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The athletic training clinical experience: A phenomenological study

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The Athletic Training Clinical Experience: A Phenomenological Study

by

Courtney M. Lewis

Dissertation

Submitted to the Department of Leadership and Counseling

Eastern Michigan University

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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Educational Leadership

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Ypsilanti, Michigan

Dedication

To my sweet Jacky boy and little Charley girl. It is nothing short of pure joy to watch you both explore, learn, and grow each day. You will never know much you both inspired me to keep going, and to show you that goals can be achieved no matter how long they seem to take, and no matter what other adventures life throws your way in the process. I want to share some very special words with both of you from Grandma Pat that I hope you will cherish as much as I do, and hold close to your heart:

“I want to tell you grandkids, the world out there is tough, but, so are you! Be a survivor, don't be afraid of hard work. Get your education, and go out into the world of working for a living. Be proud of whatever you do choose to do, and don't be afraid to do it...Don't be lazy, don't expect too much, do be aggressive, and learn to go for whatever. Be honest and truthful...that is the most important thing for your growing up in the world today.”

I love you both so much!

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teach on a daily basis, thank you for sharing your lives with me and trusting me to lead you into the profession of athletic training. You truly make going to work each day a unique and fantastic experience and I cherish our time together and the lessons that you have taught me along the way.

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I am finishing this process so full of thanks and gratitude, and I look forward to the next great adventure knowing I have the full support of so many amazing people in my life.

Abstract

The purpose of this study was to understand how students experience the clinical component of their preparation and the phenomenon of integration. Integration is the application of scientific content knowledge into a setting that reflects the real world of practice. Within the athletic training literature, this concept of integration, or the bridging of didactic and clinical preparation, is often referred to as clinical integration. The concept of integration has been studied, but unfortunately, it has not been studied from the perspective of athletic training students. My goal was to conduct a qualitative research study using phenomenological research methods to understand how athletic training students experienced integration. My unit of analysis for this research was seven athletic training students. I interviewed each participant to gain an understanding of his/her lifeworld and to understand three research questions:

- How do students experience and understand their didactic preparation?
- How do students experience and understand their clinical preparation?
- How do students experience and understand the connection between their didactic and clinical preparation?

Participants valued relationships formed in the classroom with their peers, and relationships formed at their clinical sites with their patients, and most notably, with their preceptors. This study found the essence of the concept of clinical integration is actually seeing in the real world that you know. When students are given the opportunity to try it out, the explicit knowledge becomes tacit through the adaptation of their reflective skills.

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Chapter 1: Background, Purpose, Significance

Background of the Study

The profession of athletic training has existed for decades but has drastically changed since its conception. Athletic training is an allied health care profession but has only existed as such for a little over 30 years. During this time period, athletic training programs have undergone accreditation from several different committees, including the Committee on Allied Health Education and Accreditation (CAHEA), the Joint Review Committee on Educational Programs in Athletic Training (JRC-AT), the Commission on Accreditation of Allied Health Programs (CAAHEP), and the Commission on Accreditation of Athletic Training Education (CAATE) which exists today (Delforge & Behnke, 1999). Currently, there are close to 174 entry-level bachelor's degree athletic training programs and just over 200 entry-level master's degree athletic training programs across the country (Commission on Accreditation of Athletic Training Education, n.d.). However, aside from following the standards and competencies set forth from CAATE, each program is unique. A mandate has also recently come into existence, and as of 2022, all remaining of the 174 entry-level bachelor's degree programs must transition to entry level master's degree programs, or give up accreditation and dissolve as a program (Commission on Accreditation of Athletic Training Education, n.d.).

Along with varying committees for accreditation of athletic training education, the pathway to become an athletic trainer also has significantly changed since 1959, from apprenticeship, special consideration, physical therapy school, and athletic training programs to accredited entry-level programs as the only avenue to certification. To practice professionally as an athletic trainer, an individual must complete and graduate from an accredited entry-level program, pass a certification exam, and in most cases, obtain licensure in their state of practice.

The goal of this decision was to “standardize athletic training education and enhance consistency with professional preparation in other allied health disciplines” (Delforge & Behnke, 1999, p. 60).

The National Athletic Trainers’ Association Professional Education Committee (NATA PEC) recommended a more skill based education and developed the first *Competencies in Athletic Training* to make sure students learned specific skills to athletic training (Delforge & Behnke, 1999). As athletic training has evolved and continues to grow, the competencies have changed and programs currently follow the *Competencies in Athletic Training* (6th ed.) released by the NATA PEC. As the field has evolved, the academic preparation of the athletic trainer has also experienced change and growth. Athletic training programs are a combination of both didactic and clinical preparation. Didactic preparation is supposed to provide students with the knowledge, theories, and concepts related to the knowledge, skills, and abilities needed to practice as an athletic trainer. Clinical preparation, on the other hand, provides students with the opportunity to apply knowledge, theories, and concepts learned in their didactic preparation to real world experiences through the use of authentic problems in the clinical setting (Radtke, 2008, p. 37). This type of preparation is a curriculum format adopted by athletic training as well as other allied health professions and many professional preparation programs.

Nature of the Problem

A curriculum format that includes a combination of didactic and clinical preparation is a curriculum format that emphasizes the development of both tacit and explicit knowledge. According to Sun, Mathews, and Lane (2007), tacit knowledge is knowledge from experience whereas explicit knowledge tends to be anchored in instruction. Explicit knowledge, or the knowing what, is strongly emphasized in didactic preparation and tacit knowledge, or the

knowing how, is strongly emphasized in clinical preparation. In an ideal setting, students will experience integration, meaning they connect their didactic preparation with their clinical preparation: “The term integration carries the implicit meaning of ‘connection,’ ‘use in combination,’ and ‘consistence or coherence’” (Tsang, 2014, p. 1396). In essence, integration is the application of scientific content knowledge into a setting that reflects the real world of practice. The current literature provides strong support of the need for integration and the transfer of explicit knowledge to tacit knowledge. Wrenn and Wrenn (2009) indicate “it is imperative that students in professional programs be able to put into practice what they have learned in the classroom” (p. 258). However, “research has (also) revealed that integration between implicit and explicit knowledge does not always happen automatically” (Sun et al., 2007). Within the athletic training literature, this concept of integration, or the bridging of didactic and clinical preparation, is often referred to as clinical integration: “Clinical integration is a necessary facet to students’ professional development” (Dodge, Mazerolle, & Bowman, 2015, p. 80). Integration, or this transfer of knowledge, has been studied in some settings; however, what is lacking in the athletic training literature is an understanding of how students actually experience the didactic and clinical components of their preparation and therefore how they experience this concept of clinical integration. The research in athletic training is centered around assimilation of students into the profession and how students are socialized into the profession (Dodge, Mitchell, & Mensch, 2009; Dodge, Mazerolle, & Bowman, 2015; Mazerolle, Bowman, & Dodge, 2014a; Mazerolle, Bowman, & Dodge, 2014b; Mazerolle, Bowman, & Dodge, 2014c; Pitney, Ilsey, & Rintala, 2002), but there is a lack of understanding how students experience their clinical and didactic preparation and the phenomenon of integration. We do not

understand how students experience integration, and as a result, consequences such as decreased confidence and motivation, issues with socialization, and attrition from programs exist.

Consequences

Confidence. Clinical integration facilitates a positive learning environment and this positive environment fosters confidence in athletic training students (Dodge, Mitchell, & Mensch, 2009). Students who experience greater confidence and greater self-efficacy tend to have more positive learning experiences. Mensch and Ennis (2002) found that students who had enhanced self-confidence had better educational experiences, put forth more effort, and were more motivated. Clinical integration plays a major role in the confidence of students: “Students felt more confident to learn when they were provided with experiential learning” (Mensch & Ennis, 2002, p. S-206) opportunities in the clinical setting. Students who have the ability to participate in authentic, experiential learning opportunities, where they can apply the didactic knowledge from the classroom, into the real-world setting, have shown to have greater self-efficacy and confidence. Alternatively, it is implied that this “increased confidence leads to integration” (Young, Klossner, Docherty, Dodge, & Mensch, 2013, p. 75), which allows the athletic training student to experience a connection between the didactic and clinical portions of their preparation.

Motivation. Increasing athletic training student success may also result from increasing the motivation of athletic training students. Student success in athletic training is often thought of as completing and graduating from athletic training programs, and passing the Board of Certification (BOC) certification examination. Completion and graduation from a program varies from one institution to the next as faculty members within various programs have the autonomy to create individual academic performance program standards. Therefore, a successful

student in one program may have a “B” grade average; whereas in a different program, a student might have an “A” grade average. Ultimately the goal of an athletic training program is to produce a certified athletic trainer, so success is dictated by student retention, graduation, and passing the BOC certification examination.

It has been found in the literature that motivation is a key factor in athletic training preparation and more highly motivated students perform better than unmotivated students. Dodge et al., (2009) found motivated athletic training students to be more confident and to have a stronger desire to complete athletic training programs. Their study assessed clinical integration and found a clear link between it and motivation. Motivated athletic training students are found to also have greater self-efficacy (Dodge et al., 2009; Mensch & Ennis, 2002; Young et al., 2013). These students generally have a greater determination to complete athletic training programs and graduate from college with this degree. This leads to greater student success overall. Students who are motivated are more likely to be more engaged in their learning and work to achieve the skills necessary to enter into the work force. Motivated students are able to bridge what they learn in the classroom to what they are experiencing at their clinical sites and therefore have greater levels of clinical integration (Carr & Drummond, 2002). Motivation results from a high level of collaboration and solid working relationship between faculty and preceptors, high levels of student engagement, positive interactions with educators and other students, and meaningful learning experiences (Carr & Drummond, 2002; Dodge et al., 2009; Young et al., 2013). Finding ways to increase student motivation will definitely increase the likelihood of student success for athletic training students. Currently we do not have a clear understanding of how students integrate the didactic and clinical experiences of their preparation and therefore we struggle to understand effective methods to keep students motivated.

Preparation/socialization. The concept of socialization and transforming a newcomer into an insider is an important facet of a higher education academic program. An academic program exists not only to provide a student with the foundational knowledge they need in order to enter a field of work, but some responsibility also falls upon the academic program to prepare students for the culture of the field or profession they are going to enter. The literature indicates clinical integration can aid in preparation and socialization because authentic experiences obtained through clinical integration can help athletic training students develop an appreciation for the role they would have as certified athletic trainers (Mazerolle et al., 2014b). A major component of clinical integration and the socialization process is preceptor leadership.

Preceptor leadership. Preceptors of athletic training students not only assist with clinical integration, but also play a major role in assisting them in truly understanding the “ins and outs” of the profession. A preceptor is a certified athletic trainer who oversees and athletic training student’s clinical preparation (National Athletic Trainers’ Association, n.d.). As a result of the close interaction preceptors have with athletic training students and the major role they play, they must develop their own leadership styles and skills in order to better educate students (Meyer, 2002). Literature shows athletic training students prefer their preceptors to serve as mentors and to be both accessible and approachable (Meyer, 2002; Pitney & Elhers, 2004). Curtis, Helion, and Domsohn (1998) found that athletic training students desired supervisors to demonstrate mentoring behaviors such as constructive feedback, explanation, and nurturing, and these mentoring roles have a profound effect on an athletic training student’s professional development. A preceptor must understand this, as well as their athletic training student’s level of knowledge and clinical maturity, and be able to adapt their leadership and teaching styles to meet the needs of their students. If a preceptor is unable to adapt him or herself to the needs of

the athletic training student, this can result in problems for the athletic training student including a lack of clinical integration.

Retention. According to the literature, a final problem that can arise from lack of clinical integration is decreased student retention in athletic training programs. Young et al., (2013) state, “Retention describes a student’s persistence in college or a preprofessional program until a degree is received” (p. 68). If students do not remain in an athletic training program, the program experiences high attrition rates which can be problematic in the recruitment of future students and the sustainability of the program. Young et al. (2013) found “athletic training students identified authentic learning experiences as important to their retention in the major” (p. 71) and “the more hands-on experiences given to students, the more likely they are to persist, as these experiences provide real-life situations in which students can practice and enhance their skills” (p. 74). These hands-on experiences are directly related to clinical integration and an influential factor associated with retention (Young et al., 2013).

Athletic training students feel more confident, more motivated, better prepared, and remain in athletic training programs when they experience clinical integration. The current literature provides strong empirical support of the need for clinical integration and makes it evident that athletic training programs should try to promote experiences that enhance clinical integration. However, what is lacking is an understanding of how students actually experience the didactic and clinical components of their preparation and therefore how they experience this concept of clinical integration. It is challenging for leaders in athletic training programs to develop ways to enhance clinical integration when there is a lack of understanding related to how students actually experience this phenomenon. This study seeks to understand how students experience the clinical component of their preparation.

Purpose of Study

The purpose of this study was to understand how students experienced the clinical component of their preparation and the phenomenon of integration.

Significance of Study

The concept of integration has been studied, but unfortunately, it has not been studied from the perspective of athletic training students. This research fills the void in the literature and may help those who design curricula to do so more thoughtfully. In addition, for myself specifically, this informed my practice as a leader.

More broadly, this informs the professional organization and broaden the understanding of the field. As indicated in the literature, there are consequences within athletic training preparation centered around clinical integration, which are issues with student motivation, attrition from programs, and poor professional socialization. Young et al. (2013) found that, “Clinical integration plays a significant role in persistence” (p. 69) and for some students who remain in athletic training programs, they are experiencing a disconnect in their preparation and not fully understanding what it means to be an athletic trainer. Dodge et al. (2015) state, “Clinical integration helps students develop confidence in their knowledge and skills through engagement in real-time learning” (p. 76). The nature of the problem is a lack of understanding of how students experience clinical integration. It was my goal to understand the student experience and to become aware of how students “make sense” of their preparation experiences.

This study contributes to the existing research on athletic training programs and students’ experiences and can inspire future research on athletic training preparation. Secondly, program directors, clinical education coordinators, and faculty members in other athletic training programs will be able to adapt this study to their own institutions. Lastly, by understanding how

athletic training students experience the phenomenon of clinical integration, I have the ability to serve as a more thoughtful leader within athletic training programs. Understanding the phenomenon of integration allows me to improve integration by giving me the knowledge to be more purposeful in creating a setting in which students experience enhanced clinical integration. I am able able to make more thoughtful decisions regarding program organization that will impact the students' experiences.

Research Questions

The following research questions were developed to guide this study in order to understand how students experience the clinical component of their preparation:

- How do students experience and understand their didactic preparation?
- How do students experience and understand their clinical preparation?
- How do students experience and understand the connection between their didactic and clinical preparation?

Definition of Key Terms

To provide an understanding of certain terms that are specific to one organization or body of research, this study used the following definitions:

- **Athletic Trainer (ATC):** Health care professionals who render service or treatment, under the direction of or in collaboration with a physician, in accordance with their education and training and the states' statutes, rules and regulations. As a part of the health care team, services provided by ATs include injury and illness prevention, wellness promotion and education, emergent care, examination and clinical diagnosis, therapeutic intervention, and rehabilitation of injuries and medical conditions.

- **Athletic Training Education:** Athletic training is an academic major or graduate equivalent major program that is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The current minimum entry point into the profession of athletic training is the baccalaureate level, however it was recently decided by the AT Strategic Alliance that the minimum professional degree level will be a master's, a change to be implemented within the next several years. More than 70% of athletic trainers hold at least a master's degree. Upon completion of a CAATE-accredited athletic training education program, students become eligible for national certification by successfully completing the Board of Certification, Inc., (BOC) examination
- **Athletic Training Program (ATP):** The academic program in which an athletic training student is enrolled.
- **Athletic Training Student (ATS):** A student currently enrolled in courses while matriculating through a CAATE accredited professional education program.
- **Board of Certification (BOC):** The BOC is a credentialing agency with the mission to provide exceptional credentialing programs for health care professionals to assure protection of the public.
- **Clinical Integration:** Assimilation of athletic training students into the clinical portion of the athletic training education.
- **Commission on Accreditation of Athletic Training Education (CAATE):** The accrediting organization with the mission to define, measure, and continually improve athletic training education.
- **Comprehensive Midwestern University:** A public, non-profit institution of higher education located in the Midwestern region of the United States.

- **National Athletic Trainers' Association (NATA):** The national member organization. The mission of the NATA is to represent, engage, and foster the continued growth and development of the athletic training profession and athletic trainers as unique health care providers.
- **Preceptor:** A certified and/or licensed professional who teaches and/or evaluates students in a clinical setting using an actual patient base.

Chapter 2: Review of the Development and Context of Athletic Training Education and Conceptual Framework

A History of Athletic Training

According to the National Athletic Trainers' Association (NATA) an athletic trainer is a “health care professional who collaborates with physicians to provide preventative services, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions” (National Athletic Trainers' Association, n.d., para. 1). Athletic trainers work with the athletic population and provide medical care ranging from the prevention of injuries, injury diagnosis and rehabilitation of injuries, to general medical care. Whether that is in a clinical setting with outreach care to a high school, the collegiate setting, professional sports world, or even the arts and non-traditional sports, athletic training is considered an allied health care profession.

Ironically, the first known athletic trainer, James Robinson, practiced veterinary medicine and trained race-horses (Webber, 2013). Typically, however, early athletic trainers had little to no medical training and were often sought after because of their own successes in athletics (Webber, 2013). The field of athletic training emerged concurrently with college athletics. Colleges and universities with athletic teams needed a way to develop players, keep them safe, and to care for them after injury. Hence, the need for an athletic trainer. Athletic training itself is closely connected to the overall development of athletics, education, and medicine in the United States (Webber, 2013). The following history of athletic training is organized in a chronological order, introducing critical individuals in the development of athletic training as an allied health care profession, as well as key events that helped propel the field forward. This history will help us to understand how the field of athletic training began and developed, how the preparation of

athletic trainers evolved over time, and how athletic training programs are presented and organized within higher education today.

Setting the Stage: Physical Education and Physical Therapy

Prior to delving into the history of athletic training and how the curriculum was developed and evolved, it is important to first explore a brief history of physical education in the United States. As it will be explained, athletic training is closely linked to physical education and formal athletic training education emerged from physical education teacher education (PETE) programs; though, over time, athletic training could become more closely linked to the field of medicine. Physical education in the United States was influenced by Germany, Sweden, and England. Each country had different mechanisms of maintaining health and wellness and teaching those methods to others. Germany focused on gymnastics training with heavy apparatuses; Sweden maintained physical fitness through prescribed movement patterns such as rope climbing and wand dancing; and England believed in approaching fitness through organized sport and stressing moral development alongside physical development (Mitchell, n.d.).

The first school to offer physical education (PE) in its curriculum was a private school in Massachusetts, The Round Hill School, and this occurred in 1823. However, it was not until 1855 that the first public school district in Cincinnati, OH, began offering PE. Still, it took an additional 11 years for laws to pass about the inclusion of PE in schools and finally in 1866, and the state of California passed a law stating that all public schools must have twice per day exercise periods (Mitchell, n.d.). Due to this sudden push for physical education in schools, the Association for the Advancement of Physical Education (AAPE) was founded in 1885 and one year later, in 1886, adopted a constitution and changed its name to the American Association for the Advancement of Physical Education (AAAPE; Mitchell, n.d.).

The expansion of physical education in schools was due, in part, to the poor condition of the deployable men in the country. Prior to World War I, preparation to teach physical education was primarily completed in normal schools. The poor condition of many of the men in the country who were called to serve in the war heightened interest in physical education. As a result of such concerns, there was some form of compulsory public school physical education in 38 states by 1930. (Boyce, n.d.). The push for PE in schools resulted in a need for physical education teacher education (PETE) programs in higher education. In the United States, teacher preparation in physical education originally had close links to medicine. Essentially, the first PE professional preparation curriculum had basic scientific courses which included anatomy, physiology, principles of movement (kinesiology), physical diagnoses, and corrective physical education, as well as methods of teaching, and philosophy of education (Newman & Miller, 1990).

According to the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) (n.d.), “The profession of physical education was considered to encompass everything related to the physical well-being of people. It was concerned with physical activity, exercise, dance, sports, athletics, health education, health service, health environment, recreation, outdoor education, and safety.” (para. 3). This all-encompassing educational program seemed to be a natural fit for athletic training. Athletic trainers of the time were highly concerned with the physical well-being of athletes and many of the courses offered in PE programs were adaptable to the field of athletic training. Specific athletic training courses became more formalized and comprehensive during the 1950s. This was due in part to the formation of the National Athletic Trainers Association (NATA) in 1950 and legal liability and litigation (Newman & Miller,

1990). Athletic training programs are now stand-alone programs, independent of physical education and other academic programs.

World War I not only caused people to take a look at the physical fitness of the deployable men in our country, but it also brought with it several consequences and health issues for the men who returned home from war. Occurring in parallel to WWI was also the first major poliomyelitis outbreak in the United States in 1916. As a result of war wounds and muscle atrophy from polio, support for individuals with disabilities was growing (Moffat, 2003), and thus, physical therapy was created. At the conclusion of WWI in 1918, the first steps toward helping people recover from war or from polio came with the development of Reconstruction Aide Training Programs. Individuals could graduate from an acceptable program of physical education or complete an aide training program and go on to work as a physical therapist to help war veterans and polio victims (Gwyer, Odom, & Gandy, 2003; Moffat, 2003).

Initially, the majority of people who worked as physical therapists were women. In 1921, several of these women met together and formed the American Women's Physical Therapeutic Association (AWPTA), but only one year later the name was changed to the American Physiotherapy Association (APA). The American Physiotherapy Association, formed in 1922 to recognize that men served in the field as well (Moffat, 2003). During this time, individuals were still trained to work as physical therapists via acceptable PE programs or by completing the reconstruction aide programs. The APA, however, recognized and approved five schools as acceptable PT educational programs in 1926. Four of these schools were previously Reconstruction Aide Training Programs and only one was a PE program. Two short years later, in 1928, physical therapy education was formally recognized in *The Physiotherapy Review* which was a journal published by the APA. While this was all completed independently and

within the field of physical therapy, steps were taken to create a curriculum and to offer standardized preparation for individuals desiring to work as physical therapists (Moffat, 2003).

Short on funds and in need of support, the APA reached out to the American Medical Association Council on Medical Education and Hospitals (AMA/CME) in 1933 to assist with accreditation of physical therapy programs (Nieland & Harris, 2003). The AMA provided ideas and funding but it was not for 22 more years in 1955 when the APA and AMA actually collaborated for the first time to undergo a formal accreditation process of physical therapy education (Gwyer, Odom, & Gandy, 2003). In the mean time, the APA had changed its name in 1946 to the American Physical Therapy Association (APTA) and in 1954 developed a 7-hour professional certification exam with help from the Professional Exam Service (PES), (Moffat, 2003). It was now, in 1955, that there was a formal accreditation process for physical therapy education. At this time, the majority of the PT educational programs were now independent of PE programs and existed as stand-alone academic programs.

Several other events occurred within physical therapy education over the next 30 years that were very impactful upon the future of physical therapy education and the field of physical therapy. By the time the country entered the 1960s, physical therapy now had baccalaureate degree and students no longer need to go through PE programs (Littell & Johnson, 2003). Also during the 1960s, the APTA petitioned the National Commission on Accreditation and the US Office of Education to become the official accrediting agency of PT education programs (Nieland & Harris, 2003). This was the first time physical therapists requested to self-regulate and to take control and ownership of education. Despite these requests, it took until 1977 for self-accreditation to begin and was first completed by the APTA CAE (Commission on Accreditation Education). The AMA still had a foot in the world of physical therapy education

accreditation and did so until 1983 with the APTA CAE finally gained sole accreditation of educational programs (Nieland & Harris, 2003).

Physical therapy had moved from 2-3 month reconstruction aide training program to a bachelor's degree program with an accreditation process and certification exam in less than a 70-year time period. Athletic training essentially mirrors physical therapy in their development of an education program but physical therapy is approximately 20-30 years ahead of athletic training in terms of accreditation, gaining recognition from the AMA and standardizing entry into the field. Athletic training appears to follow the steps physical therapy took to gain legitimacy with one of the biggest differences being the initial education. Physical therapy is rooted in reconstruction aide training programs, and athletic training had its beginnings in college athletic programs without any formal education or process. The development of a curriculum and formalized athletic training education also moved at a much slower pace compared to physical therapy education. With this background, I will now explore how the field of athletic training and athletic training education developed and how both came to exist as they do today.

