inclusion were textbooks, lectures. A statistically significant difference was also found with students and faculty perceiving a lower than expected use of workshops for teaching leadership skills and application.

A higher number of student respondents perceived student involvement in athletic training and other organizations as methods formally included in their programs. A statistically significant difference was found between student and faculty responses for using a student leadership role in an athletic training organization as a method for

teaching leadership skills and for teaching leadership application. A higher number of faculty indicated that they perceived involvement in athletic training and other organizations than was expected and a lower number of students than expected perceived the same. There was also a statistically significant difference for student and faculty perceptions of using involvement in other organizations to provide for leadership application. Both student and faculty perceptions were lower than expected. Student involvement in iLEAD also yielded statistically significant deviations lower faculty and student perceptions from the expected counts in regards to leadership skill education. A majority of the student and faculty respondents indicated that it was important to them that leadership was addressed in their programs because leadership is important to the athletic training profession and to the practice of athletic training.

Chapter V

Discussion

Athletic trainers need to possess leadership knowledge, skills and competencies to be successful practitioners in today's healthcare environment (BOC, 2010) and to advance the profession of athletic training (Kutz, 2010b; Peer & Schablach, 2009). The 6th *Role Delineation Study/Practice Analysis* (2010) by the Board of Certification specifically identified knowledge of leadership styles as being essential to entry-level practice in the field of athletic training. Furthermore, the National Athletic Trainers' Association (NATA) *Code of Ethics* (2005) and BOC *Standards of Professional Practice* (2006) include several characteristics of leadership as essential qualities an athletic trainer should possess and practice. Leadership characteristics such as the ability to care, show commitment and integrity, value professional knowledge, and communicate effectively with others are not only included in the *Code of Ethics* and *Standards of Professional Practice* but were found by Raab, et al (2011) to be necessary for successful practice across various employment settings.

Given the importance of leadership knowledge, skills and competencies for athletic training practitioners at all phases of practice, it is surprising that little leadership literature exists in the field. This scarcity of athletic training leadership literature extends to educational methods for developing leadership knowledge, skills and competencies. With this lack of information in an area essential to athletic training practice in mind, the purpose of this study was to examine student and faculty perspectives of the extent and ways that athletic training professional preparation programs address leadership in their

curricula. Data were obtained from 71 students and 83 athletic training professional program directors. This data may provide insight into the extent and ways in which leadership is addressed in athletic training professional preparation programs.

Summary of Findings

Perceptions of the extent that leadership is addressed. It is apparent from the 13.2% (n = 9) of student respondents who indicated that leadership was not addressed in any way in their professional program that a portion of students do not perceive that leadership is being addressed in their professional preparation program. It is surprising that 18.1 % (n = 15) of program directors indicated that leadership was not addressed in their program in any way. While leadership education is not currently part of the professional education program standards maintained by the Commission on Accreditation of Athletic Training Education (CAATE), this lack of inclusion of leadership education is concerning because the *BOC Role Delineation Study/Practice Analysis* (2010) found that leadership was necessary to practice at an entry-level in the profession of athletic training. Additionally, the National Athletic Trainers' Association *Code of Ethics* (2005) and the *BOC Standards of Professional Practice* (2006) also address leadership qualities as necessary for the practicing athletic trainer.

The majority of students who did recognize that leadership was addressed in their programs indicated that it was taught informally in the curricular portion of the athletic training program. These students also specified that the opportunities for leadership were an informal part of programs. This was reflected by the faculty responses. The majority

of students and program directors also believed that leadership was incidentally incorporated during the clinical portion of the program.

The lack of formality for including leadership in an athletic training program might be attributed to the degree level of the program personnel responding. The majority of respondents were involved with a Bachelor's degree level program. Many Bachelor's level programs are limited in the amount of credits they can require. It may be that there is simply not time to formally incorporate leadership education with the other content areas athletic training programs have to meet to fulfill CAATE accreditation requirements. This was indicated in answers by some respondents to the question "Why is it important or unimportant to you that leadership is addressed in your program?"

Perceptions of the ways that leadership education occurs. The student and faculty perceptions of leadership in relation to management were significantly different. Many faculty indicated that leadership and management were not one in the same whereas students, while still indicating that there was a difference between leadership and management, did so less often than expected. This might be attributed to the newness of the information to the students. As they are entering the profession they recognize that differences exist between leadership and management, but students may not recognize the distinctiveness as easily as the more experienced program directors. Lastly, more students and faculty perceived that management was a subset of leadership than the other way around. This is an indication that the leadership education that is occurring is having a positive effect on the students.

Curricular teaching methods. There were no statistically significant differences in the curricular methods students and faculty chose to formally or informally teach leadership knowledge, skills or application. Textbook and lecture were the most commonly chosen methods within both groups for teaching leadership knowledge. This is not surprising given that content information in higher education is frequently delivered to students in one of these traditional methods.

