

A PHENOMENOLOGICAL STUDY OF PROFESSIONAL MASTER'S ATHLETIC  
TRAINING GRADUATES' LIVED CLINICAL EXPERIENCES

by

Laura Ann Wamsley

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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## ABSTRACT

The purpose of this phenomenological study was to describe the shared clinical experiences of post Spring 2014 graduates of CAATE-accredited professional master's degree programs. The theories guiding this qualitative study were Kolb's (1984) experiential learning theory as it theorizes that students learn best through experiences, such as clinical education (Witt, Colbert, & Kelly, 2013), and Astin's (1999) student involvement theory that claims that the effectiveness of any educational policy or program is directly related to the capacity of that policy or practice to increase student involvement, meaning that a clinical education program that is designed to encourage student involvement will be more successful than programs that lack efforts to increase involvement. The researcher sought to answer the question of how master's level athletic training program graduates describe their clinical education experiences. Qualitative data was collected through semi-structured interviews, asynchronous online focus group discussion forums, and prompted journaling. Research participants were graduates of master's entry-level athletic training programs post Spring 2014. Data collection occurred in-person, on the telephone, and via the Internet. Data was analyzed by the researcher using transcendental phenomenological coding methods. The phenomenon was described as an active experience that required hard work and was influenced by the preceptors and resources available during clinical education.

*Keywords:* athletic training education, clinical education, clinical preceptors, clinical site

**Copyright Page**

### **Dedication**

This project is one that I have been committed to and passionate about because of my strong belief in the role clinical education plays in professional preparation of athletic trainers. I would like to dedicate this research to those who spent countless hours educating me when I was an athletic training student, both professors and preceptors. They instilled in me a love for the profession and a desire to educate future athletic trainers. Their mentorship and lessons remain with me today.

## **Acknowledgments**

This dissertation has been a journey, and one that I could not have completed without a few vital people.

Thanks to my dissertation chair, Dr. Brown. Your guidance, advice and willingness to walk with me through this process is much appreciated.

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### **List of Abbreviations**

American Medical Association (AMA)

Association of Schools of Allied Health Professions (ASAHP)

Athletic Training (AT)

Athletic Training Program (ATP)

Board of Certification (BOC)

Certified Athletic Trainer (ATC)

Clinical Education Coordinator (CEC)

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

Commission on Accreditation of Athletic Training Education (CAATE)

Committee on Allied Health Education Accreditation (CAHEA)

Doctorate of Physical Therapy (DPT)

Entry-Level Master's (ELM)

Emergency Action Plan (EAP)

Emergency Medical Technicians (EMTs)

Health Insurance Portability and Accountability Act (HIPAA)

Institutional Review Board (IRB)

Interprofessional Education (IPE)

Master's of Science in Athletic Training (MSAT)

National Athletic Trainers' Association (NATA)

Program Director (PD)

Task Force on Professional Education in Athletic Training (TFPEAT)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

In 2015, the Commission on Accreditation of Athletic Training Education (CAATE) announced a change to accreditation standards, stating that all professional athletic training (AT) education programs must award a degree at the master's level to maintain accreditation. Athletic training programs (ATP) will have until 2022 to comply with this revised standard (CAATE, 2015). Clinical education is a significant and required component of professional ATP at any degree level. Clinical education as defined by CAATE (2012) is “the application of athletic training knowledge, skills, and clinical abilities on an actual patient base that is evaluated and feedback provided by a preceptor” (p. 11). As professional undergraduate programs begin to transition to master's degree programs, there is little research providing guidance in best practices of a master's level ATP. This chapter will provide background knowledge on AT education and clinical education, outline the purpose of this study, and describe the problem that was addressed. Research questions drove data collection and analysis, resulting in voices of those who have completed clinical education in a master's entry-level ATP program being heard and shared experiences being identified.

### **Background**

Athletic training education, like many allied health fields is evolving, modernizing and advancing. In the past decades, there have been substantial and significant changes to AT education. What was once a profession that could be entered through apprenticeship (Delforge & Behnke, 1999; Winterstein, 2014), AT has evolved into a profession that will require a graduate level degree in the very near future (CAATE, 2015). Similar to many other related fields, athletic trainers must graduate from a nationally accredited ATP prior to taking the

nationally recognized certification exam. Passing this exam grants the graduate the ATC credentials needed to work in most states as an athletic trainer (National Athletic Trainers' Association [NATA], 2017).

As a profession, AT is often misunderstood, and thought to be similar to strength and conditioning professionals (Prentice, 2014). Athletic training is a healthcare profession that provides preventative care, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions (Board of Certification [BOC], 2016).

Professional AT organizations such as the National Athletic Trainers' Association (NATA) strive to educate the public about the role of an athletic trainer as a healthcare provider (NATA, 2017).

Recently, several changes were made to the accreditation standards for AT education programs contributing to this effort. The most significant of these changes is that of the required degree level. Currently, the CAATE recognizes programs at both the graduate and undergraduate level for accreditation. However, by 2022, undergraduate programs will be phased out (CAATE, 2015). Following this date, students must graduate from an accredited entry-level master's program in order to be eligible to sit for the national certification exam (CAATE, 2015). This required transition from the undergraduate to the graduate level will require adjustments to both programmatic and curricular standards (CAATE, 2015, Task Force on Professional Education in Athletic Training [TFPEAT], 2013).

### **Historical Context**

Athletic training education in the United States is closely intertwined with the creation and development of NATA (Delforge & Behnke, 1999). When NATA was founded in 1950, its main mission was to develop and promote the profession of AT. Shortly after, NATA decided



that one way to promote the profession was to develop a formal path to certification through education. The first AT education curriculum model was developed and approved by NATA in 1959, and the first undergraduate AT curriculums were approved in 1969. It was not until 1994 that the first undergraduate ATP was recognized for accreditation by the Committee on Allied Health Education and Accreditation (CAHEA) which was later replaced by Committee on Accreditation of Allied Health Education (CAAHEP), then replaced again by CAATE, the current accreditation association for ATPs (Breitbach & Brown, 2011; Delforge & Behnke, 1999; Perrin, 2007). Many changes have occurred in AT education as the profession has grown and found its place in the field of sports medicine (Winterstein, 2014). Currently, AT education is going through a significant change, requiring the granted degree be at the graduate level (CAATE, 2015). With this change, comes adjustments and changes to existing AT education programs, including changes to the clinical education component (Bowman, Mazerolle, & Barrett, 2017).

In 2015, just prior to the degree change announcement, there were 360 CAATE-accredited professional ATPs in the US, with an overwhelming majority of them being undergraduate programs (Mazerolle, Bowman, & Pitney, 2015). The role of clinical education in undergraduate ATPs has been heavily researched (Aronson, Bowman, & Mazerolle, 2015; Benes, Mazerolle, & Bowman, 2014; Mazerolle, Eason, Nottingham, & Barrett, 2016); however, the mandated degree change calls for new research that specifically involves master's level AT students, as they are the future population of all ATPs (Bowman et al., 2017). Clinical education is a significant and required component of AT education curriculum. The accreditation standards (CAATE, 2012) require that all students participant in clinical education experiences on a consistent basis, meeting certain exposure requirements. Failure to maintain a clinical education

program would result in standard violations and be cause for accreditation probation or withdrawal (CAATE, 2012). The proposed standards that are paired with the new degree requirement do not negate this fact, and rather increase the significance and rigor of clinical education (CAATE, 2016).

### **Social Context**

Clinical education is a major component of AT education. Clinical education in undergraduate ATPs provides students with the opportunity to realize the role of an athletic trainer and gain professional development (Benes et al., 2014). DeWitt, Rothberg, and Bruce (2015) reported a similar significance of clinical education in the field of occupational therapy. Morin, Misasi, Davis, Hannah, and Rothbard (2014) found that entry-level athletic trainers reported feeling most confident in their skills and abilities to treat traditional patient populations such as athletes with musculoskeletal injuries, and less confident when treating those in emerging settings such as elderly and special needs patients. These findings parallel with the reality that a majority of clinical education experiences in AT education are housed in athletic departments, leaving students desiring a wider variety of clinical experiences (Morin et al., 2014). As clinical education curriculum transforms with the degree change, inclusion of a wide variety of experiences could remedy these identified deficits and encourage professional preparedness and clinical confidence (Bowman et al., 2017). By designing clinical education in a manner that encourages a wide variety of exposure to both varied settings and varied roles of ATs, research (Morin et al., 2014) supports that graduates may be more competent to treat multiple populations and work in various settings.

### **Theoretical Context**

Astin's (1999) student involvement theory and Kolb's (1984) experiential learning theory

provided a lens through which this research was approached and evaluated. These theories have both been used in the past to explain trends in higher education (Webber, Krylow, & Zhang, 2013, Young & Lundberg, 2016) and health education (Bernard, 2015; Keim-Janssen, VanderMeulen, Shostrom, & Lomneth, 2014; Schellhase, 2006).

Astin (1999), in his student involvement theory, ascertained that students who are actively involved in their education will be more successful in their learning. Though this theory was originally created as a tool for student retention efforts (Astin, 1999), it lends itself well to both didactic and clinical education. Webber et al. (2013) found that college students who actively participate in their education by increased study time, faculty interaction, and coursework participation reported a higher GPA and a greater satisfaction with their education. Similarly, Bernard (2015) attributed meaningful learning in nursing students to a high level of student engagement. Kim and Lundberg (2016) took this concept one step further, stating that student-faculty interaction has a positive correlation with the development of cognitive skills needed to utilize didactic information in real life experiences. Based on the student involvement theory and these previous applications, clinical education experiences and preceptors that encourage hands on learning will be of the most benefit to students.