The Early Years: Late 1800s-1900s

The development and rise of collegiate athletics was truly the catalyst for the field of athletic training. After the Civil War, faculty and staff at major colleges and universities began to develop institutional research and the education of professionals as well as advanced forms of college education. This academic shift focused on the preparation of professionals and the development of graduate schools, which meant there was less time for faculty and staff to attempt to control what undergraduate students were doing. Students began to organize competitions and athletic events, introducing the emergence of college athletics. Initially,

competition occurred between classes at an institution. First-year students would compete against second-year students, and this allowed students to feel a sense of pride and brotherhood (Flowers, 2009). Eventually competition moved from intra-class competition to intercollegiate competition. The first collegiate athletic event was a rowing match between Yale and Harvard in 1852 (Hurd, 1888). Along with rowing, baseball and football (both with rules vastly different from today), track and even cycling hit the college athletic scene in the late 1800s. With each sport came injuries and in the 1800s, not only were there no people to care for the injuries, the concept of rehabilitation was relatively unknown and unpracticed (Webber, 2013). With no medical background, athletic trainers of the era were what we can identify as today's track coaches. This was mainly because individuals who worked as athletic trainers were previously successful track athletes and were now in charge of coaching collegiate track athletes while occasionally caring for aches and pains. Initially athletic trainers were former successful athletes who were now employed to train other athletes. This position also included the care of injuries. However, as football became more prevalent and brought with it a plethora of injuries, the modern day athletic trainers also began to emerge (Webber, 2013). As football gained popularity, administrators and coaches of colleges realized the way to gain revenue was to have healthy athletes on the field. People were hired to care for the athletes to make sure they were able to participate and thus athletic training began to take form.

The first athletic trainer recognized in the United States was James "Jim" Robinson. James Robinson began studying veterinary medicine in 1874 after a childhood and young adult life of successfully competing in track competitions. Robinson moved to the United States in 1878 and started work in the stables as a horse trainer. Still holding onto his passion for athletics, Robinson also worked with the athletes of the Harlem Athletic Club. As a result of his

athletic successes in his younger years, and his veterinary medical background, Robinson was recruited to coach the Harvard track team in 1881 and assist the Harvard football team with conditioning (Webber, 2013). The beginnings of athletic trainers and the athletic training field emerged from Robinson's work with the football and track teams. Other schools such as Princeton, Yale, the University of Michigan, and Penn began to mimic the events at Harvard, hiring individuals to work as trainers for their sports teams. Because many coaches were newly graduated young alumni who competed on the sports teams, the trainers were in place to make sure conditioning was done properly and these young "go-getter" coaches did not run their athletes into the ground (Webber, 2013). The early athletic trainers aided in the health of college athletes, including nutrition and proper conditioning for participation. Early athletic trainers would assist athletes with conditioning for their sport, guide them on nutritional advice, and offer them aid with injuries and recovery.

Through the end of the 1800s and the beginning of the 1900s the athletic training field continued to evolve and develop. This growth occurred concurrently with the growth of collegiate athletics. Prior to the late 1800s, athletics really consisted of track. However, with the growth of college football and the invention of basketball and volleyball in the 1890s, the field of athletic training also began to grow (Webber, 2013, p. 39). Football consistently proved itself to be a very dangerous sport with several deaths, and injuries frequently occurring. Athletic trainers were occasionally working with these football teams but rather than treating injuries and providing medical care, most athletic trainers at the time were considered "rubbers" or "spongers" and mainly did massage or cleaned wounds for the athletes. By 1890, the role of athletic trainers began to develop into keeping athletes healthy to maintain competition. Prior to this time, education for athletic trainers did not exist and they would rely primarily on previous

experience or in some cases education in related fields such as physical education that they could connect back to athletic training. For athletic trainers in the 1800s, “there was no accepted body of knowledge, standards of practice, ethics or any other orthodox rules which could guide their activities” (Webber, 2013, p. 57). Athletic trainers mainly learned their skills through unorganized apprenticeship or, as mentioned, in related fields. A significant change also emerged in 1890 when Dr. William M. Conant declared himself as the first team physician for Harvard football (Edwards, 1916) and worked closely with the athletic trainer. Dr. Conant was recruited by Arthur Cumnock to help Harvard win a football game after being beaten by Yale the previous year (Edwards, 1916). The original team physician was brought on board to help football teams win, but as a result, athletic trainers and team physicians developed relationships which only helped athletic trainers gain knowledge to further propel the field of athletic training.

Despite the newly forming relationships between medical physicians and athletic trainers, the field of athletic training was also receiving significant criticisms from several groups of people across the country. One group in particular that was highly critical of athletic trainers were the physical educators. Physical educators began organizing in 1885 with the Association for the Advancement of Physical Education, which is today’s American Alliance for Health, Physical Education, Recreation and Dance. The association formed in 1885 saw to it that physical education was concerned with “physical activity, exercise, dance, sports, athletics, health education, health service, health environment, recreation, outdoor education, and safety” (American Alliance for Health, Physical Education, Recreation and Dance [AAHPERD], n.d, para. 3). Many of the things physical educators considered themselves to be in charge of were also what athletic trainers were working in: specifically, sports, athletics, and health. Physical

educators often regarded athletic trainers as uneducated and incapable of working with athletes in the capacity in which they were attempting to work.

At this time, there was no formal education of the athletic trainer. Ultimately, athletic trainers were prepared to work in the field because they previously played sports and were capable of cleaning wounds and massaging the athletes. Men learned how to function as athletic trainers through trial and error, apprenticeship, and when they were lucky enough, they were able to communicate with physicians to gain more knowledge. While athletic training education would eventually develop within physical education, at this time, it was looked down upon and the field was not taken seriously. It did not take long for athletic trainers to desire legitimacy and for others to take them seriously.

Making Progress: Early 1900s

In order to attempt to legitimize this new and growing field and combat the criticism from others in medical fields, one athletic trainer, Samuel Bilik, began writing books titled *Athletic Training*. In 1918, Bilik wrote the second edition of his book and throughout his lifetime contributed nine total editions. Bilik changed the names of editions four through nine from *Athletic Training* to *The Trainer's Bible*. In the second edition, Bilik described athletic training as conditioning, treatment of injuries, and specialized training. He states, "Training has evolved into a science which requires a thorough understanding of the human body...we may define a trainer as a cross between a specialized physician and a health director" (Bilk, 1918, p. 5). In describing the three facets of training, Bilik writes conditioning as the preparation of the athlete for competitive athletics, treatment of injuries is the application of first aid and elements of minor surgery, and finally, he describes specialized training as the development of a skill to the highest possible degree. Bilk acknowledges that specialized training is primarily the role of

the coach but it is up to the trainer to keep the athlete in good condition so specialized training can occur (Bilik, 1918, p. 5). Suggested qualities all athletic trainers should have, according to Bilik, are patience, thoroughness, cleanliness of body and mind, optimism, foresight, calmness, ingenuity and resourcefulness. Bilik finally goes on to suggest that the athletic trainer and the medical adviser must remain in communication and cooperate for the most efficient conditioning and treatment of the athletes, which is still the model followed today. Despite all of the suggestions Bilik made, he never specified what the body of knowledge should be for the athletic trainer, rather just how the athletic trainer should behave and what they should do.

While the field of athletic training continued to take shape at major colleges and universities, the National Athletic Trainers' Association (NATA) was also forming. The NATA was originally formed in the spring of 1938 at the Drake Relays. Unlike a football game where only two teams would play and therefore only two, maybe three or four at most, athletic trainers would be present, the Drake Relays were host to several track teams from across the country, allowing for the best opportunity for numerous athletic trainers to gather. This was the first attempt to organize an association for the athletic trainer (O'Shea, 1980, p. 18). This was one of the only times the trainers were all together, so plans to host an annual meeting in conjunction with the Drake Relays were made. Although poorly attended by only the track athletic trainers, at the first meeting a president and a secretary treasurer were appointed and a "home office" for the organization was designated in Iowa City, Iowa. (O'Shea, 1980, p. 18). The members of the association were divided into two subcategories, member and associate member, and dues were \$1.00 per year. The association produced a monthly bulletin titled *NATA Bulletin* which served the purpose of allowing members to exchange ideas and give up-to-date opinions (O'Shea, 1980,

p. 18). The association adopted a constitution at the second annual meeting in 1939 (O'Shea, 1980, p. 19).

An important aspect of this constitution was the classification of members into three classes of membership. Senior members were men approved by the membership committee and generally the head trainers of colleges and professional teams. Junior members were generally high school trainers or assistant trainers in colleges and the junior members were required to pass a test given by the membership committee. This test consisted of both practical and written components. This test was the first set of "educational" standards put forth by the association and, perhaps not intentional, the first notion of a division between skills and knowledge, although, up to this point, no formal education had been implemented to work as a trainer. Finally, associate members were classified as athletic trainers who had been actively engaged in training for 18 months prior to membership and this group of members could not vote (O'Shea, 1980, p. 19).

In 1941, the association decided to replace the *NATA Bulletin* with the *Trainers Journal* (O'Shea, 1980, p. 20) which was published monthly September-June for three years. The purpose of the journal was to publish articles dealing specifically with the prevention and treatment of injuries and to be a "source of information for the coaches who are not fortunate in having regular trainers as a part of their staff. It is designed to help the youth of America and the trainers who are just starting in the profession" (National Athletic Trainers' Association, 1941b, p. 41). The majority of trainers worked at large colleges and universities, however the smaller colleges and even high schools were suffering from lack of resources, and young athletes injury rates were high (National Athletic Trainers' Association, 1941b). As a result, a goal of the early

NATA was to share information to decrease the number of injuries within the high school population:

The first athletic trainers' association planned to teach skills to high school students. The organization's publication, *The Trainers Journal*, announced the program in a December 1941 article titled "The High School Trainers Plan in Operation." Lessons appearing in *The Trainers Journal* were to be studied under the direction of team medical supervisors. (Ebel, 1999, p. 29)

One of the first organizations to realize the high level of injury to high school aged athletes was the Iowa High School Athletic Association (IHSAA). The IHSAA reported that "the company (Iowa High School Insurance Company) has paid out for injuries received in the athletic contests approximately \$32,000.00 in the last two years" (Quinn, 1941, p. 41). In order to help meet this problem, the IHSAA worked with the NATA to implement a program of student trainers for high schools with the firm conviction that if this program can be put into operation, the number and the severity of injuries can be greatly reduced (Quinn, 1941, p. 41). Many other high school associations were encouraged to contact the NATA to implement this program as well.

In order to achieve the goal of preventing and treating injuries for all young athletes, the *Trainers Journal* had space devoted to a "Lesson of the Month" on subjects such as muscle bruises and how to treat them, exercises best suited for specific sports, and diets and nutrition (Frey, 1941a, p. 32). In conjunction with the lessons, the NATA developed The High School Trainers Plan. The lessons of the month were targeted towards high school students who had an interest in working as student trainers. It was the hope of the membership and the contributors to the *Trainers Journal* that the high school students would work with the medical supervisor of the school, take some of the burden off of the coaches, and as result, drastically decrease the number

of injuries in the high-school aged athletes. This led to the formation of the first student trainers program (Frey, 1941a, p. 32). It was suggested that coaches would select four boys, one from each class in the high school, to serve as the student trainers. The senior student would be the head trainer and would work directly with the medical supervisor at the high school. The four students would study the lessons published in the Trainers Journal and would take the subsequent exams on the lessons published in the next month's journal (Frey, 1941a, p. 32). Frey (1941b) stated:

The National Athletic Trainers Association is anxious to pass on to the high school students that decide to study the lessons given them each month all the information its members have gathered over the many years... We sincerely hope this course will meet with such favor that eventually the boys who do the work will be given credit just as they have received from any other study they have taken in the high school. (p 42)

The majority of the first 10 lessons published were written by Bill Frey, the Executive Secretary of the NATA, and consisted of preventing and treating injuries of the lower extremity. Lessons 1-9 all contained information about the feet, ankle, lower leg, knee and hamstring muscle group. The last lesson published in the first volume of the trainers journal came in June of 1942, Lesson 10, and discussed the "football shoulder" and how to tape it to prevent injury (Frey, 1942, p. 30).

In 1942, the journal turned direction. Many athletes and young men were called overseas to fight in WWII during this time period and the NATA recognized this event. It was published in the *Trainers Journal* that "much more is now at stake and it is up to us to work harder and keep every boy in perfect shape for the great battle, not of next Saturday but of next year" (Frey, 1942, p. 44). With membership numbers dwindling to 146, a financial deficit of \$41.19,

difficulties with travel and communication, and WWII, the first association, along with publication of the *Trainers Journal*, ceased to exist in 1944 (O'Shea, 1980, p. 22-23).

From the 1800s to 1944 huge strides were made for the field of athletic training. Several individuals had a major impact on the direction of the field and an attempt at formalizing education was even made. The "Lessons of the Month" were the first steps toward providing a standardized education to those who wished to work in the field. The apprenticeship model was still the educational pathway of choice, but progress was being made toward standardizing education and developing a solid body of knowledge required to work in the field. This was the beginning of bridging the divide between practical preparation and content knowledge preparation, or as we know it today, clinical and didactic education.

Take Two: The 1950s

It did not take long for the field to make a revival post WWII and in June of 1950 the NATA was reformed. The revival began with the formation of district associations and groups of athletic trainers near one another coming together to form organizations. The first was the Southern Conference Athletic Trainers Association which formed in 1947 in Chapel Hill, North Carolina, and included athletic trainers from Maryland, North Carolina, South Carolina, Virginia, West Virginia, and the District of Columbia (O'Shea, 1980, p. 23-24). The Eastern Conference Athletic Trainers Association was formed in 1948 in New York City, New York, with athletic trainers from Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Delaware, New Jersey, New York, and Pennsylvania (O'Shea, 1980, p. 24). Simultaneously on the opposite end of the country in 1948, the Pacific Coast Conference Athletic Trainers Association was formed at the University of Santa Barbara in California, and was originally athletic trainers from California, Oregon, and Washington (O'Shea, 1980, p. 25-26). In 1949 and 1950, the

Southwest Conference Athletic Trainers Association and the Southeast Conference Athletic Trainers association were formed, respectively. The Southwest association was formed in Fayetteville, Arkansas with trainers from Arkansas, Texas, Oklahoma, New Mexico, and Arizona (O’Shea, 1980, p. 26). The Southeast association was founded in Birmingham, Alabama with trainers from Alabama, Tennessee, Georgia, Mississippi, Louisiana, Florida, and Kentucky (O’Shea, 1980, p. 27). The efforts of athletic trainers across the nation and the formation of regional conferences propelled the formation of the modern National Athletic Trainers Association.

The first modern NATA annual meeting was held June 24-June 25 in Kansas City, MO, and was advertised as a “Free Training Clinic—National in Scope.” The meeting was sponsored by the Cramer Chemical Company, a company owned by brothers, Frank and Charles “Chuck” Cramer. Charles Cramer, a collegiate track athlete, sprained his ankle and developed his own liniment to help with the pain and healing. This creation led to the development of the Cramer Chemical Company. Charles and Frank worked together to develop products for athletic trainers and volunteered as athletic trainers at several sporting events. The first meeting in 1950 was attended by 258 athletic trainers, including representatives from all but two states. At this time, the regional associations were termed “districts” and the country was divided into nine different districts. All of the districts had already been formed prior to this meeting in 1950 with the exception of Districts 4, 5 and 7. District 4 was named the Great Lakes Athletic Trainers Association and included Michigan, Minnesota, Wisconsin, Illinois, Indiana, Ohio, and the University of Iowa. District 5 included the rest of the state of Iowa, Kansas, Missouri, Nebraska, North Dakota, and the University of Colorado, while District 7 housed the remainder of the state

of Colorado, Montana, Utah, Wyoming, the University of Arizona, and the University of New Mexico (O'Shea, 1980).

Charles and Frank Cramer provided all of the funding for the "Free Training Clinic" and thus the beginning of the NATA. Charles Cramer was also elected as the National Secretary (O'Shea, 1980, p. 27). Had it not been for the financial contributions of Chuck and Johnny Cramer, it is likely the NATA would have taken a significantly longer time to form than when it did in 1950. The brothers funded all of the expenses for the first five years of the NATA as well as collected all of the membership dues which they gave to the association in 1955 (O'Shea, 1980, p. 28). Eventually, in 1955, the members decided it would be best if the organization was not tied to a single company and the Cramer brothers felt the association could function on its own so the direct sponsorship of the NATA by the Cramer Medical Company was discontinued (O'Shea, 1980, p. 28).

Along with the direct sponsorship from the Cramer Medical Company ending, the year of 1955 proved to be a major year of growth for the association. The annual meeting was held in Bloomington, IN at the University of Indiana. Members selected William "Pinky" Newell from Purdue University as Executive Secretary, a position he would go on to hold until 1968 (O'Shea, 1980, p. 31). At this meeting was also the formation of the "Special Committee on Gaining Recognition" of which William Newell was the chairman. The other committee members were Millard Kelley of the Detroit Lions Football Club and Dr. Robert Brashear. The purpose of this committee was to initiate action to gain recognition from the American Medical Association (O'Shea 1980, p 31) which would help provide legitimacy for the field. These events in 1955 were truly the beginning of the modern day NATA.

The following year, in 1956, members decided to keep the name “National Athletic Trainers’ Association,” which was the name used initially in 1938 at the Drake Relays, and it was decided that members should officially be called “athletic trainers” (O’Shea, 1980, p. 32) instead of trainers, rubbers, spongers or personal trainers as which they had been previously referred. This year was also the development and publication of *The Journal of the National Athletic Trainers Association*, which was to feature new methods, recent developments, and other matters pertinent to the athletic trainer and was to be published quarterly (O’Shea, 1980, p. 33). At the 1956 meeting, it was also decided that the “Committee on Gaining Recognition” would study avenues through which the professionalization of athletic training could be enhanced. The people working as athletic trainers wanted legitimacy and to be recognized as medical personnel, they were more than rubbers and spongers (Webber, 2013). Both formal athletic training education and a national certification exam were chosen as the routes to accomplish professionalization, as neither one existed up to this point (Delforge & Behnke, 1999).

The association continued to advance and progress and in 1957, the NATA was elected to National Collegiate Athletic Association as an affiliate member. An NCAA committee consisting of a director of athletics, a head football coach, a dean of a school of physical education, a physiologist, an American Medical Association (AMA) representative and an athletic trainer was selected to collect and develop pertinent information regarding the prevention and treatment of sports injuries and to disseminate such information as might be appropriately brought to the attention of the member institutions of the NCAA (O’Shea 1980, p 33).

In 1958, the NATA Committee on Gaining Recognition released a report which was ultimately the development of an educational curriculum that would be acceptable to colleges

and universities. This degree plan was sent to members for a mail vote and was accepted (O'Shea, 1980, p. 38-39). The program was accepted by the NATA Board of Directors in 1959 (Delforge & Behnke, 1999) and could be incorporated into both PE and PT programs.

At the 1959 meeting, there was an effort to raise standards of athletic training (O'Shea, 1980, p. 35). The athletic training program established prerequisites for entry to schools of physical therapy as suggested by the American Physical Therapy Association (APTA) and also included courses required by states for a teaching license for physical education (O'Shea, 1980, p. 35; Delforge & Behnke, 1999). It was determined that the NATA would furnish certificates to be awarded by schools giving approved trainer curriculum and only individuals who fulfilled all of the minimal requirements of the athletic trainer curriculum would be awarded a certificate. A complete analysis by the NATA of each curriculum at each school had to be conducted for approval prior to beginning the curriculum, which was the first form of accreditation for athletic training education. A list of accredited courses from the first Athletic Training Curriculum Model can be found below:

- Physical Therapy School Prerequisites (minimum 24 semester hours)
 - Biology/zoology (8 semester hours)
 - Physics and/or chemistry (6 semester hours)
 - Social sciences (10 semester hours)
 - Electives (e.g., hygiene, speech)
- Specific course requirements (if not included above)
 - Anatomy
 - Physiology
 - Physiology of exercise

- Applied anatomy and kinesiology
- Laboratory physical science (6 semester hours, chemistry and/or physics)
- Psychology (6 semester hours)
- Coaching techniques (9 semester hours)
- First aid and safety
- Nutrition and foods
- Remedial exercise
- Organization and administration of health and physical education
- Personal and community hygiene
- Techniques of athletic training
- Advanced techniques of athletic training
- Laboratory practices (6 semester hours or equivalent)
- Recommended courses
 - General physics
 - Pharmacology
 - Histology
 - Pathology

The purpose of this curriculum was to:

professionally prepare the prospective athletic trainer for a position at the secondary school level. An individual following this guided program could not only function as an athletic trainer, but could teach health, physical education, and adapted and specific programs for handicapped students. With additional study in a paramedical field, such as physical therapy as suggested by the NATA, the

teacher-trainer can provide improved health care not only for student athletes but for the entire student body. (Schwank & Miller, 1971, p. 42)

The original curriculum was essentially the same as a typical physical education major curriculum with only the laboratory work and the techniques of athletic training course differing. The curriculum ultimately was a combination of courses that already existed within many departments of physical education. Despite these efforts and the development of the courses, the NATA Professional Education Committee (NATAPEC) did not officially recognize athletic training education programs until 1969.

Athletic training experienced major growth and development during the 1950s. Finally, the field of athletic training was not only growing, but sustaining its growth. Members of the NATA recognized the importance of pushing for the field of athletic training to be recognized by other health care fields and steps were taken in the right direction to legitimize athletic training. Initially, the apprenticeship model was still widely used for the education of athletic trainers, but thanks to the efforts of several men in the field, athletic training education was pushing its way into institutions of higher education with a standardized and agreed upon curriculum. This was the first time there was a greater emphasis on the didactic component of education, rather than just the clinical preparation.

Push for Legitimacy: 1960 and Beyond

Between the development of the curriculum in 1959 and its official recognition 10 years later, several other key events occurred in within the National Athletic Trainers Association that continued to move the field forward. With a curriculum in place and an official recognition from the NATA Professional Education Committee, members of the NATA continued to push for legitimacy for the profession. Athletic trainers sought recognition and affirmation from other

allied health professions and organizations, physical educators, and the world of athletics. In 1961 the American Medical Association committee on the medical aspects of sports gave the NATA a full measure of tribute for conducting the association as an ethical professional unit. At the same time, the American Association of Health, Physical Education, and Recreation (AAHPER) also accepted the NATA as an affiliated association (O'Shea, 1980, pp. 37 & 46). These were both major steps toward legitimizing the field and gaining acceptance from other major organizations and professions.

In 1965, another major step toward legitimacy occurred and the first phase of certification was completed. All active members of the NATA were given certificates and assigned a certification number (O'Shea, 1980, p. 50). The following year in 1966 the Joint Commission on Sports Safeguards and Medical Aspects of Sports Committee was formed which included individuals from the American College Health Association, the NATA, the NCAA and the National Federation State High School Athletic Association. This commission pooled resources in the area of athletic medicine (O'Shea, 1980, p. 51).

The progress and the efforts of the NATA for advancing the field did not go unnoticed and in 1967 the AMA recognized the role of the professionally prepared athletic trainer as part of the team responsible for the health care of athlete. Essentially this meant that the AMA recognized athletic trainers were prepared in a rigorous fashion comparable to other medical fields. The NATA was commended by the AMA for its efforts to upgrade their professional standards through approved preparations and continuing education (O'Shea, 1980, p. 52).

Reflecting again upon the educational preparation of the athletic trainer, the NATA formed, in 1969, the subcommittee on curriculum development to determine the availability of academic programs in the area of athletic training. The committee consisted of Ernie Briggs,

L.F. Diehm, A.C. Gwynne (all from University of New Mexico), and Sayers Miller (chairman from Ball State University) all of whom were athletic trainers. The committee also consisted of a medical advisor and an educational advisor. The role of this subcommittee, along with determining the availability of programs, was to determine the specific colleges and universities offering the programs, and ascertain whether the curricula being offered in the area of athletic training actually fulfilled the NATA's educational requirements previously established in 1959 (O'Shea, 1980, p. 62). The need for an approved curriculum came about because after 1959 when the first curriculum was approved, a survey was given and it indicated that less than half of the physical education department administrators were even aware of an athletic training proposed curriculum (Schwank & Miller, 1971).