Peer-learning was commonly indicated by both groups as an informal method to teach the skill and application aspects of leadership. This is not surprising given that peer-learning might be employed in any number of ways throughout the curriculum to allow students to apply leadership skills in a non-threatening setting. Peer learning also provides an excellent forum for leadership education when considering Northouse's (2010) definition of leadership, "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3).

Workshop methods. Interestingly, given that many faculty indicated workshops as a method for obtaining their own leadership skills, workshops were not frequently indicated by either students or faculty as being used as a method for teaching leadership knowledge, skills or application. This may be an area to explore as nursing education reports the successful use of this method to educate students in leadership (Hendricks et al., 2010).

Leadership involvement methods. Students and faculty groups both reported the use of student involvement in athletic training and other organizations as a method used informally to teach leadership skills. While this may be an effective way for self-

motivated students to begin learning about and practicing leadership, not having this as a formal method for teaching leadership may leave some students who have not developed the self-motivation or self-confidence necessary to become involved in these organizations lacking when it comes to leadership development. Since many respondents indicated that leadership was important to the practice and advancement of athletic training, athletic training programs may want to consider if they are doing future professionals and the profession a disservice by not formally incorporating athletic training or other organizational involvement as a part of professional programs.

Students and faculty both noted that iLEAD, a student leadership conference lead by National Athletic Trainers' Association, was not frequently used to teach leadership knowledge, leadership skills or allow for leadership application. While this opportunity exists to promote the development of leadership in future athletic trainers, the conference registration fee and travel expenses may be prohibitive for students from across the nation to take part in this event and thus account for the lack of use by athletic training professional programs as a means for teaching leadership.

Mentoring, practical application and other methods. Mentoring by peers, faculty and preceptors was specified by both student and faculty groups as being used both formally and informally in athletic training professional programs to teach leadership knowledge, skills and application. Preceptors play an invaluable role in student education. Therefore, it is important to choose preceptors of high quality. To help determine which preceptors might be most beneficial to the students of an athletic training program, Weidner and Henning's (2005) "research-based standards and

associated criteria could be used” (p. 329). Preceptors who practice legal and ethical behavior, good communication skills, and have positive interpersonal relationships role model positive leadership behaviors for students. Well trained preceptors can enhance the overall learning process of athletic training students.

Platt Meyer (2002b) stated that “...students learn these professional [leadership] skills, both directly and indirectly from their clinical instructors [preceptors]” (p. 34). This is not new to the profession given the history of mentoring as the most common way of educating athletic trainers in leadership (Peer & Schlabach, 2009). However, Peer and Schlabach (2009) noted that with the growth of the profession, one on one mentoring may no longer be a practical method of training future leaders. Therefore, well trained, quality preceptors who meet specific “standards” may be one method of filling the need (Weidner & Henning, 2004, 2005).

Practical application of leadership was also seen by both groups as being used both formally and informally to teach leadership. This intuitively makes sense for the profession as experiential learning is a large part of professional athletic training programs. CAATE defines clinical education as, “the application of athletic training knowledge, skills, and clinical abilities on an actual patient base that is evaluated and feedback provided by a preceptor” (2013b, p. 12). So it is reasonable to expect that practical application might play a large role in the leadership education of athletic training students.

The category of other teaching methods was commonly seen as not being used by student and faculty groups. When asked to identify other methods used in leadership

education, the student respondents had no other teaching methods to suggest. This may be because the questionnaire covered all of the commonly used methods for leadership education extensively.

However, the faculty respondents provided some additional methods to consider. One suggestion was awarding professional development points for involvement and requiring students to obtain a certain amount of points each year. This is similar to practices already in existence for certified athletic trainers who need to participate in and report continuing education opportunities to maintain their certification. Another previously unexplored avenue for teaching leadership is incorporating leadership across the curriculum. This involvement of leadership during the entire program provides students with an opportunity to develop their leadership knowledge, skills and practice being leaders in a setting where formative feedback may be applied.

Importance of leadership being addressed. Overall, a large majority of both students and program directors indicated that it was important that leadership was addressed in professional programs. The support for this belief was cited by members of both groups in comparable ways. One line of reasoning suggested that leadership is important for the maintenance and advancement of the profession. This is supported by athletic training literature (Kutz, 2010b; Peer & Schlabach, 2009). Other reasons given in athletic training literature for the importance of leadership being addressed were that having leadership skills would create better, more employable clinicians (Amato & Warner, 1996; BOC, 2006; NATA, 2005; Nellis, 1994; Raab et al., 2011). Some faculty respondents who indicated that it was important to address leadership or had a neutral

response indicated time constraints for the material already being covered as a reason to not formally include leadership.