Kolb's (1984) experiential learning theory also contributes support to clinical education (Witt, Colbert, & Kelly, 2013). Knowledge gained during clinical education is done so based on experiences, and the students' ability to interact with the environment. Experiential learning happens in a cycle. The first stage is concrete experience, in which the learner actively experiences an activity during their clinical experience. They then move into the second stage, which is reflective observation, used to reflect on what they have or will learn from their experience. The third stage, abstract conceptualization, is when the learner tries to conceptualize

a model of what is observed. Lastly, in the fourth stage the learner tries to plan how to test their conceptualized model in a future experience (Kuiper & Pesut, 2004). In a study by Janssen et al. (2014), medical and allied health students were found to have better learning outcomes when hands-on laboratory opportunities were incorporated into their education. Specifically, students developed better clinical skills when skills were taught on cadavers as opposed to students who received only lecture-type delivery of educational content. The hands-on learning experience allowed for the experiential learning cycle to take place. The same concept is supported specifically in AT clinical education by Schellhase (2006), who suggested that AT clinical education is based on experiential learning, gaining hands-on experience in a professional setting.

### **Situation to Self**

This research is of particular interest to me as an instructor and Clinical Education Coordinator (CEC) for an undergraduate ATP at a small university in West Virginia. The university plans to transition the current undergraduate ATP to the graduate level in order to maintain CAATE accreditation. I want to understand how graduate level clinical education works, the best practices in designing a graduate clinical education program to promote student learning and the impact that clinical education has on a graduate student's learning and professional preparation. As the CEC for an undergraduate program, I have an understanding of undergraduate clinical education; however, I have no personal experience supervising a graduate level clinical education program.

As an administrator of an accredited ATP, it is my role to provide learning opportunities that will produce competent athletic trainers. Constructivism, originally developed by Vygotsky (1962) is a learning theory that is heavily utilized in the education of health professions, both

didactically and clinically (Brandon & All, 2010; Yilmaz, 2008). Constructivists believe that knowledge is not discovered, but rather constructed by individuals based upon their social experiences (Yilmaz, 2008). Jonassen (1997) took this idea a step farther, stating that because learning is based on individual experiences, multiple realities result. The clinical experiences AT students complete offer hands-on learning opportunities that allow for a greater understanding of the situations they will encounter once working as a certified athletic trainer. Literature (Benes et al., 2014; Mazerolle, Bowman, & Benes, 2014) supports the need for hands-on clinical education to bridge the gap from didactic courses to clinical application. First, as a student who completed clinical education experiences and now as an instructor who works closely with students regarding their clinical education experiences, I can visualize how constructivism beliefs and practices are beneficial in AT education. As a student, I struggled to understand information from didactic courses until I could apply the principles and skills to a patient population, using my experience as a method to construct my understanding. I see students that I work with in my role as a CEC have similar experiences. Because of my experiences and observations, I support the constructivist view on learning and knowledge and believe that AT education is an ideal arena to display this learning theory.

Kolb (1984) supported the idea of hands-on learning with his experiential learning theory, which explains that students learn best through hands-on opportunities. Astin's (1999) student involvement theory also supports the use of clinical education in AT. Having matriculated through a clinical education program as a student and now managing a clinical education program, I have experienced and witnessed the difference that experiential learning and student involvement can make in overall student learning and the ability to apply knowledge to real life situations. Because of these personal experiences, I support the use of clinical

education as part of an AT curriculum.

In any research, philosophical assumptions must be realized. An ontological approach was used in this study. Ontological assumptions recognize that individual people view their experiences differently, therefore creating multiple realities (Creswell, 2013). Recognizing this was important when it came time to analyze the data. Interviews on personal experiences were the main form of data collection, so data came from the subjective views of the participants. Participants had different recollections and slightly biased memories of their clinical education experiences. With memories reported by multiple participants, multiple realities were represented. As the researcher, I accepted each reality while recognizing that it was a version of reality, possibly straying from what once occurred.

### **Problem Statement**

The problem this study sought to address is the lack of knowledge regarding the role clinical education plays in the professional preparation for clinical practice of master's level AT students. Athletic trainers are allied health professionals who provide healthcare services to physically active populations (BOC, 2017). The clinical education that allied health professionals receive is delivered to prepare students to enter the field and provide patient care at acceptable standards (Rapport, Kelly, Hankin, Rodriguez, & Tomlinson, 2014). The clinical education component, which is required in many allied health professions, has been linked to the development of the knowledge, skills, and abilities needed for clinical practice and patient care (Coker, 2010; Norman, Booth, & Ther, 2015; Rapport et al., 2014; Rodeghero et al., 2015). Athletic training clinical education at the current undergraduate level has been found to contribute to professional socialization and offer real life learning experiences which will prepare students to provide care to future patients (Aronson et al., 2015; Benes et al., 2014; Mazerolle et

al., 2014; Mazerolle et al., 2016). Without qualified athletic trainers to provide care and health services, patients may lack access to quality care and ultimately suffer with a decline in the quality of their health (Nicoletto, Pecha, Omdal, Nilsson, & Homaechvarria, 2017; Pike, Pryor, Vandermark, Mazerolle, & Casa, 2017).

Following suit with several other allied health professions requiring an advanced degree (Arena, Goldberg, Ingersoll, Larsen, & Shelledy, 2011; TFPEAT, 2013), AT will be a degree that soon will be taught only at the graduate level (CAATE, 2015). Graduate students across many disciplines approach learning and education differently (Smith, Krass, Sainsbury, & Rose, 2010) and are equipped with a different set of soft skills when compared to undergraduate students (Artino & Stephens, 2009). The degree transition and the associated student population change calls for re-evaluation of the role that clinical education plays in the preparation of AT students for clinical practice (Bowman et al., 2017; NATA, TFPEAT, 2013). A gap in the literature exists that identifies the role of clinical education in the preparation of athletic trainers at the graduate level (Bowman et al., 2017).

In order to gain information regarding the preparation of athletic trainers who are equipped to provide patient care at acceptable standards, this phenomenological study proposed to give a voice to those athletic trainers who have personally experienced clinical education at the graduate level. The focus is on their perceptions of the role clinical education played in their professional development and preparation.

### **Purpose Statement**

The purpose of this transcendental phenomenological study is to describe the shared clinical education experiences for post spring 2014 graduates of a CAATE-accredited professional master's degree program. At this stage in the research, clinical education will be

generally defined as the application of AT knowledge, skills and clinical abilities on an actual patient base that is evaluated and feedback provided by a preceptor (CAATE, 2012). The theories guiding this study were Kolb's (1984) experiential learning theory, which theorizes that students learn best through experiences, such as clinical education (Witt et al., 2013), and Astin's (1999) student involvement theory, which claims that the effectiveness of any educational policy or program is directly related to the capacity of that policy or practice to increase student involvement.

### **Significance of the Study**

This phenomenological study serves to increase knowledge regarding the use of clinical education in a professional master's ATP. Empirically, this study provides much needed research and literature regarding graduate level AT clinical education, as there was none at the time this study began, beyond that which had been completed in the undergraduate world (Aronson et al., 2015; Benes et al., 2014; Mazerolle et al., 2014; Mazerolle et al., 2016). The lack of literature on this specific phenomenon, especially with the upcoming degree change requirement, creates a gap in the literature.

This research looked to extend Kolb's (1984) experiential learning theory and Astin's (1999) student involvement theory to the area of master's level AT clinical education. Theoretically speaking, Kolb and Astin's ideas relate to clinical education; however, there is little empirical research directly linking them to AT. Nursing (Witt et al., 2013; Kaakinen & Arwood, 2009; Cant & Cooper, 2010), as well as other fields such as engineering (Abdulwahed & Nagy, 2009) and social work (Raschick, Maypole, & Day, 1998) have all displayed the use of Kolb's experiential learning theory as it relates to fieldwork. This research demonstrated its role in AT education as well.



Practically, this research provides ELM program administrators with shared experiences of those who have completed the phenomenon. This may be useful to program administrators when designing or evaluating a master's level clinical education program. Aside from ATP administrators, clinical preceptors may find this research and information useful when developing plans for daily interactions with their AT students. By understanding the learning process that ATP students go through clinically and how opportunity contributes to that learning, preceptors may be able to provide an experience that fosters learning. Giving a voice to those who have matriculated through this phenomenon helps ATP stakeholders such as program administrators, clinical faculty and preceptors learn what aspects of clinical education are most beneficial and what aspects have either no effect or a negative one. The future strength of the profession relies on the ability of students to transition successfully into professional practice, which is linked to the socialization they receive during clinical education (Bowman et al., 2017). Therefore, future employers and patients may also benefit when AT clinicians have completed a clinical education program designed to prepare them for entrance into the professional field (Bowman et al., 2017).

### **Research Questions**

The purpose of this phenomenological study is to understand the clinical experiences of graduates of professional master's ATPs. By understanding the perceptions of the graduates' clinical education experiences and how they learn through clinical experiences, AT clinical education can be designed to promote optimal learning. Additionally, this study may be used to identify improvements that can be made to clinical education programs so that they best meet the needs of a master's AT student. Van Manen (1990) explained that phenomenology is useful in addressing the question of what something is really like. In order to view the phenomenon from

the students' perspective and to understand their experience, I used the following research question and sub-questions to guide this study.

**Central Research Question:** How do master's level athletic training program graduates describe their experiences in clinical education?