This subcommittee was also charged with developing a procedure for institutions offering athletic training curricula to obtain NATA approval. At this time, only two schools were found to have met all the requirements for the NATA approval of curriculum in athletic training. These schools were University of New Mexico and Mankota State College. Indiana State University also had a program that had been previously approved. At this time it was suggested that the athletic trainer act in liaison with the Departments of Physical Education and Student Health and the NATA-approved curriculum. The program now included a major course of study in physical education, prerequisites for entry into schools of physical therapy, and the necessary courses within an individual state for a teaching certificate. These program changes allowed for students to pursue careers in either the teaching of PE or the possibility to continue their education in a school of physical therapy. The new minimal requirements differed slightly from those in 1959. One change was in the Laboratory Practice. While the 1959 requirements included laboratory practice, the requirement was 6 semester hours or equivalent. This allowed for use of the

apprenticeship and internship models without controlling the amount someone practiced in the field. The new requirements place a 600 hour requirement on the laboratory practice. The new requirements are as follows (O'Shea 1980, p 64):

1. Teaching certificate in area of choice

2. Specific required courses:

- Anatomy
- Physiology
- Physiology of Exercise
- Applied Anatomy and Kinesiology
- Psychology (2 courses)
- First Aid and Safety
- Nutrition
- Remedial Exercise
- Personal, Community, and School Health
- Techniques of Athletic Training
- Advanced Techniques of Athletic Training
- Laboratory Practice (six semester hours or 600 clock hours)

3. Recommended but not required:

- Physics
- Pharmacology
- Histology
- Pathology
- Organization and Administration of Health and Physical Education

- Psychology of Coaching
- Coaching Techniques
- Chemistry

Also, at the 1969 NATA meeting, the subcommittee on certification by examination presented to the NATA Board of Directors a procedure for certification with the date of December 31, 1969, set for certification for the first time. This meant that after this date a certification examination was required for individuals. This sub-committee was made up of the following athletic trainers: Joe Allot (Columbia University), Sayers Miller (Ball State University), Christ Patrick (University of Kentucky), Lindsay McLean (chairman, University of Michigan) and Dr. James Feurig (Michigan State University team physician). The Professional Examination Service (PES) and the American Public Health Association was contracted to help develop and score the examination (O'Shea, 1980, p. 64). The PES was an organization that had been preparing examinations for many years for evaluation of professional competency in health and related fields. The subcommittee on certification by examination met with the PES in August of 1969 and began development of the examination. The examination was completed in the summer of 1970 and was 150 multiple choice questions covering a range of topics including anatomy, physiology, prevention of injury, first aid, recognition of injury, and treatment techniques (O'Shea, 1980, p. 65). The exam also included an oral section and a practical section on athletic training. The exam still focused on academic course preparation as well as important skills learned in the field. This is important because it allowed for people to be tested across multiple platforms and emphasized the value of both the didactic and clinical components of the education. The certification examination was to be given yearly at the national meeting and yearly in each region. The board of certification was voted into existence in 1970 and

administered the first certification exam at the Southwest Athletic Trainers Association meeting (District 6) in Waco, Texas in July of 1970. Now with an approved curriculum and a certification exam, the National Athletic Trainers Association seemed to be moving in the forward direction toward legitimacy.

At the 1973 annual meeting, the general requirements for certification set by the NATA were:

- Graduate with a teaching license.
- Work under a NATA certified trainer:
 - Approved curricula (two years),
 - Physical therapy degree (two years),
 - Apprenticeship (two years).
- Maintain a NATA membership for one year prior to examination,
- Pass the NATA certification examination.

The Professional Education Committee, at the 1974 annual meeting, developed the following definition for athletic training: “The art and science of prevention and management of injuries at all levels of athletic activity.” The athletic trainer was also defined as “one who is a practitioner of athletic training”. (O’Shea, 1980, p. 80). The general requirements for certification were also changed to the following categories (O’Shea, 1980, p. 81):

1. Graduation from an approved undergraduate or graduate program
2. Apprenticeship
3. Active athletic trainer
4. Physical therapy degree graduate
5. Special consideration

It was decided that at the annual meeting in 1975 that the initials ATC (Certified Athletic Trainer) would be used to designate professionals in the field (O'Shea, 1980, p. 81).

Finally, on June 22, 1990, the American Medical Association (AMA) formally recognized athletic training as an allied health care profession. This, in combination with the development of a certification examination and existing curricula at a few universities, allowed the NATAPEC to further enhance athletic training programs and work with outside bodies to make sure the programs were accredited. The NATAPEC developed "Essentials and Guidelines for an Accredited Program for the Athletic Trainer" and the first accreditation process began. A few years later, in 1993, the NATAPEC gave up accrediting rights and the Committee on Allied Health Education and Accreditation (CAHEA), a division of the AMA, took over the process of accrediting athletic training educational programs. However, in 1994 this organization split and athletic training education accreditation was taken over by the Commission on Accreditation of Allied Health Education (CAAHEP), another organization affiliated with the AMA. That same June, the NATA created a task force to review and critique aspects of the athletic training curriculum and the first CAAHEP accredited program soon emerged.

Programs developed across the country and continued to follow standards set forth by CAAHEP. The education of the field was growing. In 2003, the Joint Review Committee on Athletic Training (JRC-AT) was developed and took over the accrediting process for athletic training programs. The JRC-AT was a committee on accreditation under the Commission on Accreditation of Allied Health Educational Programs. Athletic training was now more aligned with other allied health care professions with the existence of its own accrediting body.

The accreditation process by the JRC-AT brought forth several changes within the athletic training field. The biggest change being that in 2004 a new policy was made stating that

in order for an individual to be eligible for NATABOC certification, he or she must possess a degree from an accredited program. This policy drastically changed entry into the field of athletic training. Prior to this decision, an individual had several routes or avenues to calling him or herself a certified athletic trainer. These included completion of an apprenticeship, graduation from physical therapy school, or a special consideration route, which usually involved some sort of internship and taking a few classes that were part of the curriculum. In the initial phases of the NATABOC examination, several individuals were “grandfathered” into the field and did not have to take the examination. The JRC-AT set a new policy and standard that changed the future of athletic training and pointed it in the direction of alignment with several other allied health care professions. Two short years later the JRC-AT transformed into the Commission on Accreditation of Athletic Training Education (CAATE) and is still the current accrediting body for athletic training education today. The CAATE is the organization currently responsible for the accreditation of professional entry-level athletic training programs, post-professional degree programs, and post-professional residency programs. The CAATE is sponsored by members from the American Academy of Family Physicians, the American Academy of Pediatrics, the American Orthopaedic Society for Sports Medicine, and the National Athletic Trainers’ Association. Individuals from each of these groups collaborate to develop the Standards for Entry-Level Athletic Training Educational Programs (Commission on Accreditation of Athletic Training Education [CAATE], n.d.).

Review of Literature

The Modern Way

The two components of the athletic training curriculum are clinical and didactic preparation. As previously mentioned, didactic preparation provides students with knowledge, theories, and concepts related to the field of athletic training and generally occurs in the

classroom setting. Clinical preparation is supposed to allow students to transfer these concepts and theories into real world experience through time spent in the athletic training clinical setting. Students must not only learn what, they must also learn how. Athletic training is a practitioner based professional program, and it is in these programs that students “must be able to put into practice what they learned in the classroom” (Wrenn & Wrenn, 2009, p. 258). This idea of putting theories and concepts into practice is known as integration. Integration “is an umbrella term for...experiences inside and outside the classroom, theory and practice” (Klein, 2005, p. 8). Truly, integration involves a process of learning, understanding, and applying both tacit and explicit knowledge. The remainder of this chapter seeks to explore the concepts of tacit and explicit knowledge, as well as the phenomenon of integration and how this is connected to athletic training preparation.

Tacit/Explicit Knowledge

Athletic training preparation is a practitioner based professional program and involves the learning of both explicit and tacit knowledge. The idea of “what” and “how” is, in fact, the premise of tacit and explicit knowledge. Frost (2017) stated, “Explicit knowledge is formalized and codified, and is sometimes referred to as know-what...whereas...tacit knowledge is sometimes referred to as know-how and refers to intuitive, hard to define knowledge that is largely experience based” (para. 7). The didactic portion of athletic training preparation strongly exemplifies explicit knowledge as “the defining feature of explicit knowledge is that it can be easily and quickly transmitted from one individual to another” (Gemma, 2014, para. 10). Knowledge, theories, and concepts are quickly and easily shared from the course instructor to the student through lectures and labs, and students are expected to know what to do based on this material. The clinical component more strongly aligns with tacit knowledge as “tacit knowledge

can only be communicated through consistent and extensive relationships or contact” (Gemma, 2014, para. 13) such as working with a preceptor and interacting with student athletes to understand how to function as an athletic trainer. This tacit knowledge is learned through observing and working with certified athletic trainers who volunteer as preceptors for the academic program. This understanding and combination of both explicit and tacit knowledge, didactic and clinical preparation, is a concept referred to as integration. Through integration, students are able to connect what they are learning in their didactic preparation in the classroom through lectures, notes and textbooks, to what they are learning in the clinical setting in labs and while working with their preceptors. This type of learning, the combining of tacit and explicit knowledge, is integrating “theory and practice, the individual and social, art and science, field and classroom” (Gibbons & Gray, 2002, p. 539). The hope and the idea is that students are utilizing explicit knowledge to inform their tacit knowledge, and their tacit knowledge to enhance their explicit knowledge. Sun et al. (2007) explain that using explicit knowledge to inform tacit is known as top-down learning whereas utilizing tacit knowledge to enhance explicit learning is known as bottom-up learning. It has been suggested in the literature by Sun and Zhang (2003) that “both directions are viable ways of skill learning” (p. 84), meaning that tacit knowledge should enhance explicit knowledge, and explicit knowledge should inform tacit. Within academic programs, “lab experiences help to promote (tacit) and/or procedural learning, while classroom lectures and textbooks often promote explicit learning of conceptual knowledge” (Sun et al., 2007, p. 1). Setting this in the context of athletic training programs, the “lab experiences” are the clinical portion of the program and the classroom lectures are the didactic portion of the program. We know that these didactic and clinical experiences exist but we cannot assume that integration is occurring. Sun et al., (2007) found in their research that

integration does not necessarily happen just because two forms of education and knowledge creation occur simultaneously. Figure 1 depicts the idea of didactic and clinical preparation and the space where integration occurs.

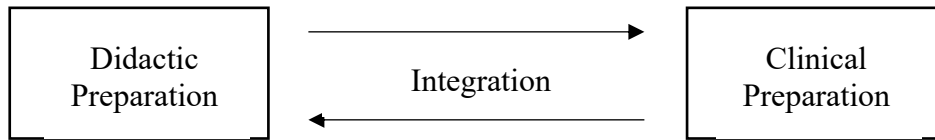


Figure 1. Integration: Clinical and didactic preparation. This figure illustrates clinical and didactic preparation and the space between where integration occurs.

Integration

Westra and Rodgers (1991) found, “The concept of integration is characterized as a process of combination in which two or more elements are merged into a new entity” (p. 278). In athletic training programs, this is the merging of didactic and clinical preparation. The clinical setting is the place for athletic training students to foster their tacit knowledge: “Clinical rotations seem to provide an extension of the classroom and laboratories to enhance the application of knowledge and skills in a real athletic training situation” (Mensch & Ennis, 2002, p. S-204). Without quality clinical experiences, students may struggle to understand the relationship between the knowledge they are learning in the classroom and their clinical experience, and how to apply that knowledge at their clinical site. Laurent and Weidner (2001) state:

Clinical education, the integration of theoretic and practical educational components into real-life situations with athletes or patients, should promote and help ensure a positive and constructive learning experience, so that appropriate skills, behaviors, and attitudes for future professional practice are learned and applied. (p. 58)

This implies that clinical preparation should facilitate the process of students understanding both the what and the how (Laurent & Weidner, 2001). The application of explicit knowledge to form tacit knowledge and understanding of the relationship between didactic and clinical preparation is referred to in the literature as clinical integration. Figure 2 shows an updated model of the phenomenon of integration and how it can occur between didactic and clinical preparation in a top down or bottom up fashion. Athletic training students are assigned a varsity team on campus, or a local high school or clinic, to work with every day. The athletic training students shadow the certified athletic trainer (ATC) working with that team. This ATC serves as the preceptor to the athletic training student. Preceptors play a major role in clinical integration for athletic training students (Curtis, Helion, & Domsohn, 1998). Preceptors interact day-to-day with athletic training students and help them develop into the future professionals of athletic training. It has been found that clinical integration occurs best and most quickly when athletic training students are having authentic learning experiences allowing them to be engaged in the clinical world (Mensch & Ennis, 2002; Young et al., 2013). Meaningful and authentic learning experiences can range from hands-on practice, to athletic training students having the opportunity to spend time with the student-athletes in the athletic training room, and having greater responsibility during their clinical rotations (Dodge et al., 2009; Young et al., 2013). Dodge et al. (2009) also found that “faculty members who focus on positive interactions with their students and improving student learning helps students achieve maximal levels of academic integration” (p. 204). This reiterates the importance of faculty involvement in the athletic training students’ clinical experiences. If the faculty members are aware of what is happening at the clinical rotation, they can discuss the experiences with the athletic training students in the classroom and help create a better learning environment. Mensch and Ennis (2002) suggest that

creating such an environment can increase athletic training students' confidence in their abilities, as well as enhance student learning. Athletic training students feel more confident, more motivated, better prepared, and remain in athletic training programs when they experience clinical integration. On the other hand, a lack of clinical integration leads to problems such as decreased confidence, decreased motivation, feeling inadequately prepared for the field, and attrition from programs.

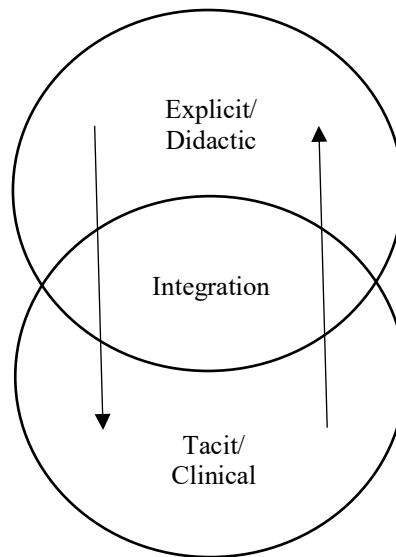


Figure 2. Integration: Top-down learning and bottom-up learning. This figure illustrates how top-down learning and bottom-up learning can result in integration.

Conceptual Framework

Symbolic Interactionism

The purpose of this study was to understand how students experienced the clinical component of their preparation and the phenomenon of integration. In order to do this, I have detailed the structure of an athletic training program, explained explicit and tacit knowledge, and defined the phenomenon of integration. In order to understand how students experience their preparation and the phenomenon, I relied upon the principles of symbolic interaction. Symbolic interactionism is “the study of human group life and human conduct” (Blumer, 1969, p. 1). It is

understanding how people construct meaning based on their interactions with self, objects, and other people. I wanted to understand how students apply knowledge in context, and in order to that, I had to understand how they construct meaning. Symbolic interactionism is based upon three premises. The first is that “human beings act toward things on the basis of the meanings that the things have for them” (Blumer, 1969, p. 2). In other words, humans act according to the meaning they have for certain objects. Objects are anything that can be referred to and fall into three categories, physical, social, and abstract (Blumer, 1969). For example, I have constructed a meaning of my mother, so I will act toward my mother according to the meaning that I have. The next premise is that “the meaning of such things is derived from, or arises out of, the social interaction one has with one’s fellows” (Blumer, 1969, p. 2). In other words, I have created this meaning of my mother based on interactions I have had with other people. Finally, the third premise is “these meanings are handled in, and modified through, an interpretive process used by the person in deal with the thing he encounters” (Blumer, 1969, p. 2). As I continue to have encounters with my mother, I need to interpret what is happening, and accept or modify the meaning that I have constructed. Simply put, meaning is socially constructed. The construction of meaning “[arises] in the process of interaction between people” (Blumer, 1969, p. 4).

In addition to the three premises that symbolic interactionism rests upon, it is also grounded in basic ideas known as root images. There are six root images and collectively they make up the framework of symbolic interactionism. The six root images, according to Blumer (1969), are human groups/societies, social interaction, objects, human being as an actor, human action, and interconnection of lines of action. Each of the root images will be explained in detail below.

Human groups/societies. Humans exist together and make up varying groups and societies in their existence. These groups or societies are “seen as consisting of human beings who are engaging in action” (Blumer, 1969, p. 6). The human beings who make up a group are individuals who are acting in response to given situations and circumstances. These people can act alone, collectively, or on the behalf of an organization (Blumer, 1969). Human beings are social by nature so as they exist, they act.

Social interaction. The actions by the humans that are seen in the human groups interact with one another. This is known as social interaction and is “an interaction between actors” (Blumer, 1969, p. 8). This idea of social interaction is incredibly important to the overall idea of symbolic interactionism because it is this social interaction that ultimately determines how an individual will then act. Every individual has a line of action and they cannot complete their line of action without taking into account the actions of others in the group. Blumer (1969) states:

Human beings in interacting with one another have to take account of what each other is doing or is about to do; they are forced to direct their own conduct or handle their situation in terms of what they take into account. (p. 8)

Humans have to interpret actions from others, understand the meaning of these actions, and then act themselves. If there is misunderstanding or confusion, then actions may not be correct or they may not happen (Blumer, 1969). To illustrate this point, Blumer (1969) refers to “Mead’s triadic nature of meaning” (p. 9), which indicates that action has multiple facets. An action tells us what the person who made the action is going to do, as well as what the person to whom the action is made should do. It is through this interpretation that a new action is created and as long as both individuals interpret the action correctly this new action or “joint action” can occur (Blumer,

1969). Social interaction is a constant and ongoing process of acting and interpreting actions to continue to act.

Objects. Humans exist in groups and societies and they are engaged in action. These human groups are also “composed of objects and these objects are the product of symbolic interactionism” (Blumer, 1969, p. 10). Therefore, these objects are social creation and arise out of the interaction of people (Blumer, 1969). Objects are broken down into three separate categories which are physical, social, and abstract, but ultimately an object is anything that can be referred to (Blumer, 1969). An object could be anything from a table to a colleague, or even compassion. Blumer (1969) states, “The meaning of objects for a person arises fundamentally out of the way they are defined to him by others who whom he interacts” (p. 11). We come to learn what objects are through our interaction with others and through this interaction, common objects, like a chair, emerge. However, Blumer (1969) also states, “objects have no fixed status except as their meaning is sustained through indications and definitions that people make” (p. 12). As mentioned, social interaction is a constant and ongoing process and meaning of objects is continually created and interpreted, then accepted or denied.

Human being as an actor. Along with interacting with others within the group or society and interpreting the actions of others, humans also act toward themselves and must interpret these actions as well. A human being can be an object to himself, and he must act toward himself based on how he defines himself as an object (Blumer, 1969). This is still a process of social interaction, but the interaction is with the self rather than with other people. Through this social interaction with self, a person makes a line of action or indication to the self, and responds based on the this indication. Humans behave not only based on their meaning of

objects and actions with others, but also based on their meaning of objects and actions with the self.

Human action. Humans have to act. There is no getting around this plain and simple fact. In order to act, humans must interpret (Blumer, 1969). Humans must give meaning to objects and the actions of others, as well as the actions of the self, in order to construct their next action. This process may not always go flawlessly, but this process has to happen (Blumer, 1969). Blumer (1969) says the “action on the part of a human being consists of taking account of various things he notes and forging a line of conduct on the basis of how he interprets them” (p. 15). In order to understand these actions we must “get inside the defining process of the actor” (Blumer, 1969, p. 15).

Interconnection of lines of action. As mentioned multiple times, human groups or societies are groups of humans who are engaged in action. Humans must interpret actions and fit them together with other members of the group. The fitting together of the actions of the members of the group creates a “joint action” (Blumer, 1969). This joint action represents the interconnection of the lines of action of the members of the group. It is different from any one of the single lines of action that make it up and can be referred to as this joint action rather than as the multiple lines of action that make it up (Blumer, 1969). Put in different words, we can discuss an academic program without having to identify all of the members of that program. However, we must remember that the “joint action of the collectivity is an interlinkage of the separate acts of the participants” (Blumer, 1969, p. 17). There are times when joint action is repetitive and stable, but it is important to note that the participants are continually linking their lines of action together to create this joint action. Participants are still very much interpreting and forming this joint action, it is not fixed (Blumer, 1969). Participants of the joint action interpret

actions differently and base their own actions on the meanings they create and the joint action arises from the previous actions of the participants (Blumer, 1969). The interconnection of lines of action, this joint action, has both horizontal and vertical linkages. The joint action is linked horizontally through the activities of the participants and linked vertically through previous joint actions (Blumer, 1969). The horizontal and vertical linkages can impact the joint action and how the participants interpret action and socially interact will influence the joint action that is formed.

To reiterate, symbolic interactionism is the study of human groups, and human groups are people engaged in action. Human groups are continually engaged in action and developing lines of action based on the situations they encounter (Blumer, 1969). Their action is guided by the meaning they give to objects, and their meaning of objects is “formed, sustained, weakened, and transformed in their interaction” (Blumer, 1969, p. 21). Ultimately, meaning is socially constructed and people are constantly engaged in action and interpretation to make meaning and continuing acting.

Summary

In this chapter, I have provided a detailed history of athletic training which provides a contextual foundation for the purpose of this study. In order to understand how students experience the clinical component of their preparation, it is critical to understand the beginnings of athletic training and how athletic training preparation has developed and evolved since the beginning of the field. The development of didactic and clinical components was a major shift in preparing individuals to become athletic trainers, but it seems, as indicated in the literature, that students struggle with the integration of these components. Mentioned several times throughout this chapter, athletic training was rooted in practice and preparation of athletic trainers started with an apprenticeship model. Relating this to clinical integration was simple because

everything students were doing occurred in the clinical setting. By default, students were absorbing how to be an athletic trainer while simultaneously learning what they needed to do to care for an athlete. As the field evolved, so did the method of preparation and, inherently, the concept of clinical integration became a major concern for students and educators in the academic programs.

As indicated in the literature, there is a lack of understanding how students currently experience integration. This is a problem because students are missing a critical component of knowledge in order to practice as an athletic trainer. This component is tacit knowledge. Clinical integration is the opportunity for students to transfer their explicit knowledge into tacit knowledge and to convert knowing what into knowing how. As stated by Nonaka and Konno (2005), the process of converting explicit knowledge into tacit knowledge is known as internalization and relies on the explicit knowledge being embodied in action and practice. The need for clinical integration in athletic training is critical for students in their development into certified athletic trainers. It is one thing to know what to do, as learned through textbooks, lectures and primarily the didactic component of preparation; it is a completely different form of knowledge to know how to do something, and this comes from the clinical component of preparation and the opportunity to work with preceptors. This tacit knowledge that is gained from clinical preparation has both technical and cognitive dimensions (Nonaka & Konno, 2005). The technical dimension is the “know-how” (Nonaka & Konno, 2005) and the cognitive dimension is the beliefs, values and mental models deeply ingrained in us. The cognitive dimension shapes the way we perceive the world (Nonaka & Konno, 2005). Therefore, in order to understand how students experience the didactic and clinical components of their preparation, I asked about the idea of clinical integration and the concepts of explicit and tacit knowledge as

they relate to didactic and clinical preparation. The best way to understand “the development of integration can best be approached via the study of exactly what is taking place to ‘join up’ the learning of theory and practice” (Clapton and Cree, 2004, p. 6). Athletic training students are constructing meaning as it relates to all of their interactions in their academic program. I wanted to determine how they construct meaning around their experiences with didactic and clinical preparation and how they construct meaning around the phenomenon of integration. This was done using the premises from symbolic interactionism, with a qualitative research approach grounded in a phenomenological framework, which is explained in Chapter 3.

Chapter 3: Research Design

Qualitative Research

When trying to understand how students experience the clinical component of their academic preparation, I had to consider how others construct meaning, my role as the researcher, the way I construct meaning, and the framework within which I wanted to work. There are several research approaches I could take for this study, but the one I was most drawn to is qualitative research. Qualitative research is grounded in symbolic interactionism: “Symbolic interactionism rests on three premises: First, humans act according to a set of beliefs. Second, meaning is derived from social interaction between and among individuals. Third, these meanings are established and modified through an interpretive process” (Schwandt, 1998, p. 233). These three premises focus on my role as the researcher and my relationship with the researched. Research is participatory and, as suggested by Schwandt (1998), the researcher should not be separate from the researched: “The observer cannot (should not) be neatly disentangled from the observed in the activity of inquiring into constructions” (p. 243). I wanted to understand how students construct meaning, so I know that a qualitative approach is the best option for this research. Because of the characteristics of qualitative research and the tradition being grounded in symbolic interactionism that people create meanings of their own worlds, it made sense for this study for me to understand how students experience the didactic and clinical components of their academic preparation, to use a qualitative research tradition.

People act according to a set of beliefs that they create, and it was my job as the researcher to determine the beliefs and actions and see the world through that lens. Denzin and Lincoln (2000) state that “qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational

constraints that shape inquiry” (p. 8). Culture and background play an integral role in the development of meaning for individuals and qualitative research allowed me to use my own cultural background and experiences to interpret these meanings and help generate and contribute knowledge about athletic training programs.