Implications

The purpose of this study was to examine student and faculty perspectives of the extent and the ways that athletic training professional preparation programs address leadership in their curricula. From the response of this particular sample, it appears that the majority of students and program directors believe that leadership is being addressed either formally or informally in their professional athletic training programs. Based on the fact that there were some student and faculty respondents who indicated that leadership was not addressed in any way in their program, more education as to the importance of leadership in the practice and perpetuation of the athletic training profession needs to occur.

Although there are many ways of teaching leadership, it appears that many programs treat leadership education as an informal part of the curriculum. Athletic training programs might consider implementing specialized leadership workshops as nursing has done (Bellack et al., 2001; Hendricks et al., 2010). Given the time constraints for content coverage at the Bachelor's degree level, that is understandable. Since these results are not generalizable to the Master's degree level, with only four Master's level program directors responding, leadership education may be occurring more formally at that level. Whether it is or not, as more programs convert from a Bachelor's degree level to a Master's degree level professional program, the formal inclusion of leadership education should be seriously examined.

This study provides a baseline for the extent and ways in which leadership knowledge, skills, and competencies are being addressed in professional athletic training programs. It opens the door to exploring what methods are most effective for teaching leadership in the athletic training profession and adds to the currently small existing body of literature related to leadership education in athletic training.

Recommendations for athletic training programs. Many of the responding students and program directors indicated that addressing leadership was important. Following are several recommendations for including leadership into an athletic training program. Given the current time constraints Bachelor's level professional programs face, informally addressing leadership may be a more feasible manner of incorporating leadership into the curriculum. Master's level professional programs or those programs considering moving to a Master's Level may consider more formal incorporation.

- When leadership is not specifically addressed, formally or informally, add it to the program in at least one of these forms.
- When in the planning stages for designing a Master's Degree level program, intentionally plan for leadership to be incorporated into the program. Identify specific courses, program benchmarks, and events where leadership development will occur.
- Clearly communicate the leadership aspects of athletic training to students (e.g., peer-mentoring, working with physicians, working with patients, including or interacting with other allied health providers, leadership during patient care).

- Provide an introduction to leadership early in the program or as a pre-program requirement.
- Continue to require or encourage upper class students to mentor lower class students (e.g. senior to junior, junior to sophomore).
- Incorporate leadership into the clinical education portion of the program. If leadership is included on the clinical evaluation form for students, clarify what behaviors and actions the preceptors should assess.
- Provide leadership education for preceptors.
- Emphasize the difference between leadership and management in courses.
- Incorporate the importance of professional involvement throughout the athletic training program.
- Infuse the overall principle of leadership throughout the curriculum.

Recommendations for the athletic training profession. A common theme emerging from both the student and faculty respondents was that leadership was important for the survival and advancement of the profession. With that goal in mind, the profession might also consider emphasizing the importance of leadership at all levels. All members should continue to educate other professionals and the general public on athletic training.

- Athletic trainers should communicate with other healthcare professionals to help them understand the leadership roles athletic trainers have in the healthcare system.
- Individuals should demonstrate the ability to lead in many different situations, not just emergency care.

- Workshop and conference opportunities on leadership should be provided for all members, including students, not just state, district and national leadership team members.
- Leadership for everyone should be encouraged.

Limitations

As with any study, there are limitations to this study. The first limitation is the time during which the questionnaires were distributed. The distribution occurred during the month of June. Since June is typically a time when student and program directors may not frequently check their email as often between spring and summer terms, a smaller sample size may have resulted. A second limitation to this study is the lack of Master's program respondents. There were three student respondents and four faculty respondents from Master's degree level programs. With this low Master's degree level response rate, the results of this study are not generalizable to the Master's degree level professional programs. Lastly, the low number of student respondents threatens the generalizability of the study. Therefore, the results must be viewed cautiously.

Recommendations for Further Research

This study provides insight into the manner in which leadership is addressed in professional athletic training programs; however, the low response rates threaten the generalizability of this study. Therefore, this study might be replicated with the goal of recruiting a larger sample of both students and faculty. Future studies might also choose to focus more on professional athletic training programs at the Master's level since the profession is currently considering making this the entry-level degree for practice.

This study is a first step toward exploring the effectiveness of the different methods of leadership education being used in professional athletic training programs. The effectiveness of the methods currently being used should be evaluated for their success in developing leadership knowledge, skills and competencies in professional level students. Additionally, future studies might analyze the effectiveness of leadership education across allied health fields.

Since some professional preparation programs reported that they did not address leadership in any manner in their programs, the reasoning for this lack of inclusion might be explored in future studies. One suggestion from select participants who did not include leadership education was that time for this topic was limited due to the amount of content which is currently required in professional athletic training programs. Given that limitation, another area to research might be non-programmatic avenues of leadership education for students in athletic training professional programs.