Creswell (2013) suggested having a central research question followed by sub-questions. The central research question posed in the study sought to give a voice to those who had completed clinical education at the graduate level, which until this point had gone unheard. There have been several articles written on research studies that give a voice to the undergraduate population regarding clinical education (Aronson et al., 2015; Benes et al., 2014; Mazerolle et al., 2014; Mazerolle et al., 2016), as well as the preceptor population (Benes et al., 2014). The required transition to the master's level (CAATE, 2015) calls for this question to be investigated, thereby giving a voice to the population which will soon become the central student population in AT education (Bowman et al., 2017). This question is based on the overall purpose of this research study, addressing the problem that has been identified.

The following sub-questions aimed to break down various components and influences of clinical education, specifically asking about experiential learning, clinical preceptors, and clinical sites. Research studies have been completed answering similar questions in regards to undergraduate programs.

**Sub-Question One:** How do participants describe the type of learning opportunities they were granted during clinical education?

Astin (1999) theorized that the level of success of a program is directly linked to the amount of student involvement. This question sought to test that theory by gathering and understanding the students' perceptions on the learning opportunities they were offered and

encouraged to participate in. The CAATE (2012) does not specifically dictate the design of clinical education, allowing for autonomy of individual programs. Undergraduate AT students reported that having the greatest learning experiences in clinical education is hands on in nature and when in an environment that promotes engagement, with engagement fostered by communication with preceptors, opportunity for patient interaction and when feedback is provided based on skill and knowledge application (Mazerolle et al., 2014). This question allowed for investigation into a graduate level population.

**Sub-Question Two:** How do participants describe the influence of clinical preceptors on the overall experience of clinical education?

Kolb (1984) asserted that learning results from synergetic transactions between the person and the environment. In undergraduate AT clinical education, the clinical preceptor plays a significant role in the overall student experience (Aronson et al., 2015; Benes et. al, 2014; Mazerolle et al. 2016; Young, Klossner, Docherty, Dodge, & Mensch, 2013). The focus of this sub-question is to explain the role that preceptors play at the graduate level.

**Sub-Question Three:** How do participants describe the influence that the clinical setting has on the overall experience of clinical education?

As mentioned in support for sub-question two, Kolb (1984) linked learning to the learner's environment. The CAATE (2012) requires that students be exposed to various clinical settings where they will gain experience with patients outside of the traditional athletic population. Varied clinical sites support professional development and role realization (Benes et al., 2014). Entry-level athletic trainers report feeling most clinically competent on traditional patient populations such as athletes due to significant exposure through traditional clinical sites

during clinical education (Morin et al., 2014). This question investigates the influence or lack of influence of the clinical setting on the students, their learning, and the students' experiences.

### **Definitions**

1. *Allied Health*- Health professions that are distinct from medicine and nursing (Association of Schools of Allied Health Professions [ASAHP], 2017).
2. *Athletic Training* – A healthcare profession which provides preventative care, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions (BOC, 2016).
3. *Athletic Trainers* – Highly qualified, multi-skilled health care professionals who collaborate with physicians to provide preventative services, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions. (NATA, 2016).
4. *Clinical Education* - The application of athletic training knowledge, skills and clinical abilities on an actual patient base that is evaluated and feedback provided by a preceptor (CAATE, 2012).
5. *Experiential Learning* – The process through which students develop knowledge, skills, and values from direct experiences outside a traditional academic setting (University of Colorado Denver Experiential Learning Center, n.d.).
6. *Student Involvement* – The amount of physical and psychological energy that the student devotes to the academic experience (Astin, 1999).

### **Summary**

Athletic training education is in a transitional period, in which all undergraduate ATPs must move to the graduate level to maintain accreditation (CAATE, 2015). This mandate

requires many changes for existing AT undergraduate programs' curriculum and program requirements and changes the planning process for those that will be created in the future. Part of designing and maintaining a successful ATP is the clinical education component. The required transition (CAATE, 2015) ensures all ATP students will be at the graduate level and will be served through clinical education; however, there is little understanding of the students' perspectives of their experiences during graduate level clinical education. The problem this study addressed is the lack of knowledge regarding the role clinical education plays in the professional preparation for clinical practice of master's level AT students. The lack of research involving this phenomenon supports the need for further investigation in order to guide ATP decision makers when making programmatic planning decisions. This research helps to fill this gap by giving a voice to those who have already matriculated through the phenomenon of graduate level AT clinical education.

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

In Chapter Two, I will review current and seminal literature that is relevant to the topic of study. The chapter will begin by explaining how two theories, Astin's (1999) student involvement theory and Kolb's (1984) experiential learning theory, has driven this study. I will explain these theories thoroughly, both historically and functionally. The application of these theories to allied health and AT education will be evaluated and previous research linking these theories to clinical education will be reviewed.

After a thorough look at how these theories have guided this research study, I will synthesize other related literature, creating a comprehensive literature review. I will evaluate allied health education and discuss AT as a profession and how future athletic trainers are educated. I will also discuss the role of clinical education and the differences between undergraduate and graduate students. Finally, I will tie the research together to demonstrate that variances in degree level students may change the best practices of their respective clinical education. A common theme throughout this literature review will be that there is a lack of research directly related to graduate level AT education.

### **Theoretical Framework**

The theoretical framework of this research study is the experiential learning theory (Kolb, 1984) and the student involvement theory (Astin, 1999). Both theories support active and hands-on learning. Researchers (Bergen-Cico & Viscomi, 2013; Entezari, 2016; Hill & Woodward, 2013; Milem & Berger, 1997; Raschick et al., 1998; Schellhase, 2006; Thomas, Herbert, & Teras, 2014; Webber et al., 2013; Witt et al., 2013) in many areas of higher education have used these theories to investigate how to encourage student learning and create successful programs

through the incorporation of active learning and involvement. Specifically, when applied to AT education, these theories encourage clinical education as a curriculum requirement regardless of the degree level.

### **Student Involvement Theory**

Through the student involvement theory, Astin (1999) proposed that there is a correlation between involvement and learning: “The theory of involvement emphasizes active participation of the student in the learning process” (p. 522). There are five main points to this theory.

1. Involvement refers to the investment of physical and psychological energy in various objects.
2. Regardless of its object, involvement occurs along a continuum.
3. Involvement has both quantitative and qualitative features.
4. The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (Astin, 1999).

This theory utilizes Freud’s idea of cathexis, which is a process of investment of psychological energy in objects and persons outside of themselves (Astin, 1999). The theory is a development from a longitudinal study of college dropouts completed by Astin in 1975 that identified factors in the college environment that significantly affect the student’s persistence in college (Astin, 1999).

Currently, this theory is commonly used by higher education professionals when developing retention improvement plans (Bergen-Cico & Viscomi, 2013; Hill & Woodward,

2013; Milem & Berger, 1997; Thomas et al., 2014). “On a more subtle level, the theory of student involvement encourages educators to focus less on what they do and more on what the student does” (Astin, 1999, p. 522). This theory places an emphasis on the student and their level of involvement rather than a teacher’s ability to teach. A teacher can produce opportunities that encourage involvement, resulting in greater learning but do not solely control the amount of learning that occurs. The use of this theory when designing didactic coursework is also demonstrated in current research (Entezari, 2016; Webber et al., 2013) by encouraging student involvement in learning activities and encouraging them to engage as a part of a learning community.

Just as this theory is applicable to student retention and classroom learning, it can also be applied to clinical education and fieldwork. Applying this theory to clinical education would support the idea that students who are actively involved in their clinical experience will garner more from the experience and be more likely to continue in their educational program than those who chose not to be actively involved (Young et al., 2013). In one research study (Mazerolle et al., 2014), AT students defined an engaging learning experience in clinical education as one that supports hands-on learning and encouraged communication among students, preceptors, and patient populations, both of which fit into the student involvement theory. Another example of this theory’s place in clinical education is Morin et al.’s (2014) research which found a link between confidence in clinical practice skills and a student’s active involvement in a similar situation during clinical education. Based on Astin’s (1999) theory, those students who are resistant to active participation in their clinical experiences will be more likely than those who are actively engaged to change majors or fail to complete the degree due to a lack of involvement (Young et al., 2013). Clinical education requirements and the extensive time commitment has



been cited as a reason that AT students persist to graduation. Those aspects have also been cited as reasons students choose to leave the major prior to degree completion (Bowman & Dodge, 2011; Young et al., 2013).

The student involvement theory (Astin, 1999) supports the use of clinical education as a retention tool for ATPs. Clinical education requires a significant time commitment, and learning is at its greatest when students are actively involved in the experience. Being involved in clinical education encourages comradery among AT students and preceptors. This professional socialization is referenced by graduates as a reason for persistence. Students report learning the most in clinical education when clinical preceptors encourage and foster learning, as well as when the clinical site provides opportunities to be actively involved (Young et al., 2013). This theory supports the idea that though the clinical preceptor has an effect on learning by offering opportunity and encouragement; ultimately, the student and the level of involvement they strive for has the greatest impact.