Further reflecting upon my role as the researcher and the way I construct meaning I found it important to understand that my meanings and beliefs guide my actions. Denzin and Lincoln (2000) state, “The net that contains the researcher’s epistemological, ontological, and methodological premises may be termed a paradigm, or an interpretive framework, a basic set of beliefs that guides action” (p. 19), and without reflecting upon my role as the researcher, I knew I would not be able to cast my net and engage in the research process:

Three interconnected, generic activities define the qualitative research process. They go by a variety of different labels, including theory, method, analysis, ontology, epistemology, and methodology. Behind these terms stands the personal biography of the researcher, who speaks from a particular class, gender, racial, cultural, and ethnic community perspective. (Denzin & Lincoln., 2000, p. 18)

Research Paradigm

Athletic trainer preparation programs are socially constructed by people, and I sought to understand how students experience the clinical component of these programs. I wanted to understand how students construct meaning. Therefore, it made sense to use a qualitative research tradition for this study. A strength of qualitative research is that it focuses on naturally occurring events in ordinary settings so that we know what “real life” is like. It is based on meanings that people construct and how individuals and groups symbolically organize their world and create meanings out of experiences. Ontologically, qualitative research allows us to

know by seeing what people are doing. What is really happening, what is the nature of reality? Epistemologically, qualitative research examines the relationship between what is known, and the researcher. It involves understanding how people have constructed their world and created meaning. Finally, methodology is how we, as researchers, gain knowledge about the world: “The constructivist paradigm assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent cocreate understandings) and a naturalistic (in the natural world) set of methodological procedures” (Denzin & Lincoln, 2000, p. 21).

According to Schwandt (1998), “constructivism means that human beings do not find or discover knowledge so much as construct or make it. We invent concepts, models, and schemes to make sense of experience and, further, we continually test and modify these constructions in light of new experience” (p. 237). Schwandt (1998) also indicates the constructivist believes that to understand meaning one must interpret it and that knowledge and truth are created by the mind. What this study sought to understand was how athletic training students conceptualize the meaning of their clinical experience. This study sought to understand how students construct meaning. Therefore, using this lens, I was able to understand how they socially construct and give meaning to this specific phenomena.

Methodology

As stated previously, methodology is how we gain knowledge about the world. It has been suggested in the literature that “in qualitative studies, research questions typically orient to cases or phenomena, seeking patterns of unanticipated as well as expected relationships” (Stake, 1995, p. 41). With this knowledge as my guide, I utilized both a case study methodology as well as the principles of phenomenological research to understand how athletic training students

experience the clinical component of their academic preparation and how they construct meaning.

Case Study

As a faculty member in the athletic training program I was interested in understanding the phenomenon of how athletic training students construct meaning of their academic preparation experiences. In order to understand this phenomenon, I utilized a case study methodology. The purpose of the case study is to provide boundaries to create a unit of analysis. A case is a functioning thing (Stake, 1995). It is bounded, has a purpose, and has a self (Stake, 2000). The athletic training programs at midwestern universities represent this bounded concept, so information gathered for this study will be specific to the athletic training programs at these universities. This case study is an instrumental case study in that it will allow me to develop an understanding of a specific phenomena. Stake (1995) states, “In qualitative case study, we seek greater understanding of the case” (p. 16) and this is exactly my goal to have a greater understanding of how students experience their academic preparation. The unit of analysis for this case, the students, is described in detail later in this chapter. In alignment with the literature by Stake (1995), I have an intrinsic interest in the case. Studying this case may or may not reveal information about other similar cases, but it will however allow me to learn about this particular case.

Phenomenology

In order to understand how students construct meaning and experience the didactic and clinical components of their academic preparation, I utilized phenomenological research methods. The practice of phenomenological research really took off in the 20th century (Smith, 2016). Phenomenology stems from the word phenomena, which comes from the Greek word

“phenomenon” meaning “appearance” and literally means the study of what appears to us and its appearing. Phenomenology as we know now it was launched by Edmund Husserl, and the focus is on describing and analyzing objective contents of consciousness (Smith, 2016). van Manen (1984) indicates, “Phenomenology aims to come to deeper understanding of the nature or meaning of our everyday experiences” (p. 37). Simply put, phenomenology seeks to understand.

According to Johnson and Christensen (2014):

Phenomenology is a human science since the subject matter of phenomenological research is always the structures of meaning of the lived human world” (van Manen, 1990, p. 11). It “refers to the description of one or more individuals’ consciousness and experience of a phenomenon.” (p. 444)

In this case, how students construct meaning as it relates to their clinical experience, is the phenomenon, and I sought to understand how athletic training students experienced that phenomenon. van Manen (1990) found, “Phenomenology asks for the very nature of a phenomenon, for that which makes a something what it is and without which it could not be what it is” (p. 10). I wanted to “construct a possible interpretation of the nature of a certain human experience” (Morris, 2013) and understand how students experience their academic preparation. I wanted to understand how students experience the clinical component of the athletic training program, and the meanings that students construct because of these experiences:

“Phenomenology is the systematic attempt to uncover and describe the structures, the internal meaning structures, of lived experience” (van Manen, 1990, p. 10). According to van Manen (1990), nothing about how students experience their academic preparation is a given. Rather, the meaning of the experience is found in the actual experience. Phenomenology explores the

experiences, or “life-world,” of an individual and attempts to “explicate the meanings as we live them” (van Manen, 1990, p. 11).

As is custom with all qualitative research, in which we seek to understand “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (Merriam, 2009, p. 5) with phenomenological research “the emphasis is always on the meaning of lived experience” (van Manen, 1990, p. 62). Furthermore, van Manen (1990) indicates that we utilize the experiences of other people to create a deeper meaning of a human experience.

Essence

Johnson and Christensen (2014) state, “Phenomenological researchers do not, however, assume that individuals are completely unique. Phenomenologists generally assume that there is some commonality in human experience, and they seek to understand this commonality” (p. 445). By attributing meaning to the student experience and understanding the commonalities of the experiences, I sought to understand the essence of the student experience. “This commonality is an essence” (Johnson & Christensen, 2014, p. 446) and will provide insight into the educational experience. My goal was to understand the essence of the athletic training student clinical experience, and the “essence is what makes a thing what it is” (van Manen, 1990, p. 177). According to van Manen (1990):

From a phenomenological point of view, we are not primarily interested in the subjective experiences of our so-called subjects...the deeper goal, which is always the thrust of phenomenological research, remains oriented to asking the question of what is the nature of this phenomenon as an essentially human experience. (p. 62)

In order to fully understand the essence of the athletic training student experience, I reflected on my personal experiences with this phenomena and went through the epoché process to explicitly state my biases. This process is explained in detail later in this chapter.

Research Design

Case Selection

The goal of this research was to fulfill the “need for general understanding, and to get insight into our questions” (Stake, 1995, p.3) of wanting to understand how students experience their academic preparation. For this research, the case was the athletic training students enrolled in Athletic Training Programs at the selected midwestern universities. I selected these Athletic Training programs because Lofland and Lofland (2006) indicate that “starting where you are provides necessary and meaningful linkages between the personal and emotional on one hand, and the stringent intellectual operations on the other hand” (p. 13). This allowed me to act as a participant observer. Stake (2000) indicates, “Qualitative case study is characterized by researchers spending extended time, on site, personally in contact with activities and operations of the case, reflecting, revising meanings of what is going on” (p. 445). From a phenomenological perspective, “the best way to enter a person’s lifeworld is to participate in it” (van Manen, 1990, p. 69).

Unit of Analysis

According to Miles, Huberman, and Saldana (2014), “we can define a case as a phenomenon of some sort occurring in a bounded context. The case is, in effect, your unit of analysis”...or “heart of the study” (p. 28). The unit of analysis for this study was the athletic training students at the midwestern universities. The students are truly the heart of the study and the reason for the methodology chosen. Participants for this study were selected based on

enrollment in the athletic training programs at the midwestern universities. Athletic training students who were currently enrolled in the program were invited to participate. This was limited to students who were in at least their second year of the program and students who were in their third year of the program preparing to graduate and take the certification exam. First year students were excluded as they do not have enough clinical experience. I observed and spoke with the athletic training students to try and gain an understanding of their academic experiences in the athletic training program. I chose second and third year students because these students have experienced at least two semesters of clinical preparation while in enrolled in the athletic training program.

Data

A strength of “qualitative data is that they focus on naturally occurring, ordinary events in natural settings, so that we have a strong handle on what ‘real life’ is like” (Miles et al., 2014, p.11). Similarly, van Manen (1990) states, “The data of human science research are human experiences” (p. 63). By beginning where I am, I was able to collect data in unobtrusive measures as I had access to the students and their experiences. Students who had completed at least two full semesters in the program and therefore have experienced clinical education will be recruited to participate. I sent emails to the program directors to seek permission to contact students at respective universities and requested an email list from the program directors. I sent a recruitment email to the athletic training students explaining the study and invited interested students to contact me to sign up to participate. Upon acceptance into the study, I explained the study in detail to all participants and had them complete informed consent documents. I also explained that participants may drop out from the study at any time. Students were observed at their clinical experiences and engaged in an interview. The interview lasted for approximately

one hour. I recorded and transcribed all interviews and sent them to students for verification and to clarify anything. I asked the student if they wanted to continue in the study and set up a time to complete second interview. The second interview also lasted approximately one hour and was recorded and transcribed and sent to the participant for member checking. All interviews were analyzed for similarities and differences and a theme analysis was completed.

Instrumentation

In order to gather the necessary data for this study to understand the experiences of the students, the students were observed and engaged in informal conversation, and interviewed with follow up individual interviews as necessary. Johnson and Christensen (2014) indicate for phenomenological studies that “data are usually collected through in-depth interviews” (p. 447), which allows participants to relive their experiences and offer rich descriptions about what actually happened and the meaning they created from their experiences. Interviewing is another way to explore the essence of an experience. Appendix A includes focus questions to guide the interviews. In phenomenological research, the interview has two purposes. First, it may be used as a means for gathering narrative material to help develop a richer and deeper understanding of a human phenomenon” (van Manen, 1990) and secondly, the interview may be used as a way to connect with someone about the meaning of an experience (van Manen, 1990). The interview protocol for this study can be found in Appendix A. I completed a first interview with each participant, and after transcribing and analyzing the interviews, I determined follow-up interviews were necessary to dive deeper into the lived experiences of each participant and further probe the initial answers provided.

I was the primary instrument in this study and I completed all of the observations, conducted all of the informal conversations, and lead every interview: “To be aware of the

structure of one's own experience of a phenomenon may provide the researcher with clues for orienting oneself to the phenomenon and thus to all other stages of phenomenological research" (van Manen, 1990, p. 57). Thus, reflecting upon my own experiences as an athletic training student and understanding my experience with the didactic and clinical components of my academic preparation was critical for understanding the experiences of others. A challenge I faced, as indicated by Lofland and Lofland (2006), was the need to distance myself. They state, "if you are already a member in the setting, you almost 'naturally' possess (or will possess) the convert stance. You have easy access to understanding. You need, therefore, at least initially, to seek mechanisms for distancing" (p. 22). My epoché process is explained in detail toward the end of this chapter.

Prior to, and during interviews, I also observed students to see if I could gain an understanding of their experiences through observation. Sometimes the best way to understand something is to sit and watch and just see what exactly is happening. This means I took the time to enter into their lifeworld of clinical preparation and observed what was happening. Acting as a participant observer allowed me an additional opportunity to explore the methods of phenomenological research through the utilization of close observation: "Close observation generates different forms of experiential material than we tend to get with the written or the interview approach" (van Manen, 1990, p. 68). This method of close observation enables the researcher to enter the lifeworld of the subjects and observe experiences relevant to the research questions. The best way to keep track of these observations is to use a technique called memoing. Miles et al., (2014) indicate that memoing is an important data source in qualitative research and that it is the researcher's field notes. These field notes are recordings of the things the researcher sees and hears as well as a reflection. It is also important to date the field notes so

other data can be correlated with them if necessary.

Moral, Ethical, and Legal Issues

As the researcher, I weighed the risks that were involved in conducting this study as both a participant and an observer. I relied upon the literature as I examined moral, ethical, and legal issues for my study and was guided by Lofland and Lofland (2006) as they state, “naturalistic research is first and foremost emergent. Today’s solutions may become tomorrow’s problems; tomorrow’s problems may provide special research opportunities the day after. “Who” you are at the beginning of the research is not necessarily the same “who” that will emerge at the end” (p. 32). This gave me confidence that the potential findings of this study were potentially greater than the risks involved and reminded me that this study can serve as a stepping stone for future research opportunities.

Several ethical issues were taken into consideration, each one will be examined, and I determined that the outcomes and contribution of knowledge this study will provide outweighs the risks I took. Lofland and Lofland (2006) also state, “ethical issues are an integral part of the research experience much as they are a part of the experience of everyday life” (p. 26). The thorough examination of these ethical issues has made me more cognizant of the potential risks I took with this study, but I felt as if the impact the study may have on athletic training programs was far greater than the risks that exist. The questions were asked, “Should this particular group, setting, situation, or question be studied by anyone? Second, should this group, setting, situation, or questions be studied by me?” (Lofland & Lofland, 2006, p. 28). I asked myself these questions, and I have answered both of them with a strong “yes.”

Prior to beginning the study, approval was sought and granted from the IRB, indicating the study was able to be completed without causing harm. See Appendix B. Along with approval

from the IRB, I also followed the National Athletic Trainers' Association code of ethics as I was able.

Ethical Considerations for Participants

This study had potential ethical considerations for the participants, the readers, and myself. To begin, the study may have led to the discovery of programmatic issues in regards to the athletic training programs at the midwestern universities. It is possible that this study could have shed light on inadequate preceptors, faculty or staff, or expose a problem that may not exist in other programs. I kept people anonymous through the use of pseudonyms and thoroughly judged material prior to publication. If, at any time, the information gathered could have jeopardized a student, it was given strong consideration regarding its inclusion in the final project. The costs versus the benefits were strongly considered before publishing all information and this was done with several conversations with my dissertation committee throughout the process of data collection and beyond.

Informed Consent

In order to make sure participants are fully aware of any positive or negative consequence as a result of participating in this study, I had each participant complete an informed consent document. I thoroughly explained the research project to the participant and presented each participant with an informed consent agreement. These signed documents were kept on file and stored separately from other data so as not to be possible identifiers of participants. The informed consent agreement followed the requirements of the institution's IRB.

Confidentiality

All participants were kept confidential as an attempt to ensure rich and thick descriptions of their experiences with the didactic and clinical components of their academic preparation. I

utilized pseudonyms and left out any personal identifiers when describing the participants.

Ethical Considerations for Readers

The Midwestern universities were well-known institutions. Focusing on these athletic training programs could have decreased the desirability of the program to future students. This was an ethical consideration for the readers and the program. First, for the readers, it could result in internal conflict for those who had goals and aspirations of attending these programs. Therefore, I did not name the institutions. I also strived to not use material that might permit individuals or the institutions to be recognized. Second, for the programs, the dissemination of this information could result in decreased program numbers or quality of students. It was possible that the results of this study may make the program less competitive if it reveals problems that may not exist elsewhere.

Ethical Considerations for Self

Finally, personal ethical issues that arose were that after the study was completed I may not want to disseminate the results. Depending on my findings, it was possible I would discover something I did not want to publish as it could jeopardize my future as a faculty member or goal of becoming a program director in an athletic training program. According to Lofland and Lofland (2006), “There is the possibility that I will experience what might be called an “ethical hangover”: a persistent sense of guilt or unease over what is viewed as a betrayal of the people under study” (p. 30). It was also possible that what I value and find important would not align with the findings of the study. This was a personal choice I had to make upon completion of the research, and it was my hope that the study would provide a breadth of knowledge that would allow for improvements of the program and the student experience, rather than information that could harm the program, the students, the preceptors, and/or the faculty.

Validity and Reliability

As with all qualitative research, the issues of “is this study good?” arises. According to Miles et al., (2014) there are practical standards by which to judge conclusions of a study to help us determine the overall quality of the research. Another lens through which to look at the study is to question the trustworthiness and authenticity of the study. Miles et al. (2014) suggest using the following five overlapping issues when trying to answer the question, “How good is this research?”:

1. Objectivity/Confirmability
2. Reliability/Dependability/Auditability
3. Internal validity/Credibility/Authenticity
4. External validity/Transferability/Fittingness
5. Utilization/Application/Action Orientation

Objectivity/Confirmability

Confirmability is, at its core, recognizing the biases that exist (Miles et al., 2014). It is critical that the researcher clearly outline his or her biases prior to the study beginning. It is also suggested that a trail or a sequence is developed to allow the reader to understand how the data was collected, processed and presented for conclusions (Miles et al., 2014). As it is nearly impossible for any researcher to be completely objective, biases must be articulated constantly reflected upon throughout the duration of the study. One effective approach to clearly articulate biases is to use bracketing. Bracketing, or epoché, is a term used in phenomenological studies that describes the researcher’s ability and need to “suspend any preconceptions or learned feelings about the phenomenon” (Johnson & Christensen, 2014, p. 445). This required me, as the researcher, to completely suspend any prejudgments I had about the phenomena and become

transparent. The process of epoché allowed me to “put aside my beliefs about my beliefs” (Moran, 2000, p. 146). This process was a reduction of beliefs down to the phenomena itself: “The reduction uncovers our psychic stream of pure lived experiences with both their real and ideal contents” (Moran, 2000, p. 151). Personally, as a faculty member in an athletic training program, as well as a former athletic training student, I knew I had biases about how athletic training programs ‘should be’. Understanding my own assumptions and values was an important step in researching my case to determine what was actually there as opposed to what I wanted to be there. This process of epoché allowed me to achieve accuracy in understanding how students experience the clinical component of their education. I bracketed and used this process of reduction through the use of journaling and reflection and analyzed my own thoughts and beliefs in order to remove the biases I had.

Self as Researcher

The phenomenon of athletic training students was important to me because in my undergraduate education I was an ATS. I completed an undergraduate ATP and observed throughout my education that my life as a student was vastly different than that of my friends outside of the program. Not only was I taking a full didactic course-load, but the three-credit course allotted for clinical coursework was 20-25 hours on average per week of spending time with my preceptor and learning about the clinical aspect of athletic training. Upon completion of my undergraduate degree, I progressed to my master’s degree. Here I worked as a certified athletic trainer and during this time, I maintained the role of preceptor, and I was responsible for the supervision of undergraduate students. I had two students assigned to work with me each semester and it was my responsibility to ensure they were using the knowledge they were learning in the classroom in their clinical setting. This is when I began to notice a disconnection

between the athletic training classroom and the athletic training clinical rotation. Unless I asked, or students specifically told me, I was unaware of what they were learning in the classroom, and faculty and staff members were unaware of what students were experiencing at each of their clinical rotations. I defined this as a problem based upon my experiences in both my undergraduate education and my graduate education, as well as in my reading of the literature.

The problem of integration was important to me because this was something I felt was an issue for me as an ATS. I was fortunate enough to have a few preceptors who would question me about what was happening in the classroom and try to give me time to practice what I was learning if we had down time at the clinical site. However, I also had preceptors who focused only on what was happening currently in the clinical rotation with their athletic team and had little time or energy to try and incorporate my didactic coursework into the current setting.

This is a problem because when preceptors are not willing to assist the ATS with what they are learning in the classroom, it does not give the student the opportunity to further practice something he or she learned, and there is a possibility the student may not see that specific thing in their clinical rotation until a different semester. The problem also exists on the didactic academic side of things. If the staff and faculty who teach the lectures and the lab classes do not speak with students about what is happening at the clinical sites, then the possibility exists that students are doing things in their clinical rotations that are not being covered in class or that their preceptor teaches differently than the faculty or staff member. It has been indicated in the literature that “students are also more likely to do better academically and stay enrolled when the collegiate environment offers a high degree of interaction between faculty and student, a flexible curriculum, and more cultural facilities” (Young et al., 2013, p. 68). Based upon my own experiences and the existing body of research, it is obvious that there is room for improvement in

athletic training education and it is my goal to understand how students experience the clinical component of their academic preparation to determine what, if any, improvements can be made.

I experienced a lack of integration in my undergraduate degree and experienced the challenges of being a preceptor during graduate school. I felt that because I witnessed the lack of integration from both sides of the spectrum, I would be able to contribute to understanding this problem, and hopefully create a way to improve academic preparation for students.

My Epoché Process. I was hopeful that I would be able to isolate myself as only a researcher during data collection and that students would openly share of their experiences without concern of how their experiences may impact me as a faculty member or my relationship with them. I facilitated this relationship and distanced myself through the process of bracketing, or epoché. This is a term used in phenomenological studies that describes the researcher's ability and need to "suspend any preconceptions or learned feelings about the phenomenon" (Johnson & Christensen, 2014, p. 445). This process allowed me to focus on what was really occurring, rather than what I wanted to see.

As I explored the phenomenon of integration, I reflected upon my personal experiences with this phenomenon. As van Manen (1984) states:

It is better to make explicit our understandings, beliefs, biases, assumptions, presuppositions, and theories in order then to simply not try to forget them again but rather to turn this knowledge against itself, as it were, thereby exposing its shallow or concealing character. (p. 46)

I started the process of epoché, or bracketing, to make explicit my biases regarding the phenomenon I was trying so hard to understand. I looked back into my time as an athletic training student and really focused on the three years, or six semesters, of my academic life

where I experienced both didactic and clinical portions of my academic preparation. While I was an undergraduate student in the athletic training program, I had a variety of experiences in the clinical setting alongside my didactic instruction. Each semester I was in the program, I was assigned a different preceptor, meaning a new opportunity to work with a team on campus, at a local high school, or in a sports medicine clinic. Thinking about it now, I had no idea that the term integration existed or what it meant for that matter. As an undergraduate student, all I really knew was that I had to go to class in the morning and my clinical rotation in the afternoon. There was not much leeway for mixing up the schedule or altering from this “norm” that had been created. Much of my education was dictated by the schedule of athletics and I was content to go with the flow and accept this as the way things were.

The first time I remember truly feeling a connection between my didactic and clinical preparation was not until my senior year when I was an athletic training student with the women’s rowing team. An athlete came in to the athletic training room complaining of knee pain and my preceptor was working with a different athlete nearby so she told me to do the evaluation and she would watch while completing a treatment with the other athlete. I successfully completed the evaluation and determined this particular athlete had a torn meniscus in her knee. My preceptor followed up with another evaluation to verify my findings and, in agreement with me, had me design a treatment and rehabilitation plan to help this athlete return to play. This is such a strong memory for me because for the first time in my six semesters of education, I felt like this was a moment where it finally all clicked. Sure, I had been given the opportunity in previous clinical rotations to observe and participate in the evaluation process, assist with rehabilitation plans and use therapeutic modalities for the treatment of injuries, but this was the first time where it all made sense. I remember questioning after this experience why

things didn't always align this naturally and thinking that my educational experiences could have been richer and fuller had the opportunities to connect the classroom to the clinic existed more frequently.

This line of thinking followed me to graduate school where I worked as the ATC for the women's tennis team and simultaneously served the undergraduate program as a preceptor. Every semester I was assigned new students to mentor and teach. Immediately upon my arrival in this position I thought back to my experience just a few months prior during my senior year and knew I wanted to help the undergraduate students better connect their classroom and clinical experiences. Still unaware of the term integration, I just thought it made sense to ask students what they were learning in the classroom and try to provide examples from what was happening at tennis to further enhance what they were learning in the classroom. To me this should have been a part of the educational process that everyone was doing and something that students automatically knew would happen with every clinical rotation they completed.

Upon completion of graduation school, I immediately moved into a PhD program and began my doctoral work in educational leadership. Impossible to predict the future, I had no idea I would be in the position in which I now sit where I am on the didactic side of athletic training preparation. I still find it necessary to connect the didactic and clinical components of academic preparation and I question if this connection actually exists. My research has lead me to discover the terminology of integration and I realize now the thing I longed for in my undergraduate experiences, and the thing I tried to create in my time in graduate school, is integration. Now, as a professor in a graduate athletic training program, I still feel very strongly that this concept of integration is something related to student motivation, retention, and overall success. My beliefs that integration should exist on a high level and my assumptions that, perhaps, it does not, lead

me to wanting to understand how students experience the clinical portion of their academic preparation and construct meaning.

I may or may not realize that current students' experiences are similar to mine but my goal was to simply understand what was. I interviewed students and, as soon as possible after each interview, recorded any of my biases or assumptions in order to remove them to truly understand what the students were experiencing without my personal lens clouding the picture. During each interview I stayed curious and questioned everything to understand what the experience "was really like." When I began to transcribe interviews and code for themes, I bracketed more biases and assumptions that came to the surface surrounding the phenomenon of integration.