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Appendix A

Faculty Questionnaire

Survey consent

You are requested to participate in research conducted by Elizabeth Drake MS, ATC and supervised by Dr. Julie Carlson on program director and student perspectives on leadership curricula in professional athletic training education programs. This survey should take no more than 15 minutes to complete. The goal of this survey is to examine faculty perspectives of the ways and the extent to which athletic training professional preparation programs address leadership in their curricula. If you have any questions about the research, please contact Elizabeth Drake at elizabeth.drake@mnsu.edu. Participation is voluntary. You have the option not to respond to any of the questions. You may stop taking the survey at any time by closing your web browser. Participation or non-participation will not impact your relationship with Minnesota State University, Mankato. If you have questions about the treatment of human participants and Minnesota State University, Mankato, contact the IRB Administrator, Dr. Barry Ries at 507-389-1242 or barry.ries@mnsu.edu. Responses will be anonymous. However, whenever one works with online technology there is always the risk of compromising privacy, confidentiality, and/or anonymity. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager. The risks of participating are no more than are experienced in daily life. There are no direct benefits for participating. Society might benefit by an increased understanding of how athletic training professional preparation programs address leadership in their curricula. Submitting the completed survey will indicate your informed consent to participate and indicate your assurance that you are at least 18 years of age. Please print a copy of this page for your future reference.

Study Title: Leadership Curricula of Professional Athletic Training Education Programs

MSU IRBNet ID#

Date of MSU IRB approval:

Yes, I agree to participate.

No, I do not agree to participate.

(If No, I do not agree to participate is selected, skip to the end of the questionnaire).

Demographics

1. What is your gender?

Male

Female

Transgender

Other

2. How many years have you been a program director?

0	8	16
1	9	17
2	10	18
3	11	19
4	12	20
5	13	21
6	14	
7	15	

3. What is the highest level of education you have completed?

Associate's Degree Bachelor's Degree Master's Degree Doctoral Degree

4. What is the degree level of your professional athletic training education program (ATEP)?

Bachelor's Master's

5. How long has your professional ATEP been in existence?

0	27
1	28
2	29
3	30
4	31
5	32
6	33
7	34
8	35
9	36
10	37
11	38
12	39
13	40
14	41
15	42
16	43
17	44
18	45
19	46
20	
21	
22	
23	
24	
25	
26	

13. For clinical education, please rate your degree of agreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I don't know
Leadership content is purposefully incorporated throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership content occurs incidentally throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership opportunities are purposefully incorporated throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership opportunities occur incidentally throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Does the athletic training program include one or more courses specific to leadership?
 Yes No *(If no is selected, then skip to # 16)*

15. Of the leadership courses included in the athletic training program, how many are...
 required?
 recommended (as opposed to required)?
 offered by the department that provides the program?
 offered by a department other than the one that provides the program?
 specific to athletic training?

16. Does the athletic training program include one or more leadership workshops?
 Yes No
(If no is selected then skip to #18)

17. Of the leadership workshops included in the athletic training program, how many are...
 required?
 recommended (as opposed to required)?
 offered by the department that provides the program?
 offered by a department other than the one that provides the program?
 specific to athletic training?

22. Please identify which of these teaching methods are used formally or informally in the ATEP to convey leadership knowledge, skills, or application.

	Leadership Knowledge				Leadership Application				Leadership Skills			
	Formally	Informally	Both	Not Used	Formally	Informally	Both	Not Used	Formally	Informally	Both	Not Used
Mentoring by peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring by faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring by preceptors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Practical application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Many ways of addressing leadership in a program have been suggested previously in this questionnaire. In what other ways is leadership addressed in your program?

24. How important is it to you that leadership is addressed in your program?

Very Unimportant	Unimportant	Neither Important nor Unimportant	Important	Very Important	I don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. Why is it important or unimportant to you that leadership is addressed in your program?

Appendix B

Student Questionnaire

Survey consent

You are invited to participate in research conducted by Elizabeth Drake MS, ATC and supervised by Dr. Julie Carlson on student perspectives on leadership curricula in professional athletic training education programs. This survey should take about 10 to 15 minutes to complete. The goal of this survey is to examine student perspectives of the ways and the extent to which athletic training professional preparation programs address leadership in their curricula. If you have any questions about the research, please contact Elizabeth Drake at elizabeth.drake@mnsu.edu or Julie Carlson at julie.carlson@mnsu.edu.

Participation is voluntary. You have the option not to respond to any of the questions. You may stop taking the survey at any time by closing your web browser. Participation or non-participation will not impact your relationship with Minnesota State University, Mankato. If you have questions about the treatment of human participants and Minnesota State University, Mankato, contact the IRB Administrator, Dr. Barry Ries at 507-389-1242 or barry.ries@mnsu.edu.

Responses will be anonymous. However, whenever one works with online technology there is always the risk of compromising privacy, confidentiality, and/or anonymity. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

The risks of participating are no more than are experienced in daily life. There are no direct benefits for participating. Society might benefit by an increased understanding of how athletic training professional preparation programs address leadership in their curricula.