### **Experiential Learning Theory**

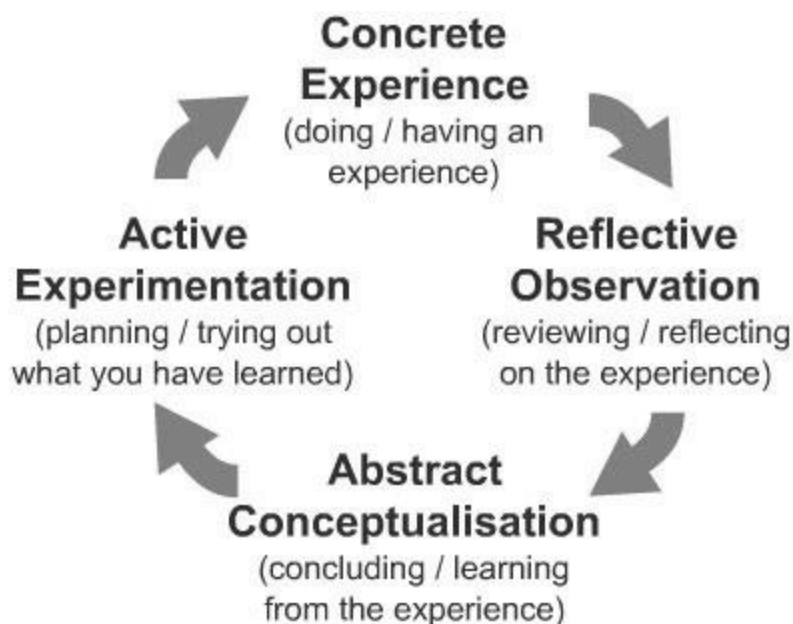
Experiential learning theory, created by Kolb (1984), asserted that learners gain a greater understanding through experiences, either simulated or real life (Kolb, 1984). The theorist also explained that learners adapt, adjusting their knowledge and perception based on experiences and that “learning is a continuous process grounded in experience” (p. 27). Experience, perception, cognition, and behavior are all key to the learning process (Kolb, 1984). This theory is based on six propositions.

1. Learning is best conceived as a process, not in terms of outcomes.
2. All learning is relearning.
3. Learning requires the resolution of conflicts between dialectically opposed modes of

- adaptation to the world.
4. Learning is a holistic process of adaptation to the world.
  5. Learning results from synergetic transactions between the person and the environment.
  6. Learning is the process of creating knowledge (Kolb, 1984).

John Dewey, Kurt Lewin, and Jean Piaget are all heavy influencers of this theory (Kolb, 1984; Kolb & Kolb, 2005; Schellhase, 2006). Dewey believed that learning transforms the impulses, feelings, and desires of concrete experience into action, or in other terms, learning encourages doing. Lewin encouraged the use of concrete experiences to validate and test abstract concepts and recognized the importance of feedback and reflection. Piaget believed that learning comes from a person's interaction with their environment and that knowledge is a product of action. Aspects of all three of these theorists' beliefs can be found in the experiential learning theory which incorporates concepts of both cognitive and behavioral theories.

The experiential learning theory has four main steps that make up a learning cycle. They are concrete experience, reflective observation, abstract conceptualization, and active experimentation (McLeod, 2013). Concrete experience can be explained as doing or having an experience. The learner then reviews and reflects on the observation they made through the experience (i.e., reflective observation) and creates a conclusion of what they learned (i.e., abstract conceptualization). The next step in the learning process is to take that conclusion and test it out through active experimentation. The results of the test will lead to further experience which then initiates that continued learning cycle all over again (see Figure 1). This cycle is a continuum of learning in which each experience and bit of knowledge fuels future understanding and experiences.



*Figure 1.* Kolb's experiential learning cycle (McLeod, 2013). Reprinted with permission (see Appendix A).

Experiential learning explains how students of higher education learn through hands-on learning techniques that professors may use in didactic courses (Nilson, 2010; Zhai, Gu, Liu, Liang, & Tsai, 2017). This theory is also applicable and has been used to explain the benefits of clinical education or fieldwork in many areas of study (Raschick et al., 1998; Witt et al., 2013), in which students are encouraged to combine sensory, motor, and cognitive learning processes (Haraldseid, Friberg, & Aase, 2016).

Prior to the development of the experiential learning theory, Kolb first suggested the classification of learning styles in 1974 (McLeod, 2013), which resulted from “an interaction between an individual's internal characteristics and their external environment” (Schellhase, 2006, p.19). Furthermore, he asserted that there are two major components to learning; acquiring an experience and then transforming that experience into knowledge (Schellhase, 2006). The preferences of an individual in the experience they are exposed to and how they transform that

experience is their learning style. The four learning styles that are identified by Kolb are diverger (feeling and watching), assimilator (watching and thinking), converger (doing and thinking), and accommodator (doing and feeling) (McLeod, 2013). Each of these learning styles are identified as combinations of two of the four steps in the experiential learning cycle (McLeod, 2013). Often, the learning style preferences of an individual changes throughout their life and individuals can identify with multiple learning styles at any given point (Schellhase, 2006). When combining the two aspects of this theory, a student's identified learning style preference may guide decisions in how to best provide opportunity and encouragement for the experiential learning cycle.

Athletic training education, like many other areas of study, provides opportunities for the use of the experiential learning theory (Schellhase, 2006). The nature of the profession calls for learning experiences that are hands on and active in design. "Though students can experience learning in any setting, experiential learning is generally used to represent learning that occurs in a hands-on or clinical environment" (Schellhase, 2006, p. 18), which fits well with athletic training education. Athletic training curriculum, which is often heavy in lab type education and requires clinical education (CAATE, 2012), lends itself to experiential learning (Dopico, Linde, & Garcia-Vazquez, 2014; Schellhase, 2006). Schellhase (2006) suggested that through both structured and unstructured experiences, clinical instructors (both clinical preceptors and laboratory instructors) could use the experiential learning cycle to facilitate instruction. Young et al. (2013) supported the use of experiential learning in a study that demonstrated that students who engage in hands-on and experiential learning have better outcomes as an AT student than those who choose to avoid active learning during clinical education. Nottingham and Henning (2014a, 2014b) further supported a portion of Kolb's experiential learning cycle, specifically

concrete experience, and reflective observation by demonstrating the value of preceptor feedback following skill experience. Students reported that preceptor feedback plays a key role in facilitating student learning and improving the overall experience (Nottingham & Henning, 2014a, 2014b).

### **Related Literature**

Athletic training is an allied health career. Allied health careers are classified as health professions other than medicine and nursing (ASAHP, 2017). Though AT shares many similarities with other allied health care, it has its unique points. Those similarities and differences are discussed in the following sections. Clinical education specifically will be reviewed and the role it plays in AT education. The roles of the students, clinical preceptors, and clinical sites will be investigated. These topics will be discussed from a scholarly perspective through a thorough review of recent literature.

### **Athletic Training**

The profession of AT, as it is currently known, first came into existence in the late nineteenth century with the establishment of intercollegiate and interscholastic athletics in the United States (Prentice, 2014). Those who served in the role of athletic trainer in these early times had no technical knowledge of healthcare. Their techniques typically consisted of applying a rub or poultice (Prentice, 2014). It has taken many years since that time and many changes in the education process for athletic trainers to be recognized as highly-qualified healthcare professionals (Prentice, 2014). There is an inherent risk involved with athletic participation, securing the need for healthcare to be provided by those who specialize in injuries and conditions linked to athletic participation (Wrynn, 2007). The transition of the athletic

trainer into a trained healthcare provider allows them to fill this role and treat physically active populations (Wrynn, 2007).

Since the inception of NATA in 1950, the profession has seen drastic changes in the role athletic trainers fill and the populations they serve (Perrin, 2007; Prentice, 2014). Where once athletes were the primary focus of an athletic trainer's attention, today the description of an athletic trainer uses the term physically active population to demonstrate the increasing settings that athletic trainers are employed in (Prentice, 2014). Employment opportunities include traditional athletic settings but also military, performing arts, industrial, clinical, hospital, and law enforcement locations just to name a few (Prentice, 2014).

Athletic trainers serve as healthcare providers to physically active populations, providing services and care for the prevention, examination, diagnosis, treatment, and rehabilitation of emerging, acute or chronic injuries and medical conditions (NATA, 2016). In 1990, the AMA first recognized AT as an allied health profession (Breitbach & Brown, 2011; Perrin, 2007). This was a significant step for the profession as it encouraged other healthcare professionals and the general public to respect the profession as one that was qualified to provide medical care (Prentice, 2014). The general public often thinks of athletic trainers as physical trainers who instruct athletes in techniques to improve strength, endurance, and physical performance (Breitbach & Brown; 2011; Prentice, 2015). This misconception is described as a contributing reason to high levels of attrition in AT education programs (Bowman, Mazerolle, Pitney, Dodge, & Hertel, 2015). While athletic trainers specialize in preventative practices that may improve physical performance, their role is much more focused on the medical aspects of participation, and not skill improvement (Prentice, 2014).

In most states in the United States, athletic trainers must meet requirements for professional recognition as a certified athletic trainer (ATC) (BOC, 2016). The Board of Certification (BOC) is responsible for initial certification of athletic trainers as well as the maintenance of certification (BOC, 2016). Initial certification requires graduation from a CAATE-accredited ATP, an approved Professional Rescuer certification, and the successful completion of a national certification exam by the BOC. Requirements for maintaining certification include continuing education to ensure that athletic trainers stay up-to-date on pertinent medical and professional changes that may affect patients. Certified athletic trainers can earn continuing education units by attending conferences, completing coursework, and publishing research or other professional documents. Recertification is required biennially through the submission of continuing education unit documentation (BOC, 2016).

Future projections for the profession demonstrate a trend of athletic trainers being focused even more heavily on general medical conditions and treatments. Discussions for potential additions to the athletic trainers' scope of practice include stitching open wounds, prescribing medications, administering injections, and installing IVs (CAATE, 2016). As the scope of practice changes, so must AT students' education. Required content of AT education stays modern through the CAATE (2012) educational competencies and the BOC Practice Analysis (2015), which dictate the skills and knowledge that must be taught for graduates to fulfill the role of an entry-level athletic trainer. Unless educational standards modernize with the profession, AT students will not graduate being prepared for entry-level practice (Perrin, 2015).