Reliability/Dependability/Auditability

Reliability, or dependability, refers to the consistency of the study and if it is reasonable over time and across researchers (Miles et al., 2014). Ultimately, when tending to issues of dependability, we are looking at issues of integrity. A few guiding principles to ensure dependability, according to Miles et al. (2014), are having clearly defined research questions, clearly defining the role of the researcher, and utilizing data quality checks. I addressed issues of dependability by making sure my research questions were clearly defined and adhered to. I made sure I answered the questions I asked for the research study. I made it clear and specific of my role as a faculty member in the athletic training program who desires to one day serve as a program director. Finally, as I collected and analyzed data, I paused and reflected often to make sure bias was removed to ensure the quality of the data.

Internal Validity/Credibility/Authenticity

Internal validity is also described as authenticity and questions whether or not something is plausible. Internal validity, or credibility, questions if the findings of the study makes sense (Miles et al., 2014). Suggestions from the literature to strengthen credibility are to utilize thick and meaningful descriptions of what is happening, triangulate the data, link the data to theory, and validate the conclusions with the actual participants of the study (Miles et al., 2014). I also had others, such as my dissertation committee, read my data to ensure it made sense.

Triangulation. Triangulating the data allowed me to view the phenomena from multiple perspectives to ensure I was providing an accurate description of what is happening: “Triangulation has been generally considered a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation...triangulation serves also to clarify meaning by identifying different ways the phenomenon is being seen” (Stake, 2000, p. 443-444). I compared interviews with field notes to make sure what I was seeing and what the students were saying aligned with one another to accurately describe the phenomena. I looked for similarities among participants and also for outliers and any sort of disconfirming evidence to make sure I told the whole story accurately.

Linking to theory. After triangulating the data and identifying themes that emerge, I related these themes back to the conceptual framework used for this study. This allowed me to tell the story of the phenomena in an accurate way that was well supported by the literature.

Member checks. One other suggested way increase credibility was to utilize member checks: “Researchers should use member checking as a validity check whenever possible in the process” (Johnson & Christensen, 2014, p. 448). Essentially using member checks was a way to make sure what you interpreted was actually what the participants experienced. In order to utilize

member checks, the original participants read the descriptions of the experience and confirmed that they were correct.

External Validity/Transferability/Fittingness

External validity, or transferability, assesses the degree to which the findings can be transferred to a broader context (Miles et al., 2014). For this particular case study I was concerned with making sure the essence of the athletic training student experience was generalizable. Simply put, did this make sense? This was also known as plausibility and something that phenomenological research emphasizes: “Phenomenology does not offer us the possibility of effective theory with which we can now explain and/or control the world but rather it offers us the possibility of plausible insight which brings us in more direct contact with the world” (van Manen, 1984, p. 38). In other words, did this seem real enough that it is plausible in other settings? It is suggested by Miles et al. (2014) to fully describe the characteristics of the sample, to explicitly state the transferability of any theories used, and, similar to credibility, to use thick and meaningful description to allow the reader to determine if the method is appropriate for their own setting: “Phenomenology seeks...the essences of experience...Essences are not tied to an individual or a group but are universal and therefore generalizable” (Mottorn, n.d., p. 7). Phenomenology conveys the essence of an experience: “Once the [essences] have been recognized and thematized, the research, itself, is generalizable” (Mottorn, n.d., p. 12). I used thick description of the experiences of each subject along with triangulation to determine the essence that represents the entire group.

Utilization/Application/Action Orientation

When considering the application and utilization of a research study the question must be asked, “Who benefits from this study?” (Miles et al., 2014). Application assesses what good is

the study and what does it do for its participants. Personally, I hoped to take action after this study to help solve any problem that may exist within our athletic training program. For example, perhaps a revelation is made regarding a particular didactic course. I can use this information to approach the instructor of the course to determine what changes can be made. Alternatively, perhaps a revelation occurs regarding an outstanding preceptor for clinical education. I could potentially utilize this preceptor as an example for others. If problems do not exist, then it is my hope that I have simply put into the spotlight the way our program functions as well as have learned more about the program in order to help myself one day be a leader.

Analysis

As suggested by Miles et al. (2014), data analysis took place concurrently with data collection. This process helped “cycle back and forth between thinking about the existing data and generating strategies for collecting new, often better, data” (Miles et al., 2014, p. 69). Max van Manen (1984) provides a methodological outline for “doing” phenomenology, which I followed throughout my data collection and analysis process. The methodological outline involved four “steps” accompanied by sub-steps in order to truly understand the phenomenon and the lived experience.

Tuning to the Nature of the Lived Experience

The first step was tuning to the nature of the lived experience (van Manen, 1984) and involved getting oriented to the phenomenon. Max van Manen (1984) suggests asking yourself, “What human experience do I feel called upon to make topical for my investigation?” (p. 44). When asking myself this question, I felt called to understand how athletic training students experience the phenomenon of integration by trying to understand how they experience the clinical component of their academic preparation. After orienting oneself to the nature of the

lived experience, the next step was to formulate the phenomenological question (van Manen, 1984). To do phenomenological research is to “question what something is really like” (van Manen, 1984, p. 44) and creates a sense of wonder in the reader. With phenomenological research, the aim is to have the reader “question deeply the very thing which is being questioned” (van Manen, 1984, p. 46). The next “step” in completing a phenomenological study is understanding my pre-existing assumptions and biases. It was important that I removed my own biases through the epoché process and portrayed the picture of what was really there, rather than what I wanted to be there. This was the beginning of my analysis process. In a sense, I was the first subject as I needed to bracket my biases through phenomenological reduction to highlight my own theoretical concepts and interpretations of the phenomena.

Existential Investigation

The next step in the methodological outline provided by van Manen (1984) is existential investigation. This process involved generating data. With data analysis, my goal, first and foremost, was to provide the evidence to support what was really happening. I used my personal experience, close observation notes, and interview data to “reduce the statements to the common core or essence of the experience as described by the research participants” (Johnson & Christensen, 2014, p. 447). This process gave me the insight into what was really happening and allowed me to tell the story of the participants’ experiences. While interviewing participants, I was sure to be very concrete and asked what an experience was like (see Appendix A). I asked about specific instances, situations, people or events and then explored the experience to the fullest (van Manen, 1984). It was important to remember during the interview process that ready-made questions may not be an option and sometimes “patience or silence is a more tactful way or prompting the other to gather recollections and proceed with a story” (van Manen, 1984,

p. 56). When gathering data from the participants' experiences, I became more experienced and better able to understand the full significance of the meaning of the phenomenon (van Manen, 1984). The essence of the experiences was described by significant statements. Johnson and Christensen (2014) state:

These are statements that have particular relevance to the phenomenon being studied...In general, to determine whether a statement is significant, you should ask yourself, 'Does the statement seem to have meaning to the participant in describing his or her experience? Is the statement descriptive of the experience? Does the statement tap into the participant's experience?'. (p. 448)

Phenomenological Reflection

Formulating significant statements from the words of the participants is a process of "delineating units of meaning" (Groenewald, 2004) and was the third "step" in the methodological outline from van Manen (1984). These significant statements were used to determine thematic aspects of the lifeworld of the participants. Upon completion of each interview, I transcribed the conversation and provided a written copy to the participant for accuracy and made changes as needed. After this process, I then carefully analyzed each interview transcript. I used the highlighting approach as described by van Manen (1984). In this approach, I read each interview transcript and highlighted statements and phrases that were revealing about the experience being described. This process allowed me to see themes that began to emerge in the data. As themes and significant statements began to emerge, through the process of triangulation, I was able to "rigorously examine (the significant meanings) to elicit the essence" (Groenewald, 2004, p. 19) of these significant statements. Stake (2000) indicates, "Triangulation has been generally considered a process of using multiple perceptions to clarify

meaning, verifying the repeatability of an observation or interpretation...triangulation serves also to clarify meaning by identifying different ways the phenomenon is being seen” (pp. 443-444). As suggested in the literature, one way to complete the process of analysis is with coding: “Codes are labels that assign symbolic meaning to the descriptive or inferential information compiled during a study” (Miles et al., 2014, p. 71). The process of coding was actually a process of analysis as it was “a deep reflection about and, thus, deep analysis and interpretation of the data’s meanings.” (Miles et al, 2014, p. 84). Using coding helped create themes which allowed me to “engage in thematic reflection and grasp the significance of phenomena to the which we are drawn” (Morris, 2013). Utilizing codes and themes to grasp meaning allowed me to tell the story of the phenomenon. Using themes created a structure that allowed me to tell the story of the phenomenon (Morris, 2013), and as van Manen (1990) indicates, “Phenomenological themes may be understood as the structures of experience” (p. 79). From triangulating the data to creating significant statements and utilizing coding, I gave a clear picture of the experiences of athletic training students. My data analysis through this process allowed me to tell the story of the essence of athletic training students’ experiences.

Phenomenological Writing

The fourth step in the methodological outline is telling the story of the phenomenon through phenomenological writing (van Manen, 1984). The purpose of phenomenological writing is to acquaint the reader with the lifeworld of the participants. The writing seeks to describe the phenomenon and, “A phenomenological description is an example composed of examples” (van Manen, 1984, p. 64). While there is no one perfect way to structure a phenomenological piece, one suggestion to organize the writing is thematically (van Manen, 1984). This organization explicitly states the themes of the experience and provides information

about the essence of the experience according to what participants stated. I organized my findings according to theme and provided rich and meaningful descriptions of the participants' lifeworlds to allow the reader to understand the essence of the athletic training student experience and the phenomenon of integration.

Chapter 4: Presentation of the Cases

Introduction

The purpose of this study was to understand how students experience the clinical component of their preparation and the phenomenon of integration. In this chapter I review the significance, questions, and methodology of the study and present seven individual case study profiles. I present the data in the form of selected excerpts from the interviews that best illustrate the themes, connections, commonalities, and differences between the cases: “This commonality is an essence” (Johnson & Christensen, 2014, p. 446) and will provide insight into the educational experience, and, according to van Manen (1990), “Essence is what makes a thing what it is” (p. 177). My goal was to understand the essence of the athletic training student clinical experience and their conceptualization of the phenomenon of integration.

Although frequently studied in other fields, the concept of integration has not been studied from the perspective of athletic training students. As indicated in the literature, there are consequences within athletic training preparation centered around integration, which are issues with student motivation, attrition from programs, and poor professional socialization. Exploring this phenomenon gives voice to the athletic training students and provides an understanding of the meaning and essence of the clinical experience.

The design of this qualitative study was grounded in the principles of both phenomenology and case study. Seven participants who are athletic training students were selected to participate in this study. These seven participants were the unit of analysis for this study. I collected data through observation and interviews. I observed students during their clinical experiences and completed interviews with each participant. The interviews focused on

the participants' lived experiences of their clinical rotations and asked them to reflect on the meaning of these experiences.

Institutional Data

The two universities selected for this study are both located in the Midwest of the United States. The first university is a large public university with close to 50,000 undergraduate students and 17,000 graduate students. The university is part of the National Collegiate Athletic Association (NCAA) and has 29 NCAA Division I teams. The second university selected for this study is a small private university with less than 1,000 traditional undergraduate students and less than 200 graduate students. This university offers 24 sports and is part of the National Association of Intercollegiate Athletics (NAIA).

Despite the differences in sizes and athletic leagues, the athletic training programs at each institution have similarities. Both programs have, on average, 20-40 students total in the program. This means that each cohort typically ranges between 10-15 students. So, even though the first university is incredibly large and the second has much smaller numbers, the athletic training programs themselves are both considered competitive programs at their institutions and both programs have a secondary admission process meaning not everyone is selected to be in the athletic training programs. During the time the study was completed, one program still offered an undergraduate degree in athletic training and the other was in the process of transitioning to an entry-level master's degree. As mentioned, the CAATE has mandated that all programs must transition to an entry-level master's degree, but for this study, all students were still undergraduate students as the second institution had not yet completed its transition.

Participant Data

The group of students who participated in this study were seven students total from the two institutions. The group of participants included two males (28.57%) and five females (71.42%). These percentages deviate slightly from the National Athletic Trainers Association demographics which are 55.88% female, and 44.11% male (Ethnicity Demographic Data, 2018), but are consistent in that there are more females than males. In addition to gender demographics, the NATA also provides ethnicity data. Table 1 is taken from the Ethnicity Demographic Data (2018) from the NATA website:

Table 1

NATA Ethnicity Total

<u>Ethnicity</u>	<u>Ethnicity %</u>
Ethnicity N/A	3.26%
Black (not of Hispanic origin)	4.26%
Asian or Pacific Islander	3.73%
White (not of Hispanic origin)	79.89%
Hispanic	5.46%
Multi-ethnic	1.98%
American Indian/Alaskan Native	0.48%
Other	0.94%

The participants in my study, see Table 2, show similar demographic data for the category of White (not of Hispanic origin), but the numbers deviate for the other ethnicity categories. I do think that although my participant pool is not a mirror reflection of the NATA ethnicity demographic totals, that I had a group of students who accurately represented a diverse population of students, especially in the Midwest.

Table 2

My Demographic Data

<u>Ethnicity</u>	<u>Ethnicity %</u>
Ethnicity N/A	14.28%
Black (not of Hispanic origin)	0%
Asian or Pacific Islander	14.28%
White (not of Hispanic origin)	71.42%
Hispanic	0%
Multi-ethnic	0%
American Indian/Alaskan Native	0%
Other	0%

While each student had a unique clinical experience, differences amongst cases did not particularly occur in this study. The students in this study were a fairly homogenous group of students in terms of their clinical experiences. All participants described their experiences in a positive way, and discussed the importance of relationships with a variety of groups of people, as can be read later in this chapter. The two institutions selected for the study and where I recruited students from are in close proximity to one another and they actually share clinical sites. Some students who were enrolled in the athletic training program and completing their didactic course work at one university were actually completing their clinical rotations at the other university. This actually allowed all students to gain experience with athletics at the NCAA DI and NAIA levels. Because of the close proximity of the institutions selected, the athletic training programs were actually using some of the same clinical sites.

In addition, I did not explicitly ask participants why they chose the institution which they were attending at the time of the study, but given the differences between the two institutions, it is important to highlight why some people choose to go to certain schools over others. When I asked participants to “tell me about yourself” a few who were enrolled at the smaller private institution did mention that in addition to being athletic training students, they were also student athletes, while none of the participants who attended the larger public university made this

indication. While this is a difference amongst participants, I do not think it is unique to this study. Anecdotally, among athletic trainers, it is often said that those who attended larger DI universities were typically told that they “were not allowed” to also participate in sports during their time as an athletic training student; whereas, again, anecdotally, those who attended smaller universities were never told they “couldn’t” simultaneously be an athlete and an athletic training student. In this particular study, every single participant indicated that they chose athletic training because they liked helping people, and not because they liked or played sports. With this frame of mind, I felt the differences between which institution the participants were enrolled in did not impact the participants’ responses.

Lastly, each student was completing a clinical rotation that every athletic training student completes during their time in a program. The Commission on Accreditation of Athletic Training Education (CAATE) requires students to complete certain rotations and each program has the autonomy to place students to meet those requirements. I think it is beneficial that these were the settings I observed, as it makes the experiences more generalizable to a larger population of athletic training students. Almost every athletic training student across the country, in any program, experiences a clinical rotation with the high school population, at the collegiate setting, and with some sort of clinic with a “non-athletic” population.

In order to provide a thorough examination of the data collected, the remainder of Chapter 4 is organized around each participant, including background information about institutions and the participants, and specific data collected during observations and interviews.

Presentation of the Cases

Participants were engaged in interviews and asked the same questions (Appendix A), but there was also room for natural conversational flow and follow-up questions to occur during the

interviews. One of the first questions asked to each participant of the study was to give a brief background of him/herself and discuss why they chose athletic training. This question was important in learning more about each participant and framing the interview with the correct lens to truly gather information in an unbiased manner from each participant. When posed with the question “give a background of yourself,” many of the participants indicated that they had grown up playing sports and liked being part of a team. Understanding that the participants chose athletic training programs for their collegiate education because they enjoyed the interactions, wanted to be part of a team, and wanted to help people, allowed me to view each interview with a much different lens than had the participants stated they picked athletic training because they liked sports. With this frame in mind, each interview lasted between 30 and 45 minutes, and unique themes began to emerge. The focus questions asked to the participants included:

1. Could you describe your current athletic training clinical rotation?
What is it like for you? How do you feel about it...?
2. When you think about the term clinical integration, what comes to mind?
3. Can you describe a time when you were in class and you remember reflecting upon something you learned from your clinical rotation and you utilized that information to help you understand what was happening in the classroom?
4. Can you describe a time when you were in your clinical rotation and you remember reflecting upon something that you learned from your classes and you utilized that information to help you understand what was happening at your clinical rotation?
5. Can you think of a time when an interaction with a preceptor verified or changed the way you thought about something? Can you describe this experience?

I transcribed, read, and analyzed each of the initial interviews and determined it was necessary to engage students in a follow-up interview. Questions that were asked in the follow-up interviews were unique to each participant. As indicated in Appendix A,

Follow-up questions will be formulated based on the participant's responses in order to clarify and expand the description of the experience details to include sensory details, such as "could you say more about . . .," "what was it like?" "how did/does it feel?" "how did that affect . . .?," or "what comes to mind?"

The second interview followed this guideline from Appendix A based on what was analyzed from the first interview. After analyzing each of the first interviews, I found that the participants provided me information and details that were aligned with what I observed the students doing at their clinical sites. When I asked students to describe their experiences in the first interview, they told me the actions that they took or the tasks they performed, all which I observed, but did not dive into the details of how they recalled information or how they knew what actions to take. In the second round of interviews I pushed students to think more deeply about their experiences, how they knew what choices to make or what to do, and how they went through their process of recalling information from the didactic setting to make choices in the clinical setting. I encouraged them to think more deeply about cognitive and emotional responses, rather than just telling me what I had observed at the clinical sites. Information from the second interview added to the knowledge from the first interview as it was an opportunity for me to ask the participants to reflect further upon specific experiences they mentioned in the first interviews. After transcribing, reading, and coding all of the first interviews, I had more questions for the participants related to the sensory details and individualized each second interview as needed. The backgrounds and narratives of each participant follow.

Sarah

Sarah is a senior student in the athletic training program at her university. She is currently in her fifth semester of the program, and therefore, this is her fifth semester of having a clinical rotation. She has had experience with university athletics and is currently placed at a high school for her clinical rotation. Sarah is a very bubbly and happy individual with an incredibly outgoing personality. She was incredibly easy to speak with during interviews and conversation flowed naturally because of her outgoing nature. While observing her at her high school clinical rotation, she was very interactive with her preceptors and with the student athletes and was often the first to tell someone hello or ask what they needed when they entered the athletic training room.

In the initial interview, when asked for a background and why she chose athletic training, Sarah stated that she originally wanted to go to school for physical therapy, but because that is a doctoral degree, she knew she had to figure out something else for her undergraduate degree and she discovered athletic training. Sarah reflected upon her first clinical rotation as an athletic training student and stated:

I really just enjoyed the interaction between athletes and athletic trainers...it's such a relational profession, I guess. The athletic trainer really like is there from start to finish.

And especially at this competitive level, um, I don't know, it was just, it was fun.

Sarah enjoyed her clinical experiences and the interaction she had with the people during these rotations. In describing her current clinical rotation at the high school setting, she said:

Surprisingly, I think this rotation is a little bit more stressful than other rotations simply because, um, I am given a lot more freedom and a lot more, um, I wouldn't say responsibilities, but they give me the chance to do a lot more.

She continued to say she feels like she is getting the most hands on experience at this clinical rotation and she also feels “a bit more respected at the high level just because (the student athletes) look up to you.” Overall, her description of her clinical rotation revealed positive feelings.

Wanting to push a little deeper into her experiences with her clinical rotations, I asked Sarah if she could describe her interactions with her preceptors. Initially when asked this question, she focused mainly on how she asks her preceptors for confirmation that what she is doing is correct or that she would ask them for help if she needed it. She again reiterated that at this clinical rotation she gets to do things. Sarah said, “they give me a lot of freedom to do what I want” and she mentioned she seeks feedback on her clinical skills and decision-making. Sarah said, “I will ask every time, just because I think, I still don’t have full confidence in my assessment and evaluation skills and for the most part they say ‘yeah I would agree with you’ so that gives me confidence.” I asked Sarah if she could elaborate more on a specific time when the preceptor agreed with her and it gave her confidence, and she stated:

Um, it's a good feeling. (laughs) Uh, it really is. Uh, just saying simply it's a good feeling. There was this one injury. Honestly, I can't even remember exactly what it was, but it was just really weird. Um, but my preceptor at the end said ‘I'm really impressed, like that was good. Um, I didn't think you were gonna get that’, and honestly, I can't tell you how I got that either. I think it was just like, it just so happened that coincidentally in class we learned about it or something and it was in the back of my head, and I was like ‘oh, it could be that actually’.

This was the first direct mention of utilizing information from the classroom in the clinical and the first hint at experiencing the phenomenon of integration. I asked Sarah if she could explain

more what exactly about that moment made it a good feeling, and she said, “You can finally apply what you learned in class...knowing that what I learn in class I can actually apply and transfer it over to a physical skill, everything is coming together.” Sticking with this idea of being able to apply information and transfer it over to a physical skill, I pushed Sarah to elaborate more on her educational experiences, and she indicated that her clinical rotation placement was important in helping her apply her classroom knowledge. She stated:

I think as you progress through the program and now that I’m a level one, I mean a level three, at level at a high school, um I have a lot more moments where I’m like okay I can see exactly how it’s this and like this type of injury or this type of treatment works best for that. Um, and I think that’s simply because I’m given more freedom to do the evaluations and stuff, that I can actually, I’m like given the chance to apply what I learn.

I followed up with asking Sarah to describe the process she goes through to connect what she’s doing in the classroom and the clinic together, and she said:

They go hand in hand, obviously because you can’t learn everything at the clinical site. Um, however I think it’s definitely easier for me personally to learn in a clinical site because obviously, like I mentioned before, it’s very hands on...I would definitely place more emphasis on the clinicals aspect of athletic training education program simply because that’s how I learn best, which is by applying things, um, and also sometimes the classroom setting can just be not as realistic because it’s not what you would actually do.

Sarah had mentioned multiple times at this point that she views herself as a hands on learner and learned best in the clinical setting where she could practice her skills. In a follow-up interview, I revisited the idea of connecting the classroom information with what she was doing in the

clinical setting, and I asked Sarah to elaborate further on the thought process that occurred when she was able to have those hands on moments and how exactly she knew what to do. She said:

As I was learning different modalities and rehab techniques, I wanted to see it play out in real life outside of the lecture and classroom setting. In addition, I knew I wanted to try out different things as I looked around the room and saw the equipment available for me. Almost like how a little kid is curious about all the things around them, I was curious to see how different equipment in the athletic training room worked and applied to each athlete.

Sarah went on to mention that she was “able to relate the material learned in the classroom to the field by recalling the lecture material and learning how to apply it to the athlete.” She also mentioned that it was “especially helpful when the injuries that we learned in class were lining up with the injuries that were actually happening in the clinic.” I asked her if she could explain further how she recalls the information from class and knows what to do, and she again mentioned her preceptors and those that gave her the freedom to try things out and practice making the decisions. She stated, “I did learn the most from preceptors who let me try out different skills in the field.” Sarah mentioned and reiterated multiple times that her learning process simply involved trying things out and actually practicing the material so when the time came to make a decision, she could.

Shifting the thought process slightly, I asked her to elaborate more on the clinical setting and the best environment for learning to apply her skills and knowledge. She circled back to the preceptors again and how the preceptors “give assurance that it’s okay, you are a student, um, you’re here to make mistakes.” However she also indicated that the actual clinical site itself played a role in her ability to learn and apply her skills. She said, “I thought it was just the nature

of the sport, it didn't allow students to learn too much because there wasn't that much happening."

Overall, Sarah had positive views towards her relationships with the preceptors and other students, and she indicated multiple times where she was able to apply classroom information to her clinical experience.

Jon

Jon is a senior student in the athletic training program at his university. He is also currently in his fifth semester of the program, and therefore, in his fifth semester of having a clinical rotation. Jon has had experience with university athletics, and a high school, and he has spent time at a physical therapy clinic. Jon is currently placed with a collegiate football team. Jon is a reserved young man who has a very quiet and calm demeanor about him. Jon was very soft spoken during the interviews, and he seemed thoughtful and intentional as he would often pause before answering questions. While observing Jon at his clinical rotation with the collegiate football team, he did not say much but appeared to always be working on a task when he was not interacting with his preceptors or the student athletes. I asked Jon if he could describe his current clinical rotation, and he said:

We'll get there around 6:45, setup for treatments for the morning. Fill up the whirlpools, fold towels, then we'll do treatments and ... ah, that's pretty much the morning. Then I'll have to leave for class, get back around 1, and then it's a little bit more treatments, not too many treatments, a lot of taping and setting up for practice.