Submitting the completed survey will indicate your informed consent to participate and indicate your assurance that you are at least 18 years of age. Please print a copy of this page for your future reference.

Study Title: Leadership Curricula of Professional Athletic Training Education Programs

MSU IRBNet ID# 607337-3

Date of MSU IRB approval: 5/29/2014

Yes, I agree to participate.

No, I do not agree to participate.

(If No, I do not agree to participate is selected, the questionnaire will automatically skip to the last slide that says Thank You for your Time!).

Demographics

1. What is your gender?

Male

Female

Transgender

Other

2. What is your age?

_____ Years

3. What is/ was your date of graduation?

_____ Month _____ Year

4. What is the degree level of your professional athletic training education program (ATEP)?

Bachelor's Master's

5. Have you taken the BOC exam?

Yes No

(If no is selected the questionnaire will automatically skip to question 7)

6. Do you intend to take the BOC exam?

Yes No

7. Do you intend to practice athletic training?

Yes No

8. I have held or currently hold a leadership position in an athletic training organization.

Yes No

Main Questions

There are many different perceptions of leadership. For the purpose of this study, Northouse's (2010) definition of leadership will be used. He defines leadership as "a process whereby an individual influences a group of individuals to achieve a common goal" (p. 3)

9. Does your program address leadership in any way?

Yes, leadership is addressed.

No, leadership is not addressed.

(If No is selected is selected, the questionnaire will automatically skip to the last slide that says Thank You for your Time!)

11. For clinical education, please rate your degree of agreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I don't know
Leadership content is purposefully incorporated throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership content occurs incidentally throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership opportunities are purposefully incorporated throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership opportunities occur incidentally throughout the clinical portion of the ATEP.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Does the athletic training program include one or more leadership courses?

Yes No

(If no is selected, the questionnaire will automatically skip to # 14)

13. Of the leadership courses included in the athletic training program, how many are... required?

recommended (as opposed to required)?

offered by the department that provides the program?

offered by a department other than the one that provides the program?

specific to athletic training?

14. Does the athletic training program include one or more leadership workshops?

Yes No

(If no is selected the questionnaire will automatically skip to #16)

20. Please identify which of these teaching methods are used formally or informally in the ATEP to convey leadership knowledge, skills, or application.

	Leadership Knowledge				Leadership Application				Leadership Skills			
	Formally	Informally	Both	Not Used	Formally	Informally	Both	Not Used	Formally	Informally	Both	Not Used
Mentoring by peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring by faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring by preceptors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Practical application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Many ways of addressing leadership in a program have been suggested previously in this questionnaire. In what other ways is leadership addressed in your program?

22. How important is it to you that leadership is addressed in your program?

Very Unimportant	Unimportant	Neither Important nor Unimportant	Important	Very Important	I don't know
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. Why is it important or unimportant to you that leadership is addressed in your program?

Appendix C

Differences Between Student and Faculty Perceptions of Athletic Training

Programs Addressing Leadership

	Faculty		Student		χ^2	<i>df</i>	<i>p</i>
	%	n	%	n			
Does your program address leadership in any way?					0.654	1	0.42
Yes	45.0	68	39.1	59			
No	9.9	15	6.0	9			

$p \leq 0.05$

Appendix D

Comparison Between Student and Faculty Perceptions of Leadership Requirements in the Curricular Portion of an Athletic Training Program

Statement		<i>n</i>	<i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>
Leadership content is a formal requirement of the curriculum portion of the ATEP.	Student	58	3.74(1.47)	0.23	123	0.82
	Faculty	67	3.69(1.19)			
Leadership content occurs informally / incidentally throughout the curriculum portion of the ATEP.	Student	58	4.26(1.35)	-0.99	75.43	0.32
	Faculty	67	4.45(0.58)			
Leadership opportunities are a formal requirement of the curriculum portion of the ATEP.	Student	58	3.04(1.28)	1.65	123	0.10
	Faculty	67	3.45(1.45)			
Leadership opportunities occur informally / incidentally throughout the curriculum portion of the ATEP.	Student	58	4.19(1.12)	-0.87	81.30	0.07
	Faculty	67	4.49(0.56)			

$p \leq 0.004$

Appendix E

Comparison Between Student and Faculty Perceptions of Leadership Requirements in the Clinical Portion of an Athletic Training Program