### **Allied Health Care**

The Association of Schools of Allied Health Professions (ASAHP) defines allied health as health professions that are distinct from medicine and nursing. Allied health professionals

utilize scientific principles and evidence-based practice for the diagnosis, evaluation and treatment of diseases, promote wellness, and provide administrative services to healthcare systems. Common professions identified as allied health fields include pharmacy technicians, nutritionists, dentistry personnel, physical therapists, radiologists, physician assistants, emergency medical technicians (EMTs), and athletic trainers (ASAHP, 2017). Athletic training was first identified as an allied health profession in 1990 by the AMA (Perrin, 2007). Current trends in community medicine show medical and allied health care professionals working together to provide comprehensive medical care (Olson & Bialocerkowski, 2014; Perrin, 2015).

### **Allied Health Care Education**

Just as there is a wide variety of professions that are classified as allied health, there is also a variety of educational techniques and designs used in the education of these professionals. Allied health degrees range from certificate programs and associates degrees, such as a dental hygienist to clinical doctorates which are required for physical therapists. An individual could earn a certificate to work in certain allied health roles in as little as six months, or may spend years in school to complete top level doctoral work (Public Health Online, 2017). There is also a larger number of allied health professions that fall in the middle of the educational spectrum, requiring bachelor's and master's degrees (Public Health Online, 2017). Recent decades have shown a trend in several allied health professions such as occupational therapy, physical therapy, and audiology to move from basic undergraduate degrees to advanced degrees (Arena, Goldberg, Ingersoll, Larsen, & Shelledy, 2011). Beginning January 2015, to be eligible for the national physical therapy licensing exam, candidates must have graduated from a CAATE-accredited program holding at Doctorate of Physical Therapy (DPT), which is a clinical doctorate (American Physical Therapy Association, 2017). Also transitioning to a clinical doctorate in



recent times is the allied health professions of pharmacy (transitioned in 2000), nurse practitioner (transitioned in 2015), and audiology (transitioned in 2007). Occupational therapy is also considering this transition to a clinical doctorate as the professional degree (American Occupational Therapy Association, 2018).

There is also a variance in the delivery methods of allied health education. Degrees are offered in traditional classroom format as well as online. One commonality among a majority of allied health professional education programs is the inclusion of clinical education within the formal curriculum. The purpose of this requirement is to establish opportunity for students to apply and develop their learning in the workplace prior to full autonomy working as a professional (Romig, Tucker, Hewitt, & Maillet, 2016). This type of education is modeled after the apprenticeship model which was once the prime mode of professional or occupational education (Romig et al., 2016).

### **Interprofessional Education in Allied Health**

Another significant trend in allied health is the inclusion of interprofessional education (IPE). “The goal of IPE is to prepare students to work collaboratively in teams within the healthcare environment” (Donnelly, Mukherjee, Koth, & Bartenhagen, 2016, p. S4), demonstrating how different entities can work together. The World Health Organization’s (2010) Framework for Action on Interprofessional Education and Collaborative Practice explains IPE as two or more professions learning about, from, and with each other to enable effective collaboration and improve health outcomes (Gilbert, Van, & Hoffman, 2010; World Health Organization, 2010).

Throughout the decade prior to this study, patient care had become less focused on acute conditions and more focused on chronic disorders and quality-of-life issues. This shift meant

that patients were more reliant on multiple health care entities instead of on a single provider (Olson & Bialocerkowski, 2014). An interprofessional healthcare team is a group of diverse health care providers from different health professions or disciplines who work together to provide health care to individuals and communities. A significant component of a successful interprofessional health care team is that team members collaborate, plan, and coordinate programs of care with an understanding that cooperation and compromise is key (Perrin, 2015). Knowing how to operate as a team is pertinent for health professionals to meet the new demands of the public they serve (Olson & Bialocerkowski, 2014; Perrin, 2015).

Interprofessional health care teams are commonly comprised of occupational therapists, physician assistants, physical therapists, and other human movement specialists (Perrin, 2015). Perrin (2015) suggested that athletic trainers should be a part of these teams, but in order to do so, they must first incorporate themselves into the educational processes of other allied health professions. Educational programs are introducing curricula that crosses health fields and encourages collaboration among future professionals. The goal of IPE is to improve teamwork and increase the understanding of roles across health care (Olson & Bialocerkowski, 2014). This goal can be accomplished through practices such as mixing professions in coursework on professional ethics and multicultural competency and by creatively developing clinical education in a way that forces professions to mingle (Perrin, 2015). In 2012, the NATA's Board of Directors approved a recommendation that IPE be a required component at both the professional and postprofessional levels (Perrin, 2015). This move for AT profession aids in its alignment with and recognition by other allied health professionals who may all be members of an interprofessional healthcare team (Perrin, 2015).

### **Clinical Education in Allied Health**

Clinical education in allied health is a term denoting the practice of assisting a student to acquire the required knowledge, skills, and attitudes in a practice setting to meet standards that are set by an institution or professional accrediting/licensing board (Maloney, Stagnitti, & Schoo, 2013; Rose & Best, 2005). Clinical education is a major component of allied health education (Maloney et al., 2013; Romig, Tucker & Hewitt, 2017). Clinical education provides students with experience in clinical, moral, and ethical decision-making (Romig et al., 2017). Rindflesch et al. (2009) specifically discussed the significance of clinical education in physical therapy and occupational therapy, though the professions use different terminology. Physical therapy refers to clinical education as *clinical experience* and occupational therapists use the term *fieldwork education*. Despite the variance in terminology, the goals and principles are the same and the significance is high. In fact, in physical therapy education programs, 23-30% of the total curriculum is clinical education or clinical experience (Laurent & Weidner, 2002). Clinical education in allied health is defined as either clinical integration or clinical immersion. Clinical integration models call for students to complete clinical and didactic coursework concurrently. In a clinical immersion model, students are immersed full time in their clinical environment with little or no didactic coursework occurring at the same time (Edler, Eberman, & Walker, 2017). The model of clinical education utilized, how long clinical education lasts, and when it occurs vary greatly by profession and institution (Edler et al., 2017)

Historically, clinical education in allied health professional education evolved from medical-education programs for training physicians. Once designed as apprenticeships, clinical education today is often designed as competency-based instruction, requiring closer supervision of students and focusing on individual skills to ensure that proficiency is met (Weidner & Henning, 2002). Physical therapy students are evaluated in clinical education through a

competency-based system in which clinical skills needed by entry-level physical therapists are evaluated (Luedtke-Hoffmann, Dillon, Utsey, & Tomaka, 2012). While the benefits of clinical education and the competency-based models are well documented (Maloney et al., 2013; Rapport et al., 2014; Parsh & Taylor, 2013; Courtney-Pratt, FitzGerald, Ford, Marsden, & Marlow, 2011), there remains discussions on the challenges of developing and maintaining a clinical education program and perceived value of the benefits (Dewitt et al., 2015; Maloney et al., 2013; Walsh, 2015). Commonly cited challenges include lack of practitioners willing to serve as clinical mentors (DeWitt et al., 2015), concerns of legal liabilities (Maloney et al., 2013), and most significantly the cost of maintaining a clinical education program (Walsh, 2015). Costs associated with maintaining a clinical education program may include supplies and facility fees, administrative costs, personnel training costs and compensation for clinical preceptors and program employees (Walsh, 2015). The cost alone of maintaining a clinical education program for allied health pre-professionals creates concerns among higher education administrators (Walsh, 2015).

### **Critical Thinking, Clinical Reasoning and Clinical Education**

Critical thinking has been defined in a variety of ways. Bok (2006) described critical thinking as the ability to ask pertinent questions, recognize problems, identify varied views of an issue, and search for and use relevant data to make carefully reasoned decisions. It has also been defined as the disciplined process of actively conceptualizing, applying, analyzing, and/or evaluating information gathered from or generated by observation, experience, reflection, reasoning, or communication (The Foundation for Critical Thinking, 2015). Chan (2013) defined critical thinking as a four-step process including gathering and seeking information, questioning and investigating, analysis, evaluation and inference, and problem solving and

application of theory. Others go on to state that “Critical thinking requires a reflective component and some level of experience to make decisions” (Bates, Sikkema, Nynas, & Culp, 2017, p. 21). All of these definitions contain aspects pertinent to the experiential learning theory (Kolb, 1984). Critical thinking skills enhance clinical reasoning, which is a necessary skill for allied health professionals in the changing world of medicine (Brudvig, Mattson, & Guarino, 2016).

Clinical reasoning is defined as the ability of clinicians to apply critical thinking skills in a clinical setting (Coker, 2010). The term clinical reasoning has been used interchangeably with clinical decision making and critical thinking in various literature (Furze et al., 2015). The authors suggested a small difference between the terms though, defining clinical reasoning as the critical thought process and judgement behind the practitioner’s actions, and clinical decision making as the action that is taken as a result of the thought process. Experiential learning has been shown to support the development of critical thinking skills and clinical reasoning in allied health students (Coker, 2010). In one study, using physical therapy students as the participants, researchers found that clinical reasoning development is a gradual process over time and that increasing the intensity and depth of the reflective process is a key component (Furze et al., 2015). As with other allied health professions, developing critical thinking skills and clinical reasoning has been found to be a significant factor in the success of AT clinical education as well (Aronson et al., 2015).

### **Athletic Training Education**

Even before being recognized as an allied health profession by the AMA, the AT educational system was similar in design to many other allied health fields. The development of educational standards began as far back at 1956, when the NATA formed the Committee on

Gaining Recognition, who was charged with the development of a model curriculum for professional preparation and certification requirements (Delforge & Behnke, 1999).