I asked Jon to describe what he meant by doing treatments, and he said, "Athletes will come in and we'll try to figure out what they need. And get them started. If they have a hot pack because

that's pretty standard treatment....then once we get past that we'll see if the (preceptors) have ideas with treatments or with rehab." I asked Jon if he was ever able to contribute with the preceptors to the treatments or the rehab and he stated that it "depends on the person." He said that he enjoys being part of that process and making decisions, but he isn't afraid to ask if he doesn't know what to do. I wanted Jon to elaborate more on this idea of making decisions and asked him how exactly does he take information and apply it to make a decision. Jon said:

I would take that question that I had or that, uh, misunderstanding and I guess instead of going to the professor about it I would go to my preceptor, who would show me, like try to explain it to me and let ... because like we would just be at practice and I would have plenty of time to ask him questions. So like I would take that concept that I didn't totally understand and try to get a new perspective from someone who wasn't the teacher.

He would utilize his preceptors to help him better understand concepts from the classroom to then make decisions. Jon also mentioned "experience" helped him make clinical decisions.

In a follow-up interview, I asked Jon if he could further explain how he connects the information he is learning in the classroom to the things he was doing in the clinic. I was hopeful Jon could elaborate more on how he knew when to try things and how he knew what to do. Jon described what he felt was one of the most obvious situations: "[When a] preceptor would flat out say 'why don't you take a look at the student athlete' and then I didn't really have a choice but to try and apply the knowledge I learned in the classroom." He joked that he was almost forced into making the decisions. When I asked Jon to explain how he knew what to do in those moments, he said his initial thought process was "mostly that the things [he] was doing were unlikely to cause any harm so there wasn't anything to be afraid of." Jon went on to mention his

growth process and how initially he did things because he thought it was what the preceptors wanted. He stated:

I used to make choices based off of how I thought the staff would go about treating something instead of really trying to understand why the staff made the choices that they did. I have grown to make decisions based off of my own beliefs that a treatment or a therapeutic exercise will contribute to a positive patient outcome instead of simply following what I think is the common plan.

Jon went on to discuss his actual relation of the material from class to his time in the clinical setting, and similar to knowing when to do something, he said, “I had no choice but to apply the knowledge I used in class to the clinic. I learned all about taking history, inspection, palpation and special tests in class.” Jon stressed how he was learning in class what was expected of him in the clinic so he had to use the knowledge or just stand there.

Jon mentioned again how he relied upon his relationships with preceptors and the ability to practice things in order to help him best relate his classroom information to the clinic. He said if he had questions from class he would ask his preceptors to explain it further for a different perspective. All in all, he really stressed learning something in class, asking his preceptors for clarification, and ultimately just trying it out for himself, was what enabled him to really connect his classroom knowledge to his clinical experiences.

In addition to his preceptors, Jon also discussed his relationships with his peers. When I asked him about working with other students in the program or his classmates, he said “We are a pretty tight knit group...anybody could talk to anybody.” I asked Jon why he thought that was the case, and he responded, “There’s nobody to empathize better with and know our situation than each other.” Jon went on to explain that “it helps with the comfort level knowing that others are

in the same situation.” Jon mentioned that he has nine other classmates, and the group of 10 is very close. He also indicated that he only worked with one other student at his clinical rotation and he spent the majority of his time with his classmates in the classroom setting. He emphasized, “It is nice to just have that community, where we can all just be humans.”

Marie

Marie is in her third year of classes as an athletic training student. She has five semesters of clinical experiences and is also a student athlete herself. She is incredibly outgoing and animated. Marie often spoke with her hands during the interview and maintained a smile on her face the entire time. Marie also has leadership experience as a captain of her own sports team, and working with younger athletic training students in the clinical setting. Marie exemplified her leadership experience in the clinical setting and was often guiding the younger students. She was not afraid to step forward and take on a task to assist an athlete or her preceptor and she was not shy to ask questions if she needed clarification. She currently is placed with a collegiate swim and dive team. When asked to describe this clinical rotation with swim and dive, she said:

Um, I do my own, now they're kinda letting me do my own thing. So I make up rehabs, or you know, my rehab plans I have for people. Whether its a neck, or a knee, or a hip. I hook people up on a, on the blood flow resistance training um, kinda sit with them. Just make sure they're doing everything fine. Keeping track of their heart rate and their blood pressure. Everything. Um, a lot of ultrasound and combo. Taping, more Kinesio tape for you know, back and shoulder, but not too much taping like you would see like in football or something. Um, I'm more on my own now. So I do all of my own evals, and figure out the diagnosis. And then I write SOAP notes on all of, all of them. Um, we have to hit our, like certain proficiencies, but they like to kinda have me do it for anybody I figure out.

I found Marie's mention of being "on her own" interesting so I asked her if she could describe that experience and how it made her feel. She said, "It's kinda scary. Um, now with me graduating, next year I should kinda be confident. And know what I'm doing quote unquote." I asked her to elaborate more on this feeling, and Marie stated:

I think the hardest part for me at least, is knowing, okay you know what's going on, but knowing what to call that actually, like that actual injury. Like, I know what's going on, I know it's hurt, what is it? You know? Um, I think that's like the hardest part for me is like, if it's not a sprain, or a strain, or if it's not this, or this. It's like, "Okay, what's going on in there?" That's like the hardest part of like finding out what it is. I'm good up to like the very last- making that decision. And that's what they (my preceptors) like, let me figure out on my own.

When Marie mentioned that her preceptors allow her to figure things out on her own, I asked her if she could talk more about her experiences with the preceptors, and she said "They, they don't ever tell me the answers. They said, 'You go look it up, and you give us a couple options and we'll go from there.' So I think that's good. They don't, they never just tell me anything. I have to always go look it up myself, so I'll never forget it." This statement allowed me to transition our conversation to how Marie goes about looking things up so she doesn't forget it, and how she takes information she is learning in the classroom and applies it to her clinical setting. She immediately started describing how she quickly learned not everything is exactly how it is in the book. Marie said:

I don't know. I don't, sometimes it's like you don't, you don't learn half the stuff in class that you actually see even in the clinic And it's just like, I don't know, that's kinda scary, but I guess that's why you gotta think outside the box sometimes and put everything you

know into just figuring that out, so. Not everything's gonna be, you know, like the book and like, very cookie-cutter.

She went on to say, "In a book, okay you read it, you go through the slides, you have a test on it. It's a clinic where you, you learn everything." I pushed Marie further with this topic and asked her to really think about how she learns the material and applies it. She said, "Just doing it and actually like, if you, like, play around with the settings (on the modalities) and everything like that, you can actually learn a lot...I just really, you just gotta do it, to know. Because it's so different than seeing it." Marie really emphasized that having the ability to just do things was what helped her the most with connecting the material from class to the clinic. She also mentioned that the preceptor allowing her to make mistakes and look up answers was also beneficial.

In a follow-up interview, I went back to the idea of just doing things in the clinic and building her confidence, and Marie said:

I would know to try things out when I myself felt comfortable to tape someone, or try a modality, or stretch them after looking at their muscles. I knew what to do because I practiced it and learned these skills/techniques in class.

I asked Marie how she practiced things and what she did to remember and recall the information, and she said, "In my down time I would practice on other AT students or my preceptor. I relate it back because what you learn in class will be used to test and treat real life injuries."

Marie relied heavily upon practicing skills until she became comfortable with them and then being given an opportunity from her preceptor to just do them in the clinical setting.

Sammy

Sammy is a second year athletic training student and in her third semester of clinical education. She is currently placed with a collegiate rowing team for her clinical rotation. She has always enjoyed the idea of working in a health care related field and, like many other athletic training students, played sports in high school and had a positive interaction with her high school athletic trainer and was drawn to the field of athletic training as a result. Sammy is more on the reserved side and conversation did not flow as easily as it did during interviews with some of the other participants. She did not appear nervous during the interviews or during her observation but she was slower to answer questions and often asked for clarification if she did not understand what was meant by the questions asked. Similarly, in the clinical setting, Sammy would often seem to observe a task and watch her preceptor before she would dive into trying it herself.

As I did with all participants, I asked Sammy to first describe her current clinical rotation. She said:

Let's see. You go, I go in and you know, talk to trainers about what you know, happened in classes or whatever. I would talk about it like, whose, what athlete's coming in, what they're coming in for. Kind of like a game plan of what the day's gonna be like. Um, do some treatments, um, go over what we did. Why we did it. Just kind of review uh, sometimes during the week, usually on like, Thursdays with my preceptor, we pick a topic for the week and then on Thursdays we discuss it.

I asked her to describe more what she meant by “do treatment,” and she answered:

We kind of talk about, before we get in like, what we're gonna do with each athlete so, we do either like, e-stim, uh, heat, uh. We go into like, joint mobilizations. Uh, what else do we do with them? We have exercises, teach them, make them new ones. Um, and I

think that's kind of a lot of what we do. It's cause we deal like, with chronic injuries. So it's not like, we're constantly doing like, I mean like, we do evals everyday.

Having a better understanding of a “normal” day for Sammy at her rotation and knowing that she communicated with her preceptor daily about what to do each day, I asked her to describe her relationships with her preceptors and interactions that influenced her learning. She mentioned when a preceptor confirms her decisions, “It makes me feel good because it's like, all right, I'm taking what I'm knowing and then doing it. It's like all right, cool. I'm actually paying attention. And like, understanding why I'm doing it and that I feel pretty confident in what I'm doing.”

With this in mind, I transitioned the conversation to focus more on how she understands what she is doing and if she could describe her learning process. She immediately discussed the hands on aspect of her athletic training program. Sammy said:

Um, I think I, I like more of being able to take, sort of classes that are pretty much more hands on. I think I learn better that way so being able to take what we learn in class hands on and then move into like, the clinical setting and putting it into action kind of really helps rather than just sitting behind, like at a desk, like reading.

I asked Sammy if she could describe this process in more detail of how she takes what she learns in class and puts it in to action. She described her process and indicated that the preceptor plays a big role in this for her. She said:

Kinda just going like, just recapping in my head real quick like what we talked about in class and then putting it into action and then, um, talking to the preceptor after on like how I did, like what I could've done better or like changed or kinda like feedback on it.

In a follow-up interview, I asked Sammy to elaborate more on this idea of putting into action what she learns in class and again how exactly she does it, and she said:

When working with my preceptors they allowed me to evaluate an athlete and then decide what should be done next. My preceptor would always be by me and if I was wrong he would suggest another treatment if he did not agree.

Sammy also mentioned the stories her professors told in her classes helped her remember the information when making decisions in the clinic. Sammy said, “The experiences my professors have told us in class help me make decisions because I can relate what I am looking at to a story they have told us.” Sammy went on to explain that the professors have really impacted her during her time as an athletic training student. She said, “Our professors are pretty great here. They do a really good job of explaining the material.” Sammy enjoyed her interactions in the classroom with her professors and their teaching styles. She stated she is able to “take what they’ve taught us into the clinical setting.”

Sammy also mentioned that the positive feedback from a preceptor: “[It’s a] confidence booster because it’s like, okay, I know what I’m actually like talking about, what I’m doing is the correct method, so it makes me think that I’m actually paying attention in classes and kind just really understanding what I’m, like, learning about.”

Sammy really emphasized the importance of the preceptor in her experiences and how the preceptor greatly impacts her confidence and whether or not she feels like she knows what she is doing. Sammy discussed times when she applied information from class to her clinical rotation remembering anecdotes her professors shared, but ultimately it seemed it was the preceptor who impacted her level of confidence in her own knowledge and abilities to make clinical decisions.

Thomas

Thomas is in his fourth year of taking athletic training classes and therefore currently in his fifth semester of experiencing clinical education. He is also a student athlete and completing the athletic training program. He is very confident and laid back, yet composed and professional. Thomas had a demeanor about him that exuded confidence during his interviews. He reclined comfortably in a chair and spoke freely and without reservation when discussing his education and his clinical experiences. Thomas is currently completing his clinical rotation at a physical therapy clinic where he works with an athletic trainer. Thomas stated:

That's the whole reason I came into the field. To help people using my hands and maybe impact the athletes. You're growing and making a difference so that they can have a better life basically because no one likes walking around in pain or discomfort all the time.

With the mindset that Thomas is in athletic training so he can help people utilizing his hands, I asked him to describe his current clinical experience at the physical therapy clinic. Thomas said:

I'm learning. Um, I haven't got like total control of the patient yet but I've been observing and just helping out any way I can when he (my preceptor) says, hey, can you go teach this person an exercise, you just go and do it and you try and verbally explain it or physically show them and then just connecting with the patient so they feel comfortable around you to do that stuff.

I asked Thomas more about his relationship with his preceptor and the interactions the two of them have and Thomas indicated that his preceptors have all been professional and he hopes to learn at a variety of clinical sites. Pushing him further, I asked him to describe specific interactions with preceptors where they provided feedback that impacted his learning and stated:

I'm just glad I can take it from the classroom or the lab from where we learned into the field and making an impact. So, we've had to take a lot, a lot of classes because it's a new

program. So, just going through the class work, seeing the same, sometimes the same power point over and over again, having to be in the lab practicing your skills all the time, and then finally just seeing it pay off.

Wanting to know more of what Thomas meant by this and seeing it pay off, and he described his experiences:

You hear about it in the classroom but then get good at it in the clinical site So, you learn in the classroom, get a little lab time and you get to practice it but it's not necessarily you're good at it 'cus you've always got to keep working on your skills. So, when you can take it to the clinical setting, it's kind of like, hey, preceptor, can you watch to make sure I'm doing it right and maybe he'll adjust your hand placement or maybe he'll teach you a different way to do it and, um, it's just, it's always a learning experience. So, you just gotta keep practicing.

I asked Thomas with his practicing of the skills, how he then would know what to do in the clinical setting and how he would know what decisions to make. He mentioned that his preceptors letting him trying things out on the patients and then getting feedback was really beneficial to him. He said:

I enjoy the opportunity to try something new to me. The patients had it done to them before so it was great to ask them if I was doing it similarly compared to the other treatments (done by my preceptor). I would ask the patients what was beneficial (that my preceptor did) so I could try and replicate it.

I also asked Thomas if he could describe what it is like in the classroom with his classmates and he immediately indicated, "We are all like really good friends...we're all pretty close. We have been for a while now and we know areas where we struggle or where someone's better." I asked

Thomas if he could explain more about this, and he stated, “We can always go to someone else for them to help us and we have a group chat about everything...where we can all collaborate on things.” Thomas had positive relationships with his peers in the classroom and those were helpful for him to talk through ideas together.

Overall, Thomas seemed to have positive experiences in the classroom and in the clinic and his interactions with his preceptors, in addition to his opportunities to try things out and solicit patient feedback, influenced his confidence and understanding of the classroom material. Thomas mentioned that being in the clinical sites with the preceptors has pushed his learning process along farther than just the classroom could have alone.

Katelyn

Katelyn is a fifth year student at her university and in her fourth year of athletic training education. She is also a student athlete as she simultaneously completes her educational requirements for the athletic training program. Katelyn is best described as an empathetic and thoughtful individual. While observing her at the physical therapy clinic, she worked closely with the patients, continuously communicating with them to make sure she understood how they were responding to different rehabilitation exercises. When interacting with her preceptor she was confident in conversation and she was never afraid to admit if she did not fully understand something. She is very poised and incredibly well-spoken. During our interviews, Katelyn maintained eye contact, she spoke very clearly, and was easily able to articulate her thoughts in response to the questions asked. Katelyn is currently completing her clinical rotation with an athletic trainer at a physical therapy clinic. I asked Katelyn why she chose athletic training, and she stated:

I really liked the aspect of taking somebody who may be going through an injury, or a mental injury, or any part that's taking them away from their normal daily living, and helping them get back to what they were originally at. I really like the concept of just going through the process with them, helping them, and problem-solving, trying to figure out what's wrong to make them feel better in the end.

Katelyn described her current clinical rotation at the physical therapy clinic as very hands on.

She said:

I work in a physical therapy office. So, I am helping out my preceptor with different SOAP notes, writing down, um, what the patients have done that day. And then also I help patients, like, run through, like, all their exercises for that day, I help do manual therapy on them. Um, and we go through scenarios a lot of times when there's down times in the clinic. So, we are always busy, always doing something, which is really nice.

I asked Katelyn if she could describe her relationship with her preceptor at this clinical rotation and she indicated that he gives her opportunities to think on her own. She said:

But he'll give me opportunities sometimes, like, "Hey, what do you think you sh-, we should do on this one?" "What exercises do you think we should do for this person in this injury at this phase?" But then also there's times where some of the exercises I'm not too familiar with, within, so he'll make sure to run through all of them and he'll let me, like, give the, um, patient, all the exercises, even if he has them laid out for me.

Katelyn indicated that this hands on experience really helps with her confidence and she appreciates when her preceptor gives her opportunities to make decisions. She stated:

It makes me feel really good about myself, like I'm actually, like, doing something right. And it encourages me, like, when I do my stuff on things and I know, like, I've done this

right. So, I can't just hang my head about one thing that I mess up on because ... he (my preceptor) really encourages me 'cause he's like, "I've messed up on things so try not to get too hard on yourself about it." And I think that's really helped me.

I asked her if she could discuss more about her decision-making and how she uses information from class in her decision making. She stated, "We go through a lot of scenarios in our classes and I just kind of think back to like, those scenarios a lot." Katelyn tried to rely on past experience to help her make decisions. She circled back to the relationship with the preceptor and said, "If you're not comfortable with your preceptor, you're not gonna wanna, like, verbally ask questions. And try and apply what you're learning in class to what they're doing." Katelyn also articulated that she liked to use analogies to help her remember things from class to use in her clinical rotations. She said:

So, when I learn things in class, I tend to use analogies or different types of words to help me remember those certain techniques or skills that I've learned so that when I come across something in the clinical setting, like taping an ankle, I can use that analogy so I can do the action, do the rehabilitation, and it comes to my mind quicker than having to sit there and try and remember what I've learned in class.

I asked Katelyn in a follow-up interview if she could talk more about this process of relating the material from class to what was happening in the clinic, and she said:

I ask in clinical questions about what we just learned in class so its fresh in my mind and I can see my preceptor's perspective and learn their view on it. Also, when an athlete comes in, I try and related what I just learned in class to each situation. For example, I am in Ethics Class right now and I try and relate ethical practices to every treatment I do.

I also asked Katelyn if she could discuss her classroom experiences more and her interactions with her peers and professors. She said that she works a lot with her classmates who are similar to her. She said, “I feel like a lot of times, we will study together, or we’ll do study guides together...I try to find classmates that learn the same way I do, so that we can help (each other).” I asked her how studying and doing study guides with her classmates helps her, and she said, “So that we’re not just doing it on our own. Maybe (my classmate) thinks of something that I didn’t think of, that can help me remember a certain topic...so that’s kind of how I use my peers as help.”

Overall, Katelyn relied heavily upon her relationship with her preceptor when it came to using information from class and applying it in the clinic. She felt strongly that the better working relationship she had with a preceptor, the more comfortable she was asking questions and practicing her skills which gave her the opportunity to think about the information from class and apply it in a tangible way. The hands on component of the courses also assisted with her decision making in the clinical rotations.

Emily

Emily is an athletic training student who is in her third year of her academic program. She is currently completing her fifth semester of clinical education and has experience with collegiate and high school athletics as well as a physical therapy clinic. Emily is currently assigned to a collegiate football team. She is a very intelligent and poised young woman with an outgoing and friendly personality. From the minute we sat down to begin the first interview until the end of our final conversation, she spoke freely and confidently and with great enthusiasm in her voice. She was able to speak about her clinical experiences, both present and past, in a reflective way and conversation flowed without awkward pauses. She mentioned she enjoys

working as part of a team and is drawn to athletic training due to the interaction she has with people each day. Emily stated:

I grew up playing sports, which I'm sure is a lot of peoples' way to get to it (athletic training). I met my high school athletic trainers once I started playing volleyball and I really liked the atmosphere. They have a training room. There are always people coming in and out. It was very social, lively, and they were helping people out.

Emily, like many of the participants, enjoyed the interaction of the athletic trainer with the athletes and hoped to build similar relationships one day. I asked Emily if she could describe her current clinical rotation, and she replied:

So, um, a normal day would be, um, going in, uh, in the morning before classes for the, um, for the rehabs and like the treatments, uh, for before classes. Um, they usually have lifts in the morning so people coming in before and after those. Um, you know, providing treatments, like doing, uh, short rehab programs with people in the morning, getting what we can do before class and for athletes. Um, and then, um, after classes, coming back for, um, the rehabs that are in the afternoon, which are more extensive, uh, oh. And then, um, leading up to, uh, before practice, and then with, with that becomes like taping, like making sure everybody's equipment is ready, uh, setting up the field for, um, water. And then, you know, during practice, um, handing out water bottles, uh, you know, doing little first aid things, like if someone needs a thumb taped or, you know, gets a cut, or something, covering that.

It was not entirely clear what she meant during this answer, so I asked her to elaborate more on what she meant when she said she does "treatment and rehabs," and she stated:

It's directed by the preceptors. They have a plan they've already discussed, already ready to go. And then, they'll just give you that plan so you, they'll give you what to do, and then you'll just go ahead and do it, following their steps. If it's someone not as high profile, they'll all be a little bit more lenient and let you have more independence and, uh, autonomy with it.

This idea of autonomy was interesting to me, and I wanted to get more information regarding Emily's ability to make clinical decisions, so I asked her if she could describe how that felt to have autonomy as an athletic training student. She responded:

Um, it, it feels awesome because you're, you know, uh, functioning as you will as a career, like what you wanna do when you're old, like, and professionally you're getting to do it right now as a student in a learning environment where you still have that safety net of, you know, like, making sure that you're doing things right. There are somethings that you don't realize you'll have questions about until you do it. So it's really aweseomt to have that environment and be able to do it then. You know, you get all of your questions out of the way, like, while you're still a student.

I wanted to pursue this idea of autonomy even more, so I asked Emily if she could describe experiences at other clinical rotations where she was able to make decisions and practice autonomy as a student. She immediately started taking about her first clinical rotation with a collegiate team and how the preceptor at this rotation would often ask her "Hey do you wanna look at this" and she would respond with "I can give it a shot." She went on to mention that when she had a rotation with the collegiate women's lacrosse team, it was the best environment for her. Emily said:

But when I went to women's lacrosse, it was the perfect atmosphere of, uh, you know, I've taken all the classes necessary. I've gotten comfortable with, you know, um, evals and like immediate treatments and then some, like, some rehab things, and also, there was one, uh, athletic trainer for that site responsible for the, the 30 athletes. So, it really was a perfect storm of me being able to, you know, people come up to me if she's doing something else, and I would be able to be like, "What's going on?" Be able to do a whole initial eval, give them initial treatment, and go and talk to my preceptor, you know, check all the boxes, make sure everything's okay if she wants to look at it afterwards, and then get the thumbs up and be able to, uh, progress with that, and be able to, you know, document it myself.

This was a positive experience for Emily to gain autonomy as an athletic training student and her mention of the preceptor at this rotation allowed me to ask her further about her relationships with her preceptors. She indicated that all of her preceptors were very willing to teach her and put her into situations where she could think and do things for herself. She said:

All my preceptors have been very, um, very nurturing in that way of, like, always being ready to answer questions and always making sure that I'm, like, comfortable with what's going on, and like, understand what's going on as well, and then giving me, um, really detailed, like, reasons of like why they're doing what they're doing, give me like what are the next steps, and give me feedback on what I'm doing as well.

She went on to describe that the feedback given from the preceptors can increase or decrease confidence as an athletic training student and that is important with the interaction with the athletes. She said if you are “not confident in yourself and don't know what you're doing, then you know they [athletes] may not come up to you again.” Emily stressed multiple times how the

interaction with preceptors could increase her confidence and make her feel like she knew what she was doing as an athletic training student.

I asked her if she could discuss more her experiences in the clinic when she had opportunities to apply her information from class and act autonomously and what that process was like for her. She stated:

Learning in class and then being able to like modify it and like personalize it to like the clinical application I think is more beneficial for me because you learn about it, you learn the uh, like the basis of it and then you learn how, you know, it differs in the clinical setting versus the academic setting maybe like with learning evals like yeah, you learn the basis of this but then you go with the-, that information, know, you know, what's important and what's not important and how you mold it to what you want to do.