Statement		<i>n</i>	<i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>
Leadership is purposefully incorporated throughout the clinical portion of the ATEP.	Student	58	3.97(0.90)	1.99	121.98	0.05
	Faculty	67	3.62(1.03)			
Leadership occurs incidentally throughout the clinical portion of the ATEP.	Student	58	4.10(0.69)	- 1.04	122	0.29
	Faculty	67	4.23(0.63)			
Leadership opportunities are purposefully incorporated throughout the clinical portion of the ATEP.	Student	58	3.88(0.98)	2.05	121.71	0.04
	Faculty	67	3.48(1.17)			
Leadership opportunities occur incidentally throughout the clinical portion of the ATEP.	Student	58	4.14(0.74)	- 1.36	122	0.17
	Faculty	67	4.30(0.61)			

$p \leq 0.004$

Appendix F

Comparison Between Student and Faculty Perceptions of Leadership and Management Distinctions

Statement		<i>n</i>	<i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>
Leadership and management are one in the same.	Student	56	2.30(0.95)	3.65	92.31	0.00*
	Faculty	67	1.76(0.63)			
Leadership is addressed as a subset of management.	Student	56	3.18(0.97)	1.94	120.60	0.05
	Faculty	67	2.79(1.24)			
The majority of leadership education occurs informally in the clinical education portion of the ATEP.	Student	56	4.00(0.81)	4.34	120.97	0.00*
	Faculty	67	3.30(0.99)			
Management is addressed as a subset of leadership.	Student	56	3.48(1.16)	0.31	121	0.76
	Faculty	67	3.42(1.12)			

* $p \leq 0.004$

Appendix G

Differences Between Student and Faculty Perceptions of the Formality of the Use of Textbooks as a Curricular Method

Textbook	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					7.97	3	0.05
Formally	21.1	24	12.3	14			
Informally	2.6	3	7.9	9			
Both	18.4	21	8.8	10			
Not Used	14	16	14.9	17			
Leadership Skills					1.11	3	0.78
Formally	14	15	7.5	8			
Informally	8.4	9	7.5	8			
Both	18.7	20	11.2	12			
Not Used	17.8	19	15	16			
Leadership Application					0.87	3	0.83
Formally	11.2	12	8.4	9			
Informally	10.3	11	10.3	11			
Both	11.2	12	6.5	7			
Not Used	25.2	27	16.8	18			

$p \leq 0.003$

Appendix H

Differences Between Student and Faculty Perceptions of the Formality of the Use of

Lecture as a Curricular Method

Lecture	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					13.58	3	0.004
Formally	23	26	15	17			
Informally	6.2	7	15	17			
Both	25.7	29	10.6	12			
Not Used	0.9	1	3.5	4			
Leadership Skills					2.31	3	0.51
Formally	19.6	21	12.1	13			
Informally	9.3	10	8.4	9			
Both	26.2	28	15	16			
Not Used	3.7	4	5.6	6			
Leadership Application					1.69	3	0.64
Formally	14.0	15	7.5	8			
Informally	16.8	18	14.0	15			
Both	19.6	21	12.1	13			
Not Used	7.5	8	8.4	9			

$p \leq 0.003$

Appendix I

Differences Between Student and Faculty Perceptions of the Formality of the Use of Self-Reflection as a Curricular Method

Self-reflection	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					12.47	3	0.006
Formally	15.9	18	6.2	7			
Informally	14.2	16	24.8	28			
Both	18.6	21	9.7	11			
Not Used	8.0	9	2.7	3			
Leadership Skills					4.85	3	0.18
Formally	13.8	15	7.3	8			
Informally	16.5	18	18.3	20			
Both	20.2	22	13.8	15			
Not Used	8.3	9	1.8	2			
Leadership Application					3.53	3	0.32
Formally	12.1	13	8.4	9			
Informally	21.5	23	16.8	18			
Both	15.9	17	14.0	15			
Not Used	9.3	10	1.9	2			

$p \leq 0.003$

Appendix J

Differences Between Student and Faculty Perceptions of the Formality of the Use of Peer-Learning as a Curricular Method

Peer-Learning	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					10.75	3	0.01
Formally	15.8	18	5.3	6			
Informally	17.5	20	24.6	28			
Both	16.7	19	13.2	15			
Not Used	6.1	7	0.9	1			
Leadership Skills					4.37	3	0.22
Formally	12.8	14	4.6	5			
Informally	23.9	26	23.9	26			
Both	18.3	20	11.9	13			
Not Used	3.7	4	0.9	1			
Leadership Application					6.00	3	0.11
Formally	15	16	5.6	6			
Informally	19.6	21	19.6	21			
Both	20.6	22	15.9	17			
Not Used	3.7	4	0	0			

$p \leq 0.003$

Appendix K

Differences Between Student and Faculty Perceptions of the Formality of the Use of Service Learning as a Curricular Method

Service Learning	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					0.67	3	0.88
Formally	13.2	15	7.9	9			
Informally	18.4	21	14.9	17			
Both	14	16	13.2	15			
Not Used	10.5	12	7.9	9			
Leadership Skills					2.67	3	0.45
Formally	9.3	10	9.3	10			
Informally	27.8	30	13.9	15			
Both	13	14	13	14			
Not Used	8.3	9	5.6	6			
Leadership Application					2.28	3	0.52
Formally	11	12	8.3	9			
Informally	26.6	29	13.8	15			
Both	12.8	14	13.8	15			
Not Used	8.3	9	5.5	6			