The first recommendations for professional education programs were approved by NATA in 1959, but it was not until 1969 the first undergraduate curriculum program was approved (Breitbach & Brown, 2011; Cummings, Stanley-Green, & Higgs, 2009; Delforge & Behnke, 1999). Recommendations by NATA for curriculum development included general courses in biology, physics, chemistry, and social sciences, as well as more specific courses such as anatomy, physiology, nutrition, first aid, and AT techniques. It was also encouraged that programs initiate laboratory classes or clinical experiences into the requirements. Along with this core curriculum, which provided commonly requested prerequisite courses for physical therapy school, NATA also encouraged schools to require teacher education courses for degree completion. The idea was to graduate students who either went on to attain a graduate degree in physical therapy or who were qualified to teach in a high school while also serving as an athletic trainer (Breitbach & Brown, 2011; Delforge & Behnke, 1999). There were limited employment opportunities for athletic trainers during this time, and by encouraging additional credentials, AT graduates would become more marketable (Delforge & Behnke, 1999).

Throughout the late 1960s, undergraduate and graduate programs began to form, resulting in the first four undergraduate programs being officially recognized by NATA in 1969 and the first two graduate programs being recognized in 1972 (Delforge & Behnke, 1999). The first national certification exam was also administered in 1970 (Breitbach & Brown, 2011; Delforge & Behnke, 1999). The development of educational programs and the certification exam seemed to parallel each other and guide the growth and development of AT education (Weidner & Henning, 2002).

It is also important to note that from the late 1970s to the early 2000s there was an alternative option to become eligible to take the national certification exam. Students could choose to complete between 1500-1800 internship or apprentice hours with an athletic trainer. This option gave students who attended a university that did not offer an accredited program the opportunity to enter the profession (Weidner & Henning, 2002). The internship route to certification ended, however, when on January 1, 2004, NATA and BOC recognized only one official route of eligibility to sit for the certification exam which was to graduate from a CAATE-accredited program (Breitbach & Brown, 2011; Cummings et al., 2009; Ostrowski & Marshall, 2016). This was a significant change for AT education, recognizing the importance of a standardized curriculum (Cummings et al., 2009).

The requirements of educational programs continued to change and progress as the role of the professional athletic trainer advanced. After the allied health recognition by AMA in 1990 standards were created for accreditation through the AMA's CAHEA and the first entry-level educational programs were recognized in 1994 (Delforge & Behnke, 1999; Perrin, 2007).

The accrediting body for ATPs has changed several times over the years, and today is maintained by the CAATE. The CAATE is currently responsible for the accreditation of more than 360 professional programs, 16 post-professional programs and two residencies (CAATE, n.d.). The standards for accreditation, developed by CAATE dictate administrative, programmatic design and curriculum requirements for accredited programs. Programs are expected to teach knowledge, skills, and abilities that match NATA's (2011) 5th ed. Athletic Training Competencies and the BOC's (2015) 7th ed. Practice Analysis. The current standards require teaching be delivered in classroom, clinical, and laboratory environments (CAATE, 2012) but leaves much of the delivery design up to program administration (Edler et al., 2017).

Clinical education experiences are required of all AT students, on a variety of patient populations and in various healthcare settings, and there must be interdisciplinary education with other healthcare fields incorporated (CAATE, 2012).

### **Athletic Training Professional Degree Level**

The NATA Board of Directors was presented with a white paper report (NATA TFPEAT, 2013), compiled by a workgroup of AT faculty and professionals, summarizing research into what the appropriate professional degree level is for AT. The workgroup was developed and charged with the project based on the *Future Directions in Athletic Training Education* report (NATA Executive Committee for Education, 2012). This report explained that there is a trend in professional education of healthcare providers in which the required degree for professional practice is increasing. It called for a critical examination of the appropriate degree level for preparation of athletic trainers (NATA Executive Committee for Education, 2012).

The findings of the white paper study (NATA TFPEAT, 2013) revealed both positive and negative possibilities of a transition to a graduate level degree. The key positive findings included that a graduate level degree will better align ATs as peers to other healthcare professionals, factors fundamental to providing quality care are likely to improve, students will be more likely to have career aspirations of remaining in the AT profession, IPE will be enhanced, and a more efficient education system will develop (NATA TFPEAT, 2013). Possible implications of the degree change could result in an increase of educational costs to the student, the loss of traditional graduate assistants as a workforce, the demand for doctoral trained faculty may increase, and trends in other fields show that the minority population in the profession may decrease (NATA TFPEAT, 2013). It was also noted that though a higher degree traditionally corresponds with salary increases, it is difficult to project if athletic trainers could expect to see



an increased salary if the minimum degree was raised to a graduate level. The paper culminated by recommending that the professional AT degree be at the graduate level only (NATA TFPEAT, 2013). This recommendation was supported in a separate study by Mazerolle et al. (2015) in which 62% of the AT education stakeholders who participated in the study supported the transition. The same themes emerged as reasons for the transition and possible negative implications.

Based on these (Mazerolle et al., 2015; NATA TFPEAT, 2013; NATA Executive Committee for Education, 2012) and other various discussions, meeting, and considerations, NATA and CAATE jointly decided that the appropriate and required level for all professional ATPs is that of the graduate degree (CAATE, 2015). The 333 undergraduate programs that were in existence in 2015 (Mazerolle et al., 2015) will be required to transition to the graduate level, accepting no students into an undergraduate program after the year 2022 (CAATE, 2015). This date was set in an effort to ensure adequate time for programmatic changes that will need to take place (CAATE, 2015).

Though the proposed curriculum standards for a graduate level are much more specialized than what they once were in the early days of AT, the requirements are also showing signs of reverting back to some of the early requirements. With the addition of educational years, there will be time for the incorporation of more general study requirements, creating a science knowledge base for AT students (NATA TFPEAT, 2013). Possible requirements of graduate level programs include chemistry, biology, physics, and physiology as prerequisites (CAATE, 2016).

### **Athletic Training Educators**

Current CAATE accreditation standards specify several different classifications of AT educators. Each program must have a program director, who has responsibilities in maintaining accreditation standards, and planning, implementing, delivering, and assessing the educational program (CAATE, 2012). The CEC ensures student clinical progression along with evaluating clinical sites and preceptors and training preceptors (CAATE, 2012). Athletic training faculty are those faculty members that teach within the AT didactic curriculum. These three classifications all require BOC certification and state licensing when appropriate. Lastly, preceptors are educators, who teach clinically, working with students during clinical education. Based on the definition of a clinical preceptor, these individuals may be a BOC-certified athletic trainer; however, they may also be a licensed professional in another allied health field (CAATE, 2012).

Recent discussions regarding the appropriate degree designation for AT have identified several challenges facing educators and professionals (NATA TFPEAT, 2013). With the decision made that the appropriate professional degree for AT is at the graduate level (CAATE, 2015), all current undergraduate programs must begin to appraise their viability as a graduate program and begin planning for such a transition. One aspect that must be considered is the qualifications of AT faculty members (NATA TFPE, 2013; Pitney, 2012). The proposed standards for future graduate level AT education dictate that though the degree level required to teach in an accredited ATP is at the discretion of each institution, the program director must hold an earned doctorate, with the exception of those grandfathered out of this rule (CAATE, 2016). The current minimal degree at the undergraduate level allows for many athletic trainers to meet qualifications of teaching holding a master's level degree. The need for AT educators with a

doctoral degree is rising based on institutional requirements for teaching at the graduate level (Payne, Walker & Mazerolle, 2016; Pitney, 2012)

Craig (2006) questioned the preparation of AT faculty members. They not only have to be content experts, but also, they must have the skills to effectively teach and master pedagogy. A doctoral level education is intended to prepare an individual for a career in higher education as a faculty member (Mazerolle, Barrett, & Nottingham, 2016). However, Mazerolle et al. (2016) also noted that doctoral education favors the development of researchers. In reality, most AT faculty positions are closely linked with teaching and service. Athletic training faculty not only teach classes but also often fill administrative roles such as program director (PD) or CEC (Mazerolle et al., 2016). Payne and Berry (2014) suggested that experiences and mentorship are key aspects in the socialization of AT faculty as they make the transition from doctoral student to faculty member. Those teaching AT courses while holding only a master's level degree are unlikely to have training in pedagogy, and therefore must rely heavily on socialization to find the support and guidance needed for success as an educator (Payne & Berry, 2014).

As programs transition from the undergraduate to graduate level, they must consider the faculty needs and qualifications (Pitney, 2012), as well as how to best provide socialization for faculty in this new role as a graduate professor (Mazerolle et al., 2016; Payne et al., 2017). Not only are they educating students in the classroom, but they may have responsibilities of educating educators (preceptors) on best practices in clinical education and must have background knowledge and the teaching skills to do so (Bomar & Mulvihill, 2016; Witt et al., 2013).

### **Athletic Training Clinical Education**

The clinical education requirement, as set forth in the 2012 CAATE Standards for Accreditation, call for ATPs to create and maintain a clinical education component within their curriculum. The requirements read that “clinical education must provide students with authentic, real-time opportunities to practice and integrate athletic training knowledge, skills, and clinical abilities, including decision-making and professional behaviors required of the profession in order to develop proficiency as an Athletic Trainer” (CAATE, 2012, p. 7). The standards go on to explain the requirements of variety in patient populations, care providers, and health care settings. There must be a minimum of two years of clinical experience in an ATP’s curriculum and students must receive course credit for their clinical education (CAATE, 2012).