Emily preferred learning in the classroom and then being able to apply information at her clinical rotation. I pushed her further to describe this personal process of applying information to her clinical setting, and she indicated the combination of the classroom information and working with a variety of preceptors was most beneficial for her. She said:

I think the, the hands-on component in, that you have in that classroom setting is huge. Um, I personally am visual/hands-on learner, so, you know, you have a lecture where you learn, like, you know, the physiology behind things, but then you have a lab that's also connected to the class and the hands-on practice in, like, the classroom learning environment, make, um ... allows me to be more confident in applying it in the clinical setting.

Similar to other participants, Emily overall described her clinical experiences positively and mentioned multiple times how preceptors impacted her confidence. In addition, like many of the

other participants, she often indicated that having the ability to practice skills and be hands on, was the most beneficial for applying classroom knowledge in the clinical setting.

As previously stated, the purpose of this study is to understand how students experience the clinical component of their preparation and the phenomenon of integration. Utilizing qualitative research methods grounded in case study and phenomenology, I was able to gain an understanding of the lived experiences of athletic training students. Through the use of interviews and observation, I was able to understand the “lifeworld” and lived experiences of athletic training students. Ultimately, the essence of the concept of clinical integration is actually seeing in the real world that you know. When students are given the opportunity to try it out, the explicit knowledge becomes tacit through the adaptation of their reflective skills.

Summary

This chapter provided a presentation of the cases that described the participants’ lived experiences with clinical preparation and the phenomenon of integration. The following chapter will conclude this qualitative research study and present an analysis of the seven cases that were previously presented, and discuss data and ideas that emerged during the analysis; in addition, Chapter 5 includes a discussion of the conclusions, implications of this research, and suggestions for future leaders in athletic training related to athletic training students and how they experience their clinical preparation and the phenomenon of integration.

Chapter 5: Summary of the Study, Analysis of Themes, and Conclusions

Purpose of the Study

The purpose of this study was to understand how students experience the clinical component of their preparation and the phenomenon of integration. In essence, integration is the application of scientific content knowledge into a setting that reflects the real world of practice. Within the athletic training literature, this concept of integration, or the bridging of didactic and clinical preparation, is often referred to as clinical integration: “Clinical integration is a necessary facet to students’ professional development” (Dodge, Mazerolle, & Bowman, 2015, p. 80). When students experience clinical integration, they gain an understanding of their role as an athletic trainer (Dodge, Mazerolle, & Bowman, 2015). The concept of integration has been studied, but unfortunately, it has not been studied from the perspective of athletic training students. As indicated in the literature, there are consequences within athletic training preparation centered around clinical integration, which are issues with student motivation, attrition from programs, and poor professional socialization. Young et al., (2013) indicate, “Clinical integration plays a significant role in persistence” (p. 69), and for some students who remain in athletic training programs, they are experiencing a disconnect in their preparation and not fully understanding what it means to be an athletic trainer. Dodge et al., (2015) found that, “Clinical integration helps students develop confidence in their knowledge and skills through engagement in real-time learning” (p. 76). This research helped fill a void in the literature by contributing to the existing research on athletic training programs and students’ experiences. In addition, program directors, clinical education coordinators, and faculty members in other athletic training programs may be able to adapt this study to their own institutions.

Conceptual Framework

The conceptual framework utilized for this study was symbolic interactionism. Symbolic interactionism is “the study of human group life and human conduct” (Blumer, 1969, p. 1). It is understanding how people construct meaning based on their interactions with self, objects, and other people. I wanted to understand how students experience the clinical component of their education and the phenomenon of integration within their classroom preparation and to do this, I needed to understand how students constructed meaning.

Research Questions

The following research questions were developed to guide this study in order to understand how students experience the clinical component of their preparation.

- How do students experience and understand their didactic preparation?
- How do students experience and understand their clinical preparation?
- How do students experience and understand the connection between their didactic and clinical preparation?

Research Tradition

Athletic trainer preparation programs are socially constructed by people and I sought to understand how students experienced the clinical component of these programs and the phenomenon of integration. I wanted to understand how students constructed meaning and experienced their academic preparation. Therefore, it made sense to use a qualitative research tradition for this study, specifically phenomenological research methods.

Phenomenology

In order to understand how students constructed meaning and experienced their academic preparation, I utilized phenomenological research methods: “Phenomenology is the systematic

attempt to uncover and describe the structures, the internal meaning structures, of lived experience” (van Manen, 1990, p. 10). In this case, how students constructed meaning as it related to their clinical experience, was the phenomenon, and I wanted to understand how athletic training students experienced that phenomenon.

Research Methods

Unit of Analysis

Because this study sought to understand how students experience the clinical component of their preparation and the phenomenon of integration, my unit of analysis was at the student level. To focus my research, I invited second and third year athletic training students enrolled in athletic training programs at midwestern universities to participate in the study.

Data Collection

Prior to beginning the study, I sought and obtained IRB approval. Students who had completed at least two full semesters in their respective athletic training programs and therefore have experienced clinical education were recruited to participate. I sent emails to the program directors to seek permission to contact students at midwestern universities and requested an email list from the program directors. I sent a recruitment email to the athletic training students explaining the study and invited interested students to contact me to sign up to participate. Upon acceptance into the study, I explained the study in detail to all participants and they completed informed consent documents. I explained that participants could drop out from the study at any time. Students were observed at their clinical experiences and engaged in an interview. The interview lasted between 30 and 45 minutes. I recorded and transcribed all interviews and sent them to students for verification. I asked each student if they wanted to continue in the study, and then set up a time to complete second interview. I felt it was imperative to meet with each

participant a second time to dig deeper into the questions I had previously asked. After transcribing and analyzing each of the first interviews, along with the data from my observations, I wanted to allow the participants more time to reflect upon their experiences and add to the information from the first interview. I felt I could gain more detailed and more reflective information from the participants in an additional interview. The second interview lasted approximately 30 minutes and was recorded, transcribed, and sent to the participant for member checking. I repeated this process a third time, at which point only six of my initial seven participants agreed to continue participating. I followed up via email for clarification and further explanation of any questions. All interviews were analyzed for similarities and differences and a theme analysis was completed.

Data Analysis

Data analysis, as suggested by Miles et al. (2014), took place concurrently with data collection. This process allowed me to use my existing data and develop strategies for collecting new, better data (Miles et al., 2014) and included notetaking during observations, transcribing interviews and using the highlighting method to code and find significant statements.. These were statements that had a particular relevance to the phenomenon being studied (Johnson & Christensen, 2014), and these statements were used to determine the themes.

My specific process for this study involved transcribing each interview with the participants and then sending the transcription to the participant for member checking and asking the participant to confirm the accuracy of the document. I then carefully analyzed each transcript, reading them all once to gain a general understanding of the stories being told. I then began using the highlighter method. I reread the transcripts looking for specific words or ideas and highlighting these things in corresponding colors. I repeated this process about four times. This

process of highlighting and coding revealed the significant statements, which allowed me to develop overarching themes for the study.

To crosscheck and confirm my findings, I then uploaded all of my transcripts into a software program called NVivo. Once uploaded into NVivo, I used the search and find tool and was able to code my transcripts a second time and include any phrases I may have previously missed. Using NVivo also allowed me to analyze my codes and create word trees, cross reference my codes amongst multiple interviews simultaneously, and develop a word cloud to reveal the overarching themes. I was then able to draw conclusions about the study.

Summary of the Findings

Analysis of Ideas

Each participant in the study had educational experiences with the didactic and clinical components of their academic program. The didactic portion included time spent as a cohort in traditional lecture and laboratory settings, and clinical experiences ranged from collegiate athletics to high school sports, and some included placement working with certified athletic trainers at physical therapy clinics. Although the physical setting for clinical experience varied from participant to participant, similarities existed among all seven individuals in how they experienced the clinical component of their preparation and how they experienced the phenomenon of integration. As students began to talk about their experiences, the following ideas began to emerge:

- relationships impact experience,
- autonomy builds confidence,
- practice impacts integration.

Relationships Impact Experience

Athletic training students in this study often referred to interacting with athletes/patients, peers, and preceptors. As participants began to describe their clinical preparation, how the students felt about their clinical preparation, and how the interactions with these groups of people influenced their feelings about their clinical preparation began to surface. Relationships with athletes/patients, peers, and preceptors emerged after analyzing the interviews conducted with the participants.

Athletes/Patients

The biggest mention of relationships with the athletes or patients the participants worked with was in reference to wanting to help these individuals and have a positive impact. This relationship directly related to the reasons why many of the participants chose athletic training. They wanted to have an impact and help people. One of the main reasons many of the students were initially interested in athletic training was the desire to help people. For many participants in the study, the attraction of athletic training was being able to work with the patients and athletes and help them improve their quality of life. Several participants mentioned that they have an innate desire to help people and they knew they would have an opportunity to work with people and help them through athletic training. Katelyn stated:

I really liked the aspect of taking somebody who may be going through an injury, or a mental injury, or any part that's taking them away from their normal daily living, and helping them get back to what they were originally at. I really like the concept of just going through the process with them, helping them, and problem-solving, trying to figure out what's wrong to make them feel better in the end.

Thomas stated:

That's the whole reason I came into the field. To help people using my hands and maybe impact the athletes. You're growing and making a difference so that they can have a better life basically because no one likes walking around in pain or discomfort all the time.

Similarly, Sarah said, "It's such a relational profession...after an injury the athletic trainer is there from start to finish." In addition, Marie felt a draw toward helping people, and she stated she wants "just to help people get better and bring them back to what they love to do in a safe manner."

The relationships between the athletic training student and the athlete is very much that of a caretaker and patient and reinforces the initial attraction for the student to the field of athletic training. The participants in this study had to act towards the patients/athletes and interpret their own actions as well as the actions of the patients/athletes. These interactions between the groups created joint actions and represent the interconnection of the members of the group (Blumer, 1969) and meaning is derived out of these interactions and modified through an interpretive process (Blumer, 1969). Students who have this desire to help people get back to where they were and recover after injury and who get to actually work with the athletes and patients seem to be more motivated and excited about the profession. As Sarah said, "I really just enjoy the interactions I had with the athletes." We also know from the literature that an increase in motivation leads to greater confidence and retention in an athletic training program (Dodge et al., 2009).

Ironically, embedded within the relationships that students have with the athletes and the desire to help that athlete exists the opportunity for the student to practice what they are learning in the classroom on a real person. The desire of taking somebody going through an injury and

helping them get back as Katelyn indicated is the actual opportunity to practice skills. Laurent and Weidner (2001) state that clinical education should have real life situations with athletes or patients and this relationship that students have with the athletes and patients gives the students the opportunity to practice on real people. As the literature indicates, when students get to participate in experiential learning, they are more confident (Mensch & Ennis, 2002) and this increase in confidence can lead to integration (Young et al., 2015). In addition, students who have a desire to help people and actually get to practice their skills on real athletes and patients are also more motivated and found to have greater self-efficacy (Dodge et al., 2009; Young et al., 2013). These students who are more motivated are able to bridge what they learn in the classroom to what they are experiencing at their clinical sites (Carr & Drummond, 2002) therefore experiencing integration

Peers

When discussing relationships with peers and how these influence experience, two main ideas emerged. The first is that there is almost a “pecking order” or perceived level of seniority as well as a degree of friendly competition amongst peers, and the second is that there is a very strong sense of unity and camaraderie as no one can better relate to an athletic training student than another athletic training student. The seniority idea is apparent between students who are placed at the same clinical rotation. Students who are farther along in an athletic training program at the same clinical site as another student tend to be given more opportunities to try things out. For example, Thomas mentioned he felt in his experience that the older student who was farther along in the academic program was given more opportunities for hands on experiences, which contributed to his feelings of competition. Thomas indicated, “[The older student] kind of got more the reigns to do things. So I kind of had to watch more and it’s not like

he could teach me as much as a preceptor even though he was trying to help me out.” Opposite of Thomas, when at the top of the seniority pecking order, Marie indicated how she liked being the older student and guiding the younger students at her rotation. She said she has had rotations with younger students: “They came to me for a lot of things sometimes and I can definitely help them.” This, essentially, is social interaction amongst peers, and although it occurs in somewhat of a pecking order, the students have to take into consideration what one another is doing in order to direct their own conduct (Blumer, 1969). If Marie is guiding the younger students, those younger students have to interpret Marie’s actions before acting themselves. This pecking order seniority ranking then, drives the friendly competition that exists amongst the students. This competition is not the standard “I am going to win and you are going to lose” type of competition one would traditionally think of. Rather, when referring to competition, it is more in terms of students gaining opportunities to put their clinical skills into practice. Students, especially those at the same clinical sites, desire to be the ones selected by the preceptors to work with an athlete and to be given an opportunity to experience something hands on. As Sarah stated in her interview:

When we worked football, you don't compete to see anything, but like essentially you do.

Um, I think one time like someone was about to like, get stitches taken out and then one of the athletic trainers was like, oh we're only taking two people into the back to see.

Similarly, Katelyn also indicated how she feels a level of competition amongst her peers. She said she actually gets a lot of encouragement and motivation from her peers, especially when they praise or compliment her on her knowledge and abilities: “[These are] the people who are like, I’m almost competing against...I almost feel like that’s a little bit more encouraging sometimes because your peers are like, your classmates are the ones, like, you have to compete

against.” For Katelyn, the competitive relationship is motivating especially when that positive affirmation occurs. Marie echoed the sentiments of competition in her interview, and stated, “When I’ve had classmates (at my rotation) it gets competitive a little bit for sure...they’re your friends yet you’re competing against them because you all want to be the best.”

Despite the seniority rankings and the friendly competition, the participants all indicated that they enjoyed having peers to bounce ideas off of, learn from, and relate to in the classroom and clinical setting. The athletic training students share a set of common experiences, and this idea of camaraderie and collegiality emphasized supportive and mentoring relationships amongst the students. Jon stated:

There’s nobody better to empathize with and know our situation than each other. Just the grind of working all day and studying all night, going to classes. It helps with the comfort level just knowing that others are in the same situation.

Sammy also indicated that she appreciated the ability to have a mentor who was an older student and then return the favor at a different rotation when she was working with a student who was younger. She said:

I had worked with a student that was a higher level than I was so it was kinda cool. She was kind of like a mentor and showed me the ropes. Now I’m working with a lower level student so it’s kinda like on the flip side and now I’m mentoring her. I get a chance to help her so I think it’s pretty cool.

Emily also mentioned her appreciation for an opportunity to work with an older student as well as a student who is in her same cohort. She stated:

Being able to learn from another student who was further along was definitely really beneficial. Having the same career path as you, it was really cool to experience

that...there's the benefit of being able to see how you are doing against your peer and being able to gauge yourself. We're both at the same level so being able to check yourself and think 'I can do the same things as them' and bounce things off of them has been really beneficial.

Lastly, Katelyn also mentioned that she enjoys the camaraderie of her peers and the positive affirmation she receives from them. She said:

Our class is actually really close. We study a lot, we're just a really good friend group. There's some competitive tension but we're just really close...in class I wanna make sure that I'm doing my best so I get the positive encouragement. I feel like we're always trying to do better to get that positive encouragement...it's better to get praise from someone you are 'competing' against...it kind of just fills you with some type of confidence when that happens.

Participants of the study primarily indicated that their relationships with their peers had a positive impact on their experiences due to the level of empathy peers are able to express, and because of the friendly competition that is created which encourages growth and confidence. For the most part, peers relationships were valued much more on a personal level than on a professional level and students appreciated having relationships with individuals who could "walk in their shoes" and act as both mentors and friends.

Relationships with peers provided a community of support amongst athletic training students sharing a common set of experiences. This community of support helped with the process of integration as it provided opportunities for social interaction between students and according to Blumer (1969) the construction of meaning "arises in the process of interaction between people" (p. 4). So as students interacted with one another, they were able to create

meaning. In addition, the peer relationships also provided encouragement, and we know that “positive perceptions of peer support also have positive total effects on commitment and persistence” (Berger & Milem, 1999, p. 659) and students who persist tend to be more motivated and are able to bridge what they learn in the classroom to their experiences at their clinical sites and have greater levels of integration (Carr & Drummond, 2002).

Preceptors

The most frequently discussed relationship among participants was their interactions with their preceptors. Preceptors have the ability to create an environment of trust and a safe space for students to practice. Preceptors and students had a professional relationship, meaning preceptors were the ones giving clinical opportunities with the real life experiences to the students, guiding them through the process of being an athletic trainer, teaching them when needed, and pushing the students to reflect upon what they know and put it into practice. Participants indicated that the relationship with the preceptor had a major impact on their overall clinical experience and their development and growth as an athletic training student. Thomas said, “Being in the clinical site with the preceptors has pushed my process along farther than any classroom could have...so I feel like the athletic trainer I’ll become is mainly because of my preceptors.” Emily also mentioned her relationships with her preceptors, and she indicated:

I’ve had good experiences with all of my preceptors, all very willing to teach, and you know, throw me in situations where I can do things myself and try and figure things out myself and learn from that. All my preceptors have been very nurturing in that way of always being ready to answer questions and always making sure I’m comfortable with what’s going on and understand what’s going on.

The relationships with the preceptors and the ability to ask questions and understand what is happening was important to the participants of the study. One of the things that a few of the participants agreed was important in this preceptor interaction was trust. Participants felt they had a more positive experience when they felt they were trusted by the preceptor. In response to what has been impactful from the preceptors in her own growth as an athletic training student, Katelyn stated:

Definitely having our preceptors trust us. Trust that we have some knowledge of what we're doing so that we're able to have more hands on experiences. Definitely for me that is something that is very important. I learned so much faster from preceptors who have shown me what to do and I have been able to do it. I feel like having a preceptor trust me and having a relationship with them in a professional standpoint where they can trust me to be able to do stuff is very important.

Ultimately, relationships with a variety of different groups of people had a major impact on the participants' clinical experiences. While it was important to the participants to have meaningful interactions with the different groups of people, all of the interactions facilitated the process of integration and helped the students integrate the classroom knowledge with their clinical experiences. This aligns with Blumer (1969) in that the athletic training students are interacting with different groups of people and socially constructing meaning out of these interactions. The interactions they had with athletes and patients reinforced the initial draw to athletic training and kept the students motivated; the interactions with peers provided a community of support amongst individuals sharing similar intellectual experiences; and the interaction with preceptors seemed to have the greatest impact on how they felt about their clinical experience and their confidence to put what they know into practice. The preceptors were in the mentoring aspect of

the relationship and helped students construct meaning in almost a facilitated symbolic interactionist way. They would manage the social experiences and help students create meaning based on prior knowledge.

Autonomy Builds Confidence

During interviews, another major idea that emerged from the participants was that having autonomy and the ability to make decisions made them feel more confident in their growth and development as athletic training students. This is an interesting concept because the first idea that emerged from the participant interviews was the importance of relationships. Autonomy in this instance does not mean being left completely alone to make decisions but is more of a pseudo-autonomy that develops based on the relationships previously discussed. As Katelyn indicated, her preceptor would give her opportunities and ask things like “what exercises do you think we should do for this person in this injury at this phase?” but when she was unfamiliar with something, her preceptor would “make sure to run through all of [it] and...had [it] laid out” for her. When students have the professional relationships with the preceptors and the climate of trust is there, students are given the opportunity to practice their skills independently while still under the guidance or the watchful eye of the preceptor. Similarly, students have developed relationships with the patients and athletes and are able to practice their skills and make decisions about real people because the real people trust the students. The mentoring and supportive relationships give students the confidence and motivation to practice their skills, and therefore able to make more autonomous clinical decisions. Emily said:

The most beneficial experiences are definitely the ones where I’m in the clinical setting where I get to do things more autonomously. I think that’s when I learn the best. You can

watch people and you can see how to do everything but not until you get to actually do it, at least for me when I learn the most is being thrown into a situation.

Being thrown into a situation and being able to practice skills is an important facet of integration. As Wrenn and Wrenn (2009) indicated, “It is imperative that students in professional programs be able to put into practice what they have learned in the classroom” (p. 258). When students can make decisions and do things they learn in the classroom, they are more likely to experience integration (Mensch & Ennis, 2002; Young et al., 2013). Sarah also mentioned in her interview that the ability to continuously practice her skills and do things on her own helps with her confidence. When she does an evaluation and her preceptors agree with her, she said, “That gives me some confidence.” She also stated, “I think all these evaluations are helping to build my confidence, to boost my confidence, and I feel better with each one.” Similarly, Jon indicated that the more he was able to do, the more confident he felt. He greatly enjoyed his clinical rotation at the high school because “you get more independence and...definitely built a lot of confidence there. And learned how to act as an athletic trainer, talk, and communicate.”

Participants all felt that as they were able to practice their skills, make clinical decisions, and learn how to act as an athletic trainer, that they had increased confidence and this increased confidence can lead to integration (Young et al., 2013). We also know from the literature that increased confidence leads to students feeling as if they have better educational experiences (Mensch & Ennis, 2002) therefore enhancing the process of integration.

Practice Impacts Integration

All seven participants indicated during interviews that the ability to “just do it” and practice their skills is what lead them to feel as if they could take information from a textbook and make a clinical decision. Practicing skills and having prior experience was the driving force

for many students when it came to making a decision regarding a patient treatment or developing a plan of action. Jon stated that he used to do things “based off of how [he] thought the staff would go about treating something...[he has] grown to make decisions based off of my own beliefs.” Jon was given opportunities to try things out, and as a result, the practicing of his skills enhanced his process of integration by allowing him to create meaning out of his actions. He is now comfortable making decisions on his own. Marie also indicated that she knows what to do because of her time spent practicing. She said, “I know what to do because I practiced it and learned these skills/techniques in class.” Marie would use down time to practice with classmates or her preceptors because she felt “the best way to recall is actually doing it hands on.” This is an example of top down learning as mentioned by Sun et al. (2007). Marie is using explicit knowledge from her didactic class to inform her thinking and understanding of her tacit knowledge in the clinical setting. In addition, as she practices and actually does skills hands on, she has to interpret her actions and create meaning (Blumer, 1969).

When students were given the opportunity to act as an athletic trainer and reflect upon their actions with feedback from their preceptors, they gained the most confidence and felt as if they understood what to do. Practicing their skills gave them the confidence to trust their own knowledge that they had learned what is needed in order to function as an athletic trainer.

When students in the study had opportunities to problem solve and go through the process by working with patients and athletes, motivation and confidence increased therefore reinforcing the integration process. As the literature indicates, students are more confident when they are able to participate in experiential learning (Mensch & Ennis, 2002), and this increase in confidence leads to integration (Young et al, 2015).

Conclusions

Research Question 1

How do students experience and understand their didactic preparation? According to Blumer (1969), humans exist together in groups, and these groups are humans who are engaged in action. Athletic training students are grouped together into cohorts according to admission year in a given program. This cohort group is engaged in action. The students experience their courses together, and they interact with one another and their professors/instructors to create meaning. As participants mentioned, they would practice skills together and try things out on one another, work together and collaborate. The relationships with peers, in this instance, had the greatest impact on the experience of didactic preparation as it was the relationships with peers that allowed for social interaction amongst the peers and the interpretation of actions to create meaning (Blumer 1969). This relates to our first theme, relationships impact experience, in that it was here in didactic setting where the participants formed relationships with their peers and had the ability to practice skills and collaborate to create meaning.

The seven athletic training students who participated in this research study experienced traditional didactic classroom preparation. The emphasis in the lectures was on explicit knowledge, which is formalized and codified (Frost, 2017), and the students learned material from lectures via PowerPoint presentations. They also learned in laboratory classes where they could practice their skills in a closed environment. This closed environment in the laboratory classes promoted tacit learning (Sun et al., 2007), which is “sometimes referred to as know-how and refers to intuitive, hard to define, knowledge that is largely experience based” (Frost, 2017, para. 13). The cohorts of students all took didactic courses together in a sequential order and were able to interact with one another in the classroom and laboratory setting. As they interacted

with one another, they had to interpret actions to construct meaning and continue to act (Blumer, 1969). The peer relationships were the most impactful on experiencing didactic preparation. The classroom was the only time an entire cohort of students was together.

All of the students indicated that whatever they learned in the classroom setting, they wanted to try and apply and put to use in the clinical setting which relates to the theme of practice impacts integration. Sarah learned things in the classroom, or the didactic setting, and wanted to see this knowledge work in the real world. She said, “As I was learning different modalities and rehab techniques, I wanted to see it play out in real life outside of the lecture and classroom setting.” Similarly, Jon stated that he learns concepts in the classroom and he tries to use these concepts in the clinical setting. He stated when he better understand concepts from the classroom he can then make decisions. He specifically stated that he “learned all about taking history, inspection, palpation and special tests in class.” One of the things Katelyn enjoyed about her didactic experiences was practicing different situations. Katelyn described her didactic experiences: “We go through a lot of scenarios in our classes and I just kind of think back to like, those scenarios a lot.” Lastly, Emily discussed how she learns in class and then tries to modify that material to the clinical setting. She said you “learn the uh, like the basis of (a topic) and then you learn how, you know, it differs in the clinical setting versus the academic setting.” She also mentioned, “The hands-on component in, that you have in that classroom setting...you have a lecture where you learn, like, you know, the physiology behind things, but then you have a lab that's also connected to the class and the hands-on practice.” This aligns with the literature as Sun et al. (2007) state that “lab experiences promote (tacit) and/or procedural learning, while classroom lectures and textbooks often promote explicit learning of conceptual knowledge.”