$p \leq 0.003$

Appendix L

Differences Between Student and Faculty Perceptions of the Formality of Using a Workshop through the Athletic Training Program as a Method for Teaching Leadership

Workshop Through ATEP	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					0.84	3	0.84
Formally	4.5	5	1.8	2			
Informally	2.7	3	1.8	2			
Both	3.6	4	3.6	4			
Not Used	45.5	51	36.6	41			
Leadership Skills					5.85	3	0.12
Formally	6.5	7	0.9	1			
Informally	4.6	5	5.6	6			
Both	3.7	4	6.5	7			
Not Used	43.5	47	28.7	31			
Leadership Application					4.98	3	0.17
Formally	5.6	9	1.9	2			
Informally	4.6	5	6.5	7			
Both	4.6	5	7.4	8			
Not Used	43.5	47	25.9	28			

$p \leq 0.003$

Appendix M

Differences Between Student and Faculty Perceptions of the Formality of Using a Workshop through the Department as a Method for Teaching Leadership

Workshop Through Department	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					4.73	3	0.19
Formally	1.8	2	1.8	2			
Informally	5.4	6	4.5	5			
Both	1.8	2	6.3	7			
Not Used	46.8	52	31.5	35			
Leadership Skills					8.74	3	0.03
Formally	0.9	1	1.9	2			
Informally	6.5	7	3.7	4			
Both	1.9	2	8.3	9			
Not Used	48.1	52	28.7	31			
Leadership Application					14.47	3	0.002*
Formally	1.0	1	1.0	1			
Informally	5.7	6	7.6	8			
Both	1.0	1	9.5	10			
Not Used	49.5	52	24.8	26			

* $p \leq 0.003$

Appendix N

Differences Between Student and Faculty Perceptions of the Formality of Using a Workshop Conducted by the College / University as a Method for Teaching Leadership

Workshop By College/University	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					12.12	3	0.007
Formally	8.0	9	8.9	10			
Informally	3.6	4	3.6	4			
Both	2.7	3	10.7	12			
Not Used	42.0	47	20.5	23			
Leadership Skills					14.84	3	0.002*
Formally	8.3	9	8.3	9			
Informally	3.7	4	3.7	4			
Both	2.8	3	11.9	13			
Not Used	43.1	47	18.3	20			
Leadership Application					13.01	3	0.005
Formally	5.6	6	5.6	6			
Informally	5.6	6	5.6	6			
Both	3.7	4	12.0	13			
Not Used	43.5	47	18.5	20			

* $p \leq 0.003$

Appendix O

Differences Between Student and Faculty Perceptions of the Formality of Using a Student Leadership Role in an Athletic Training Professional Organization as a Method for Teaching Leadership

Student Leadership Role in AT Professional Organization	Faculty		Student		χ^2	<i>df</i>	<i>p</i>
	%	n	%	n			
Leadership Knowledge					12.46	3	0.006
Formally	8.0	9	14.2	16			
Informally	27.4	31	8.0	9			
Both	17.7	20	18.6	21			
Not Used	3.5	4	2.7	3			
Leadership Skills					13.73	3	0.003*
Formally	7.3	8	9.2	10			
Informally	29.4	32	6.4	7			
Both	17.4	19	21.1	23			
Not Used	4.6	5	4.6	5			
Leadership Application					19.27	3	0.000*
Formally	8.2	9	9.1	10			
Informally	28.2	31	5.5	6			
Both	17.3	19	26.4	29			
Not Used	4.5	5	0.9	1			

* $p \leq 0.003$

Appendix P

Differences Between Student and Faculty Perceptions of the Formality of Using a Student Leadership Role in an Organization as a Method for Teaching Leadership

Student Leadership Role in Other Organization	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					11.97	3	0.008
Formally	5.3	6	10.6	12			
Informally	25.7	29	8.0	9			
Both	16.8	19	19.5	22			
Not Used	2.2	10	5.3	6			
Leadership Skills					12.08	3	0.007
Formally	6.6	7	8.5	9			
Informally	28.3	30	7.5	8			
Both	15.1	16	20.8	22			
Not Used	7.5	8	5.7	6			
Leadership Application					14.47	3	0.002*
Formally	7.3	8	8.2	9			
Informally	27.3	30	6.4	7			
Both	15.5	17	22.7	25			
Not Used	8.2	9	4.5	5			

* $p \leq 0.003$

Appendix Q

Differences Between Student and Faculty Perceptions of the Formality of Using a Student Involvement in iLEAD as a Method for Teaching Leadership