Clinical education is very important in the preparation of AT professionals (Benes et al., 2014). Historically, AT education has been more steeped with clinical education than didactic instruction (Weidner & Henning, 2002). This is in contrast to that of other medical professions which traditionally showed a greater emphasis on classroom education (Weidner & Henning, 2002). Laurent and Weidner (2002) found that entry-level certified athletic trainers perceive that approximately 53% of their entry-level professional development came from clinical education, making it a significant portion of their education. In a similar study involving AT students, they contributed much of their confidence in patient care to their clinical experiences (Morin et al., 2014). Benes et al. (2014) reported that clinical education contributes to realization of the role of an athletic trainer and professional socialization. They also found that students who had completed clinical education experiences felt they benefited by being able to apply skills they first had been exposed to in coursework. Attributes that contribute to a student’s overall experience and learning are positive professional role-modeling, supervised autonomy, and the use of teachable moments to encourage the development of critical thinking skills (Aronson et

al., 2015). In one study completed by Thon and Hansen (2015), a majority of AT students identified with the learning style of diverger, which combines the ideas of concrete experience and reflective observation in Kolb's (1984) experiential learning cycle. Divergers are described as being creative and having the ability to multitask as good time managers which are also common characteristics of quality athletic trainers (Thon & Hansen, 2015).

The design of a clinical education program is largely dictated by the ATP and not by CAATE (Mazerolle et al., 2014). In the 1970s to the early 2000s, accredited programs followed the accreditation standard of requiring 600 to 800 clinical hours with a ATC (Weidner & Henning, 2002). Currently, the number of clinical hours is left up to the individual program, with a minimum of two years of clinical education required (CAATE, 2012). A portion of the clinical hours may be completed with other licensed allied health professionals, leaving it up to individual institutions to decide appropriate exposure (CAATE, 2012). The autonomy of designing clinical education programs allows programs to create a clinical education curriculum that matches their individual program goals and objectives (CAATE, 2012). Overall, there are several components to clinical education that contribute to its successfulness. They include the student role, the preceptor role (Aronson et al., 2015; Mazerolle et al., 2016), and the clinical setting (Benes et al., 2014; Bowman & Dodge, 2011).

### **The Role of the Student**

Clinical education, designed to encourage learning and professional preparation of AT students, requires active participation by the student. Athletic training students perceive that they learn best when being engaged with hands-on learning (Mazerolle et al., 2014). The CAATE requires that clinical experiences are educational in nature and that students are not replacing the role of a professional AT staff or medical personnel. Students must be supervised

at all times during clinical education (CAATE, 2012). Clinical hours must be accurately monitored, and fall within the program's set minimum and maximum amount (CAATE, 2012). Clinical experience hours will be most beneficial and encourage optimal learning when the student chooses to actively participate and take advantage of hands-on learning experiences that are presented. Also noted as a contributing factor was the student's ability to develop a strong relationship with the clinical preceptor to whom they were assigned (Mazerolle et al., 2014; Mazerolle et al., 2016; Young et al., 2013). By developing a strong relationship with the supervising clinical preceptor, the student will feel more comfortable asking questions, seeking out learning opportunities, and requesting feedback, all of which will contribute to a better overall learning experience. Astin's (1999) student involvement theory supports the idea that a student who is actively involved in clinical education will be more successful in the program than one who is not. During clinical education, the student ultimately has control over how actively involved they are in the experience, and therefore, influences their overall experience and learning.

### **The Role of the Clinical Preceptor**

When students are completing clinical experience hours, any skills they perform on an actual patient must have been taught to the student prior to that time and must be supervised (CAATE, 2012). Clinical preceptors are responsible for the enforcement of these rules (Mazerolle et al., 2014). The CAATE (2012) defines a clinical preceptor as "a certified/licensed professional who teaches and/or evaluates students in a clinical setting using an actual patient base" (p. 15). Clinical preceptors should encourage active participation in clinical experiences but make sure that lines are not crossed, protecting both the student and the patient. The clinical preceptor should also actively participate in clinical rotations, again to ensure that students are

not conducting skills unsupervised and that students are exposed to learning situations where they can observe, ask questions, practice skills, and reflect upon what they have learned (Aronson et al., 2015; Benes et al., 2014; Mazerolle et al., 2014).

The clinical preceptor serves not only as an educator but also as a mentor for students as they explore the field of AT and become socialized to the profession. Just as students perceive clinical education as a strong supporter of professional socialization, so do clinical preceptors. Preceptors find value in clinical education because it exposes students to the reality of the profession (Benes et al., 2014). Athletic training students observe their clinical preceptor as an individual and professional to not only learn AT skills from but also to learn how an athletic trainer is to work the profession. They observe areas such as the struggle to maintain a work-life balance and how the concept of burnout affects athletic trainers (Nottingham, Barrett, Mazerolle, & Eason, 2016).

Nottingham and Henning (2014a) suggested that feedback should be considered an integral part of AT education. Feedback can be used in the reflective observation phase of experiential learning, assuming that the feedback is purposeful. Specifically, Nottingham and Henning (2014b) found that feedback played a significant role in the clinical education of athletic trainers, with both students and clinical preceptors reporting its value. In the same study, it was found that a majority of feedback that AT students received from their clinical preceptor was in response to a skill they performed, or an experience.

### **Preceptor Preparation**

The role that a preceptor plays in clinical education is significant (Aronson et al., 2015; Mazerolle et al., 2014; Mazerolle et al., 2016; Nottingham & Henning, 2014a, 2014b; Young et al., 2013). Requirements of being a clinical preceptor vary among institutions; however,

CAATE (2012) requires that all clinical preceptors be accredited by the state in which they work as a health care professional. CAATE also requires that all preceptors participate in “planned and ongoing education from the program that is designed to promote a constructive learning environment” (p. 6). The CEC is responsible for ensuring that such training is delivered (CAATE, 2012). Bomar and Mulvihill (2016) suggested that using various pedagogical designs to train preceptors and providing strong support to preceptors is key in their preparation. Just as faculty may or may not be prepared for teaching responsibilities in the earlier years of their career, preceptors must also receive training and support in order to develop and maintain the practices that have been identified as successful in clinical education mentorship. Laurent and Weidner (2001) suggested that preceptors who model appropriate behaviors and practices were most helpful to students. They also provided a list of preceptor tips to be shared during preceptor training that include: (a) display confidence, (b) manage clinical emergencies well, (c) demonstrate skills for students, (d) discuss practical application of knowledge and skills, (e) communicate what is expected of students, (f) demonstrate respect for students, (g) provide opportunities for student to practice both technical and problem-solving skills, (h) be willing to admit when you do not know something, (i) remain accessible to students, and (j) listen attentively to students and athletes (Weidner, 2001). Ford and Velasques (2010) suggested the use of dynamic paired behaviors such as communication and action, demonstration and practice, and instruction and evaluation when serving as a clinical preceptor. They also suggested that the use of feedback should contain six characteristics: (a) be frequent, (b) be specific, (c) be developmentally appropriate, (d) be timely, (e) follow up with practice, and (f) be positive in nature. Throughout all of these varied suggestions and training points that preceptors would and could benefit from being included in their training is the concept of active participation in the



clinical education system and the importance of students having opportunity to observe, reflect, practice and apply skills, just as Kolb (1984) suggested in the experiential learning theory. They also all encouraged student involvement in the activities occurring during clinical education, which supports Astin's (1999) student involvement theory. Clinical preceptors need these concepts to be taught to them before they can be expected to utilize them as clinical educators (Bomar & Mulvihill, 2016).

### **The Role of the Clinical Site**

A clinical site is defined as a physical location where clinical education occurs (CAATE, 2012). The type of clinical sites that are used in AT education varies greatly from program to program. Clinical sites can include traditional collegiate AT rooms, high school AT rooms, clinics, nontraditional/emerging settings that employ athletic trainers, and other healthcare facilities with licensed healthcare professionals who are qualified and trained to serve as preceptors (Bowman et al., 2015). The current Standards of Accreditation (CAATE, 2012) require that students complete clinical education in a variety of settings, exposing students to populations and sites outside of the traditional athletic setting. Beyond this, it is up to each institution to determine the most appropriate way to incorporate this requirement, how much exposure is required, and what type of nontraditional populations and sites to maintain (CAATE, 2012). Benes et al. (2014) supported this requirement with a study that demonstrated that both students and preceptors feel that a variety of experiences is needed in a strong clinical education program. To further support this requirement, Morin et al. (2014) found that students felt the most competent in their ability to treat traditional populations such as athletes because that is who they had the most experience with upon graduation based on the fact that a majority of their clinical experiences occur in traditional settings. Furthermore, Bowman and Dodge (2013)

reported that monotonous clinical experiences are one reason students have departed from AT education prior to degree completion.

### **Graduate Athletic Training Education**

Of the 333 CAATE-accredited ATPs in 2015, only 27 were at the graduate level (Mazerolle et al., 2015). With the announcement that in the future all ATPs must be taught at the graduate level (CAATE, 2015), there has since been an increase in this number; however, at this time the number of graduate programs is still much lower than that of undergraduate programs (CAATE, 2017b). Historically, graduate level professional programs have served a unique role, offering an opportunity for those who have already completed college in another area of study to become an athletic trainer in a shorter time commitment, in two years as opposed to the more traditional four-year undergraduate degree (Bowman et al., 2015a). Coursework offered at the graduate level is advanced, encouraging more scholarly work by students. By eliminating general education courses that are often required in an undergraduate curriculum, more time is available for AT specific coursework and research (Mazerolle et al., 2015). The newly proposed Standards for Accreditation (CAATE, 2016) suggested prerequisite courses in biology, chemistry, physics, and statistics be requirements of graduate students for program admission to ensure they are prepared for the advanced coursework of a professional graduate degree.