As Sammy mentioned in the study, her classmates and professors would share stories and experiences and this helped her relate the didactic material from the classroom to her clinical experiences, another example of the theme relationships impact experience. Katelyn also indicated the importance of having her classmates to bounce ideas off of and study with. She said that she likes to work with classmates who are similar to her and who learn like her. She said, “We will study together, or we’ll do study guides together...I try to find classmates that learn the same way I do, so that we can help (each other).” Thomas also mentioned that his classmates are very helpful and “we are all like really good friends...we’re all pretty close. We have been for a while now and we know areas where we struggle or where someone’s better.” He went on to mention how the group often collaborates with one another and how “we can always go to someone else for them to help us.” Marie echoed these sentiments and said she practiced the material from class with other students. She mentioned, “In my down time I would practice on other AT students...because what you learn in class will be used to test and treat real life injuries.” As Blumer (1969) indicates, the meaning of things comes from the social interaction between people. As the students interacted with one another, collaborated, and practiced, they created meaning. The relationships the students had with their peers impacted their didactic experiences.

The classroom, or didactic, preparation of the athletic training program is primarily the formation of explicit knowledge. Sammy mentioning her professors and classmates sharing stories to help her understand class material, Thomas indicating that he collaborates with others for help, Marie stating that she practices with other students, and Katelyn discussing how they use different scenarios in class are all descriptions of the formation of explicit knowledge and all examples of how relationships impact experience as indicated in the first theme. Gemma (2014)

says, “The defining feature of explicit knowledge is that it can be easily and quickly transmitted from one individual to another.” It is “easily interpretable and has a clear conceptual meaning” (Sun & Zhang, 2003, p. 65). Gemma (2014) also says, “Explicit knowledge is knowledge that is recorded and communicated through mediums” (para. 9). So, whether it be through textbooks, presentations, or verbally sharing experiences, the athletic training students experienced explicit knowledge in their didactic preparation.

Research Question 2

How do students experience and understand their clinical preparation? The seven participants engaged in this research study each had a unique clinical experience during the time of the study. All preceptors were certified athletic trainers. Some of the students were assigned to work with preceptors at the collegiate level, others with preceptors at the high school level, and some were with preceptors at physical therapy clinics. Regardless of setting, the preceptors all gave the students opportunities to work with patients and practice their skills, and we know from the third theme of the study that practice impacts integration. The participants all mentioned that the relationships they had with their preceptors were monumental in building their confidence and giving them a desire to actually do things in the clinic. Some preceptors “forced” students to do things and would put students on the spot as Jon indicated when he said, “A preceptor would flat out say ‘why don’t you take a look at the student athlete’ and then I didn’t really have a choice but to try and apply the knowledge I learned in the classroom.” and other preceptors tended to be more guiding and provided students with times to look up answers and research the questions they had as well as try out their skills as Marie mentioned when she said, “They, they don't ever tell me the answers. They said, ‘You go look it up, and you give us a couple options and we'll go from there.’”

In the clinical settings, students interacted with their preceptors, students interacted with the patients, and on occasion, the students would interact with other students. Reflecting upon the themes of this study, relationships impact experience, and students built relationships with patients and preceptors, especially, while at the clinical setting. The students, preceptors, and patients are all different groups of people. Blumer (1969) states that human groups must engage in social interaction and take into account the actions of the others. These relationships impact their experiences, and they are then forced to act according to what they take into account and how they interpret these actions. This social interaction amongst the different populations allowed students to interpret what was happening, and then determine the next course of action. As Gemma (2014) indicated, “Tacit knowledge can only be communicated through consistent and extensive relationships or contact.” (para. 13) When the athletic training students participated in their clinical settings and formed the relationships with their preceptors, patients, and other students, they were experiencing tacit knowledge creation. As Thomas mentioned, his preceptors letting him try things out on the patients and then getting feedback was really beneficial to him. This strengthens the theme that practice impacts integration, and he said:

I enjoy the opportunity to try something new to me. The patients had it done to them before so it was great to ask them if I was doing it similarly compared to the other treatments (done by my preceptor). I would ask the patients what was beneficial (that my preceptor did) so I could try and replicate it.

In addition to this tacit knowledge creation, the relationships formed in the clinical experiences also led to increased confidence, furthering illustrating the first theme from this study that relationships impact experience. As Katelyn mentioned, it’s really encouraging to get positive feedback from preceptors. Katelyn stated, “It makes me feel really good about myself,

like I'm actually, like, doing something right.” A positive interaction with a preceptor often boosted the confidence of the student and enabled them to feel like they knew what they were doing which allowed them to confidently make a decision in the clinical setting. Sammy mentioned how it feels when a preceptor confirms her decisions: “It makes me feel good because it's like, all right, I'm taking what I'm knowing and then doing it.” Sammy also mentioned that the positive feedback from a preceptor is a “confidence booster because it's like, okay, [she] know what [she's] actually like talking about, what [she's] doing is the correct method.” Finally, as Emily said, her preceptors were nurturing and made her feel comfortable which helped with her decision making confidence. She said, “All my preceptors have been very, um, very nurturing in that way of, like, always being ready to answer questions and always making sure that I'm, like, comfortable with what's going on, and like, understand.” The participants in this study primarily formed tacit knowledge in their clinical experiences. They engaged in action with different groups, interpreted this action, and continued acting. The positive relationships formed with the groups increased the confidence of the participants and also encouraged them to continue acting.

Research Question 3

How do students experience and understand the connection between their didactic and clinical preparation? Every athletic training student who participated in the research study indicated that they could connect what they were learning in the classroom to what was happening in the clinic simply by recalling information from the classroom and practicing it in the clinic. As indicated in the second and third themes mentioned in this study that autonomy builds confidence and practice impacts integration, the students all mentioned that just doing it, or being given autonomy and independence, gave them the greatest opportunities to try things

out and become more confident in their clinical decision making. As Blumer (1969) has found, humans have to act. In order to act, humans must interpret (Blumer, 1969). They have to give meaning to the actions of others and their self in order to construct their next actions. Humans act toward things based on the meanings they have for those things (Blumer, 1969). Students indicated that when they were given the freedom to act and try things out, therefore interpreting and creating meaning to construct their next actions, they had the best experiences. When the students could practice, this impacted integration. Sarah said that at this clinical rotation the preceptors give her “a lot of freedom to do what [she] want[ed]” and she stated she “did learn the most from preceptors who let [her] try out different skills in the field.” Similarly, Katelyn indicated that her preceptor gives her opportunities to think on her own. She said, “He'll give me opportunities sometimes, like, ‘Hey, what do you think you sh-, we should do on this one?’ ‘What exercises do you think we should do for this person in this injury at this phase?’” This forced her to interpret what her preceptor wanted and make decisions in the clinical setting.

Athletic training students, by nature of the structure of an athletic training program, experience both explicit and tacit knowledge. Explicit in their didactic preparation and tacit in their clinical preparation. We know from Sun et al. (2007) that just because the two forms of education are occurring simultaneously, it does not necessarily mean integration is occurring. However, we also know that integration happens when the two forms of education are combined a new entity is formed (Westra & Rodgers, 1991). When students are able to combine their explicit knowledge and their tacit knowledge, when they are able to “just do it” and practice their skills, they were able to act, interpret these actions and create meaning, thus experiencing the phenomenon of integration. This is evident in the third theme of the study, practice impacts integration. As Sarah mentioned in regards to her didactic and clinical preparation, “They go

hand in hand, obviously because you can't learn everything at the clinical site." Wrenn and Wrenn (2009) found that students have to put into practice what they learn and when they can do this through authentic learning experiences in the clinical world, clinical integration occurred best (Mensch & Ennis, 2002; Young et al., 2013). In addition, Marie really emphasized that having the ability to just do things was what helped her the most with connecting the material from class to the clinic. Marie said, "I knew what to do because I practiced it and learned these skills/techniques in class." Lastly, Emily indicated how great it felt to be able to apply knowledge from class to the clinical setting. She said, "Um, it, it feels awesome because you're, you know, uh, functioning as you will as a career, like what you wanna do when you're old, like, and professionally."

The essence of the concept of clinical integration is actually seeing in the real world that you know. When students are given the opportunity to try it out, the explicit knowledge becomes tacit through the adaptation of their reflective skills. In their experiences, they were given this opportunity to reflect by having those moments to try out different skills in the field as Sarah had mentioned or being asked to do an actual evaluation on an athlete as Jon stated. It was in the times of being able to act as an athletic trainer that integration occurred.

Meaning to Me as a Researcher

The knowledge I have gained from this research has influenced my practice as a faculty member who interacts with athletic training students on a daily basis. By understanding the process of integration, educational leaders, including myself, can be better prepared to facilitate this process in a way more aligned with how students are actually experiencing it. Most importantly and, probably the most tangible way this has impacted me as researcher, is in the framework of educational leadership. As mentioned in the beginning of this study, I am a faculty

member in an athletic training program, and I have shared the findings and the results of this study with my fellow faculty members. As a result of my findings, we have been able to make changes to our own athletic training program to help facilitate the process of integration and allowing students to see that they actually know. One of the things I am the most excited about is the development of a new course in our entry-level master's program. The title of this course is "Clinical Integration and Transition to Practice in Athletic Training," and in this course, I will be able to provide students with hands on learning opportunities to practice their skills in a simulated clinical environment. This course will focus on giving students those opportunities to practice clinical scenarios, work with one another, and receive real-time feedback from the instructor of the course who, just like a preceptor, is a certified athletic trainer.

In addition to the development of a new course, we are also revamping our preceptor training. Currently, to serve as a preceptor for our program, athletic trainers must complete a training provided by our clinical education coordinator. With our transition to an entry-level master's degree and some changes from the Commission on Accreditation of Athletic Training Education (CAATE), and in response to the findings of this study, myself and the other faculty members of our program are developing a new preceptor training to greater emphasize relationship building and the education of students. As indicated in this study, students who had positive experiences with their preceptors and received real time feedback and who were given the opportunities to try things out, experienced clinical integration. However, not every preceptor is a natural teacher and understands fully how to pull students into learning moments or debrief them after a situation occurred. Our new preceptor training will focus on this aspect of professional relationships in addition to all of the other requirements from CAATE.

Lastly, I think it is important to mention that the way an athletic training program is structured includes a program director, a clinical education coordinator, and full-time faculty members. The program director is responsible for the administrative aspects of the program, and the clinical education coordinator is responsible for setting up the clinical experiences for the athletic training students. While I do not currently fulfill either of these rolls, this study and this process has really encouraged me to fulfill leadership roles in athletic training without the titles and in other capacities. I currently serve as the faculty advisor for our Athletic Training Student Organization, where I work to create opportunities and events to bring all of our students together, not just single cohorts. I serve on different committees for athletic training at both the state and district levels, and I stand in the classroom daily with our students as a leader in this profession. This study and this experience has reminded me that leadership does not coincide with a title, but rather, with a sense of self and a desire to be in such a position.

Implications for Practice

Researching how students experience the clinical component of their preparation and the phenomenon of integration has informed my practice as an educational leader and a faculty member in an athletic training program. The essence of the phenomenon of integration is actually seeing in the real world that you know. This process of integration and seeing that you know, is a process of building relationships where students can exchange ideas and think about what they learn in the classroom and how it applies in practice. To my knowledge, no one has examined this relationship piece yet. As mentioned in the study, we know from the literature how students are socialized into the profession (Dodge et al., 2009; Dodge et al., 2015; Mazerolle et al., 2014a; Mazerolle et al., 2014b; Mazerolle et al., 2014c; Pitney, Ilsey, & Rintala, 2002) and the types of leadership styles from preceptors that students prefer (Meyer, 2002;

Pitney & Elhers, 2004). We know that when students experienced integration they had greater confidence, they were more motivated, and they were more like to remain in an athletic training program (Dodge et al., 2009; Young et al., 2013). We knew that integration happened occasionally and yielded positive outcomes, but we did not know how students experienced that piece of integration. This study adds to literature because it introduces the importance of relationships for athletic training students, and how the connection between individuals allows students to actually see in the real world that they know. This study strengthens what was suggested by Blumer in symbolic interactionism in that it is with interacting with other groups that students were able to interpret and create meaning. This interpretation and creation of meaning was the integration of the didactic and clinical components of the participants' educational experiences. Students must be given opportunities to create the meaning, to practice and experience, but it must be done in an environment where they feel safe to make a mistake, supported to try things out, and trusted to make a decision. However, it's not just about being given opportunities and having authentic learning experiences. This study adds to the athletic training literature in its findings of the importance of relationships. The process of integration is about fostering relationships to socially construct meaning, interpret, act, and actually see in the real world that you know. The following paragraphs provide additional recommendations for educational leaders.

Faculty

Faculty members are in a very unique position in athletic training education. Faculty members have the entire cohort of students present at the same time to disseminate information. Often times, because faculty members teach multiple classes, they also interact with all of the cohort groups in a given semester. Faculty members and the cohorts of students are human

groups that are interacting. If a faculty member can promote conversation in the classroom related to what is happening at the clinical rotations, this will give students an opportunity to discuss their own lived experiences and to try and make meaning out of what is happening in their clinical setting. Every student is experiencing something different, even if they are at the same clinical site. Allowing students to bring their experiences into the classroom and promote discussion related to the material being taught may be an invaluable learning opportunity.

Similarly, a faculty member has the ability to use case studies, simulation, and hands on learning activities to replicate a “real-life” situation in a completely controlled environment. As the study showed, students who were able to practice their skills in authentic settings felt more comfortable and therefore this would be an appropriate way to allow them to practice their skills. This is a method of giving students autonomous experiences under the guidance of a faculty member who, for the most part, is also a certified athletic trainer. This creates the safe environment the student is seeking to practice his/her skills and allows autonomy in a very low stakes setting. Utilizing hands-on learning and lab activities and giving students opportunities to practice their skills will increase their confidence and their desire to make those decisions in the clinic. In addition, faculty members need to evaluate how they are assessing and testing students. As indicated in this study, the ability to just do it and actually practice skills had a major impact on integration. If students are only being tested on paper, that is not giving them a high pressure/high stakes situation to perform their skills in. While it shouldn't be all about a grade that is received, if students are tested in a hands on method in the didactic setting, they may be able to transfer their skills to the clinical setting.

Preceptors

Preceptors need to be nurturing, honest and trustworthy; build a relationship with the athletic training student; and be open to allowing students to try and mess up. When a preceptor is working with a patient, they can provide autonomous learning opportunities for the athletic training student. While not all situations lend themselves to being an autonomous experience for a student, most situations are observable learning moments for the students. Preceptors have a unique position in athletic training education as they can allow students to implement their skills, utilize their classroom knowledge, and make mistakes within a relatively controlled environment. In the moments where things seem to be happening all at once or escalating in a noncontrolled way, if preceptors trust their athletic training students and are comfortable with them performing skills, this would be a great opportunity for the autonomous experience. The critical piece is that preceptors then have to relate their actions to what they learned in the classroom. Preceptors need to make explicit the connection between what the student is learning in the classroom and skills they are utilizing. As indicated in the study, if the preceptor can get the athletic training student to reflect upon their actions, they create an environment for the student to create tacit knowledge. Enabling a student to reflect upon their skills and actions drives them to interpret these actions and create meaning, thus contributing to how they act in the future.

Educational Leaders

Program administrators also need to assess curriculum delivery and program format. While the Commission on Accreditation of Athletic Training Education (CAATE) sets the standards all accredited programs must adhere to, and creates all of the competencies which programs must teach, the CAATE allows academic freedom for programs to do this however

they desire. Program administrators need to create opportunities for students to mingle and develop supportive and mentoring relationships. Students in the study indicated that no one understood what they were going through more than the other students and that a certain level of competition existed amongst the students. Programs are currently organized in a cohort model with students taking classes together according to level in the program but perhaps program administrators need to strongly consider more of a collaboration model to give students opportunities to interact with one another and work together so those competitive/mentoring relationships can form. Athletic training programs right now tend to be set up in a linear model with courses in a sequence, but program administrators could look at this model and assess if there would be any benefit to taking some courses in a more fluid fashion.

In addition to examining the cohort method of curriculum, it would benefit program administrators to create other opportunities for students to interact. When students in an entire program, and not just single cohorts, are given time to engage in social interaction with one another, mentoring and supportive relationships can emerge. As the study showed, these mentoring and supportive relationships are important for persistence and motivation and, ultimately, integration. Program administrators should work to set up strong student organizations, possibly offer seminars and different learning lab experiences, and allow social interaction to occur outside of the classroom and clinical settings.

As mentioned above, this study also indicated the importance of relationships for students in their academic experiences and in the process of integration. Program administrators and educational leaders who work for the CAATE and develop competencies and standards for athletic training programs should more strongly and thoughtfully consider the impact of relationships as they develop and implement standards for athletic training education. As we

continue to unpack the concepts of relationships found in this study, discovering ways to implement ideas like support, trust, and mentorship into our academic standards and competencies may prove beneficial for students and their experiences and facilitate the process of integration.

Others

In addition to athletic training education, the findings of this study also provide implications for other academic programs with clinical or practicum experiences. This study indicated that relationships and allowing students to “just do it” had an impact on how students experienced integration. Educational leaders from other programs can utilize the conceptual framework of this study to determine the impact on integration for their own students. Programs like nursing, occupational therapy, and even outside of the health sciences like teaching, higher education administration, and social work may benefit from the findings of this study and utilizing the conceptual framework to determine how to enable their own students to actually see in the real world that they know.

Recommendations for Future Research

The purpose of this study was to understand how students experienced the clinical component of their preparation and the phenomenon of integration. I believe that this research led to ideas and topics that can be researched in greater detail.

Preceptor Training

This study suggests that preceptors who are nurturing, who trust students, and who manage the social interactions of the athletic training student to create meaning, are the preceptors that students feel the most confident with, but there is currently no formal mandated preceptor training that allows us to know how preceptors are being trained in this area. For this

study, students attended two different midwestern universities, which means preceptors discussed by the participants likely had training from two different clinical education coordinators. In order to serve as a preceptor for an athletic training program, the certified athletic trainer must complete preceptor training with the clinical education coordinator at institution where the student is enrolled in the athletic training program (Commission on Accreditation of Athletic Training Education, n.d.). Currently, programs are allowed autonomy in how they choose to do this activity. It would be beneficial to know how (if at all) preceptors are being trained to allow students to work independently and autonomously. What is the clinical education coordinator within the athletic training program doing to train preceptors? Is there a uniform training that would work for all preceptors or does training need to be tailored to each individual program and each specific clinical site? In addition, the development of some sort of training for preceptors to give them tools to properly debrief with students or engage students in a reflective thought process would be beneficial.

Relationships

This study suggested that the process of integration is one of relationships. I believe more research can be done examining the impact of relationships between preceptors and athletic training students, as well as relationships amongst peers. There is some research regarding student preference of leadership and teaching styles of preceptors, and the socialization of students into the field of athletic training, but there is limited research examining the role of the relationship between the preceptor and student, and the student with other students, in the field of athletic training and how those relationships impact integration. This study provided concepts and the beginning of qualities of positive experiences, but these should continue to be unpacked to determine the role of relationships on students and their experiences. What does support look

like? What does a mentoring preceptor look like? What does it look like for a student to be trusted by a preceptor? Further exploring these concepts can provide us with tangible and impactful ideas to enhance how students experience their academic preparation and integration.

Just Do It

There is very little research on what athletic training programs are doing to allow students to “just do it.” Research in this area may create a sense of collegiality amongst athletic training programs or allow program administrators to recognize program strengths and weaknesses. The CAATE has mandated that all undergraduate programs transition to entry-level master’s programs by the fall of 2020 and include an “immersive experience” in their programs where students only focus on their clinical coursework and do not take any didactic courses simultaneously. Researching how programs are offering these experiences to a higher level of student may prove promising for the phenomenon of integration.

Student Attrition

The seven participants for this study all indicated the importance of relationships in their experiences, and all indicated something positive about their experiences. In addition, all seven participants remained in their athletic training programs and were on track to graduate from their respective programs. In the future, seeking out students who did not persist in athletic training programs, or students who persisted but never took the certification exam, may provide a greater understanding of the phenomenon of integration and the impact of relationships on student experiences. What was the reason for not persisting? Seeking out these students in addition to the students who remain in programs may allow us to understand a more holistic picture of the phenomenon of integration.

Biases and Limitations

As it is inevitable with qualitative research, biases and limitations did exist during this research process.

Biases

While I worked to expose and remove my own biases during my epoché process while conducting this research study, other biases did emerge. To begin, the seven participants of this research study were all volunteer participants and wanted to be a part of this study. The seven participants were all young athletic training students and enthusiastic about their education. All of the participants were enrolled in an athletic training program because they had a desire to help people and make a difference. None of them indicated that they chose athletic training because they were “sports fans.” The participants were also very openly discussed their positive and negative experiences as students.

Limitations

Limitations also existed in this research study. The study focused on only seven athletic training students from two different midwestern universities and the participants were a fairly homogenous group of students who all had positive clinical experiences. The data is not generalizable to all athletic training programs, but the conceptual framework can be used for other studies researching the phenomenon of clinical integration. For example, other programs with clinical experiences including but not limited to nursing, occupational therapy, or even social work, could utilize this framework to understand how, if at all, their students experience the concept of clinical integration. Lastly, the research study was limited by my own knowledge of the conceptual framework used, and my interpretation of the findings.

Even with these limitations, I do believe that this research will contribute to the field of educational leadership, and to athletic training education. Integration is a phenomenon that has been studied in other fields but information on this topic is lacking in athletic training. Athletic training programs/students have not been viewed through a symbolic interactionism lens and to my knowledge, there has not previously been a published study that examines the interactions of these specific human groups to create meaning. I believe this research will contribute to a greater understanding of athletic training students' experiences and the phenomenon of integration.

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APPENDICES

Appendix A: Interview Guide

Project Title: The Athletic Training Clinical Experience: A Phenomenological Study

_____ **Interviewee signed Inform Consent Agreement**

Date: _____

Place: _____

Interviewer: Courtney Lewis

Interviewee: _____ **Age:** _____ **M** **F** _____

Demographic information:

Could you give a background about yourself?

What brought you to be an athletic training student?

How long have you been an athletic training student?

Focus questions:

1. Could you describe your current athletic training clinical rotation?
What is it like for you? How do you feel about it...?
2. When you think about the term clinical integration, what comes to mind?
3. Can you describe a time when you were in class and you remember reflecting upon something you learned from your clinical rotation and you utilized that information to help you understand what was happening in the classroom?
4. Can you think of a time when an interaction with a preceptor verified or changed the way you thought about something? Can you describe this experience?

Follow-up questions will be formulated based on the participant's responses in order to clarify and expand the description of the experience details to include sensory details, such as "could you say more about . . .," "what was it like?" "how did/does it feel?" "how did that affect . . .?," or "what comes to mind?"

Appendix B: IRB Approval Letter

Sep 18, 2018 9:58 AM EDT

Courtney Lewis
Leadership and Counsel, School HPHP

Re: Exempt - Initial - UHSRC-FY17-18-325 Dissertation

Dear Courtney Lewis:

The Eastern Michigan University Human Subjects Review Committee has rendered the decision below for Dissertation. You may begin your research.

Decision: Exempt

Selected Category: Category 2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Findings: Permission to observe participants during clinical rotations must be obtained from the site/organization (e.g., clinic, hospital, school, etc.) prior to engaging in any observations.

Renewals: Exempt studies do not need to be renewed. When the project is completed, please contact human.subjects@emich.edu.

Modifications: Any plan to alter the study design or any study documents must be reviewed to determine if the Exempt decision changes. You must submit a modification request application in [Cayuse IRB](#) and await a decision prior to implementation.

Problems: Any deviations from the study protocol, unanticipated problems, adverse events, subject complaints, or other problems that may affect the risk to human subjects must be reported to the UHSRC. Complete an incident report in [Cayuse IRB](#).

Follow-up: Please contact the [UHSRC](#) when your project is complete.

Please contact human.subjects@emich.edu with any questions or concerns.

Sincerely,

Eastern Michigan University Human Subjects Review Committee