Student Involvement in iLEAD	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					12.32	3	0.006
Formally	8.9	10	4.5	5			
Informally	13.4	15	2.7	3			
Both	8.0	9	2.7	3			
Not Used	25.9	29	33.9	38			
Leadership Skills					16.87	3	0.001*
Formally	6.4	7	4.6	5			
Informally	16.5	18	0.9	1			
Both	9.2	10	3.7	4			
Not Used	25.7	28	33.0	36			
Leadership Application					15.31	3	0.002*
Formally	7.3	8	4.6	5			
Informally	15.6	17	0.9	1			
Both	8.3	9	3.7	4			
Not Used	26.6	29	33.0	36			

* $p \leq 0.003$

Appendix R

Differences Between Student and Faculty Perceptions of the Formality of Using Peer Mentoring as a Method for Teaching Leadership

Mentoring by Peers	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					7.87	3	0.05
Formally	14.3	16	4.5	5			
Informally	20.5	23	15.2	17			
Both	19.6	22	23.2	26			
Not Used	2.7	3	0.0	0			
Leadership Skills					9.11	3	0.03
Formally	15.6	17	3.7	4			
Informally	20.2	22	12.8	14			
Both	21.1	23	24.8	27			
Not Used	1.8	2	0.0	0			
Leadership Application					4.51	3	0.21
Formally	15.0	16	5.6	6			
Informally	21.5	23	12.1	13			
Both	20.6	22	22.4	24			
Not Used	1.9	2	0.9	1			

$p \leq 0.003$

Appendix S

Differences Between Student and Faculty Perceptions of the Formality of Using Faculty Mentoring as a Method for Teaching Leadership

Mentoring by Faculty	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					4.36	3	0.23
Formally	15.2	17	7.1	8			
Informally	15.2	17	7.1	8			
Both	24.1	27	25.9	29			
Not Used	2.7	3	2.7	3			
Leadership Skills					6.12	3	0.11
Formally	14.8	16	7.4	8			
Informally	18.5	20	6.5	7			
Both	24.1	26	23.1	25			
Not Used	1.9	2	3.7	4			
Leadership Application					9.52	3	0.02
Formally	14.8	16	4.6	5			
Informally	19.4	21	7.4	8			
Both	23.1	25	24.1	26			
Not Used	1.9	2	4.6	5			

$p \leq 0.003$

Appendix T

Differences Between Student and Faculty Perceptions of the Formality of Using Preceptor Mentoring as a Method for Teaching Leadership

Mentoring by Preceptors	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					10.60	3	0.014
Formally	14.3	16	5.4	6			
Informally	17.0	19	5.4	6			
Both	24.1	27	31.3	35			
Not Used	1.8	2	0.9	1			
Leadership Skills					11.02	3	0.01
Formally	13.0	14	6.5	7			
Informally	21.3	23	4.6	5			
Both	24.1	26	28.7	31			
Not Used	0.9	1	0.9	1			
Leadership Application					6.71	3	0.08
Formally	13.9	15	5.6	6			
Informally	18.5	20	6.5	7			
Both	25.9	28	27.8	30			
Not Used	0.9	1	0.9	1			

$p \leq 0.003$

Appendix U

Differences Between Student and Faculty Perceptions of the Formality of Using Practical Application as a Method for Teaching Leadership

Practical Application	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					8.54	3	0.036
Formally	8.0	9	7.1	8			
Informally	21.4	24	6.3	7			
Both	25.0	28	28.6	32			
Not Used	2.7	3	0.9	1			
Leadership Skills					7.78	3	0.05
Formally	7.4	8	8.3	9			
Informally	24.1	26	6.5	7			
Both	25.0	27	24.1	26			
Not Used	2.8	3	1.9	2			
Leadership Application					10.98	3	0.01
Formally	5.6	6	8.4	9			
Informally	23.4	25	4.7	5			
Both	27.1	29	25.2	27			
Not Used	2.8	3	2.8	3			

$p \leq 0.003$

Appendix V

Differences Between Student and Faculty Perceptions of the Formality of Using Other Methods for Teaching Leadership

Other	Faculty		Student		χ^2	df	p
	%	n	%	n			
Leadership Knowledge					3.47	3	0.32
Formally	2.6	2	2.6	2			
Informally	6.6	5	2.6	2			
Both	6.6	5	13.2	10			
Not Used	36.8	28	28.9	22			
Leadership Skills					3.56	3	0.31
Formally	2.7	2	4.0	3			
Informally	8.0	6	2.7	2			
Both	6.7	5	12.0	9			
Not Used	34.7	26	29.3	22			
Leadership Application					4.17	3	0.24
Formally	1.4	1	5.4	4			
Informally	6.8	5	2.7	2			
Both	8.1	6	12.2	9			
Not Used	35.1	26	28.4	21			

$p \leq 0.003$