The knowledge, skills, and attitudes that are taught at the graduate level based on curricular standards as set by CAATE are no different than those in an undergraduate curriculum (Ostrowski & Marshall, 2015), and the same set of standards are assessed through the national certifying exam based on the practice analysis (BOC, 2017). Several researchers have identified superiorities of ATPs at the graduate level. Bowman et al. (2015a) reported that professional master's programs have a higher retention rate as well as higher career-placement percentages

when compared to undergraduate ATPs. When asked why graduate programs have the higher success benchmarks mentioned, PDs responded with beliefs that they serve a more mature and committed student and that they can provide improved professional preparation. CAATE also reported a greater percentage of graduate degree BOC exam candidates pass the certification exam on the first attempt (CAATE, 2017a). Bowman et al. (2015a) described the average professional program as having an enrollment of 28.1 students and a retention rate of 88.5%. Graduate level professional ATPs are encouraged to be housed with other health care degrees, opening up opportunities for more advanced equipment as well as alliances for IPE (NATA TFPEAT, 2013).

### **Graduate Athletic Training Clinical Education**

Clinical education at the graduate level offers several unique opportunities. Because the amount of coursework is often less in graduate school, more time is available for clinical experiences (Bowman et al., 2015a). Unique experiences are also available to graduate students because of health school alignment, providing access to patients and settings not traditional to the profession (Bowman et al., 2015a; Mazerolle et al., 2015). Outside of descriptive data (Bowman et al., 2015a; Bowman et al., 2015b; Ostrowski & Marshall, 2016) and a small number of studies investigating perspectives of stakeholders of clinical education (Bowman et al., 2015a; Bowman, Pitney, Mazerolle, & Dodge, 2015b), there is little research that describes the specific benefits, challenges, and best practices in graduate level AT clinical education (Bowman et al., 2017).

### **Clinical Integration vs. Clinical Emersion**

CAATE released a draft of the standards that are being written for ATPs in the future, reflecting the requirements of graduate level professional ATPs. In the proposed Standards of

Accreditation (CAATE, 2016), graduate level clinical education would require an aspect of clinical immersion to be completed at least once by a student, in which an AT student would work with their clinical preceptor in a full-time manner. This requirement encourages a realistic view of the profession and gives the student the opportunity to be exposed to all aspects of the job, not just what happens at specific times of the day (Edler et al., 2017). More commonly AT education, a clinical integration model is used in which students complete clinical and didactic education requirements concurrently (Edler et al., 2017). Edler et al. (2017) estimated that clinical integration models call for 50-75% of a student's course load to be didactic in nature and the remaining load to be earned by completing a few clinical hours a day 4 to 6 days a week. These clinical integrations occur over 4 to 6 semesters. This design is likely most commonly used because of the inflexible nature of undergraduate education (NATA, 2013).

Clinical immersion, on the other hand, is an intensive experience that is designed to enable graduates to transition readily to practice following graduation (Diefenbeck, Plowfield, Herrman, 2006). In the clinical immersion model, students complete clinical experiences in which 100% of their course load is dedicated to clinical experience (Edler et al., 2017). Physical therapy education requires clinical immersion as an educational component (Edler et al., 2017). Nursing accreditation agencies suggest clinical immersion as well, though accreditation standards do not require it as a mandatory component (Edler et al., 2017). The freedom of curriculum design that a graduate degree offers allows clinical immersion to be a realistic component of a clinical education plan for AT (NATA, 2013). There are some established ATPs that already have clinical immersion requirements established (Edler et al., 2017). Clinical immersion is supported by Diefenbeck et al. (2006) in their study that showed that clinical immersion in nursing education improved test scores and offered better learning opportunities for

students. Though other health professions often utilize the idea of clinical immersion, this concept is new to many ATPs and is not heavily researched in regards to its benefits in AT education (Edler et al., 2017).

### **Differences in Undergraduate and Graduate Students**

Differences have been noted between graduate and undergraduate students throughout many disciplines and learning environments. Aside from the obvious difference of education levels, research shows that graduate students have a greater level of self-motivation, more developed critical thinking skills and experience less procrastination than undergraduate students (Artino & Stephens, 2009). In another study (Smith et al., 2010), which examined the different approaches to learning of undergraduate and graduate pharmacy students, the graduate students were more oriented toward meaningful learning and showed a stronger desire for applying in their profession the knowledge they have acquired than their undergraduate counterparts. They had a stronger preference for learning through doing and mastering skills directly related to their desired profession (Smith et al., 2010). These preferences support the use of Kolb's experiential learning theory in graduate level education, specifically in allied health fields. Smith et al. (2010) explained that the ideal learning environment promotes motivation in students to acquire a deep understanding of material and master content, while at the same time developing the skills for independent and self-directed study. Graduate students, having a strong desire to apply vocational skills and have meaningful learning experiences (Smith et al., 2010), are likely to benefit from an educational experience that utilizes the four cycles of experiential learning as explained by Kolb (1984). Graduate students who participate in community-based research have a greater increase in the development of research skills when compared to undergraduate students completing community-based research (George, Wood-Kanupka, & Oriel, 2017).

Program directors of graduate ATPs perceive their students to be more mature and committed to the profession than undergraduate students (Bowman et al., 2015b). In a study involving undergraduate and graduate medical students, Sandover, Jonas-Dwyer, and Marr (2015) found that graduate students prefer a deep approach to learning, seeking more understanding, whereas undergraduate students prefer a superficial approach, with the differences becoming most obvious in clinical years of education. They also found that there are significant differences in how the two groups cope with stress. This study demonstrated significant differences in undergraduate and graduate students. Research suggests that there is a difference in undergraduates and graduates who are enrolled in professional ATPs (Bowman et al., 2015; NATA TFPEAT, 2013; Sandover et al., 2015)

### **Summary**

As demonstrated by this literature review, AT education has gone through many changes since its initial development and is again going through a transition. Clinical education plays a significant role in not only AT education but also allied health education. There is a base of research when it comes to clinical education in allied health and AT, giving a voice to both students and clinical preceptors. Current research demonstrated the value of clinical education in undergraduate ATPs (Aronson et al., 2015; Benes et al., 2015; Mazerolle et al., 2014; Mazerolle et al., 2016), but has yet to specifically evaluate the role that it plays in graduate level AT education. This study sought to build on the research that has been completed in regard to AT clinical education and investigated the identified void of graduate level clinical education.

## **CHAPTER THREE: METHODS**

### **Overview**

Chapter Three will explain the design of this research study, as well as define the research questions that this research study sought to answer. The site and participants will be defined and methods of data collection will be discussed. The methods used for data analysis will be explained, based on Moustakas' (1994) recommendations. The role of the researcher is thoroughly explained to allow readers to understand the lenses through which the analysis was completed. Lastly, credibility, validity, and reliability will be explained and ethical concerns will be addressed.

### **Design**

The purpose of this study was to describe the shared clinical education experiences for post spring 2014 graduates of a CAATE-accredited professional master's degree program. To achieve this purpose, a qualitative transcendental phenomenology study was completed. Creswell (2013) said that qualitative research is useful when trying to capture interactions among people by empowering individuals to share their stories. Qualitative research was appropriate for the identified problem as it gives a voice to those who have completed clinical education at the graduate level. Qualitative research was appropriate for this study. Using quantitative research would not have captured the essence of being a graduate level clinical education student in an ATP. The voices and perceptions of participants' experiences were needed to capture this phenomenon, which was best be achieved through qualitative research. Qualitative research allows for stories to be heard, and trends to be found in the experiences of those who share this phenomenon (Creswell, 2013).

Phenomenology is an appropriate methodology for investigating human experiences (Moustakas, 1994). According to van Manen (1990), phenomenology is an immersion into a specific subject of interest, in this case AT clinical education, and it “describes how one orients to the lived experience” (p. 4). Creswell (2013, p. 76) stated that “A phenomenological study describes the common meaning for several individuals of their lived experiences of a concept or phenomenon”. In regards to this study, the phenomenon being examined was that of AT clinical education at the graduate level. This phenomenon is one that only a small number of people have experienced, and is a shared experience of those that have. Study participants met the criteria of being a part of this phenomenon, giving a shared experience from which trends can be identified.

Specifically, transcendental phenomenology was used in this research. Transcendental phenomenology looks at perceptions of the participants, giving them a voice through a first person point of view (Moustakas, 1994), which is appropriate when the researcher can consciously separate his/her own experiences from the participants. Being that I have never experienced AT clinical education at the graduate level, I have relied on the first person points of view of the participants to gain insights into the experience of this phenomenon. Any preconceived notions or judgements I may have had about graduate level clinical education were identified through the process of bracketing. Bracketing helped to identify any judgements I had already made about AT education, clinical education, and graduate level education. Bracketing includes writing out personal thoughts and experiences that could influence the interpretation of the data, thereby making the researcher aware of them, removing them from influence. Bracketing is the process used for epoche to set aside biases and preconceived ideas that a researcher may have (Moustakas, 1994). This process of bracketing and achieving epoche is



central to transcendental phenomenology and sets it apart from other forms of phenomenology. Transcendental phenomenology was appropriate for this study because my background is not so closely entwined with the phenomenon that I cannot remove my personal biases. By identifying the biases that I have, I worked to control their effect on data analysis.

### **Research Questions**

**Central Research Question:** How do master's level athletic training program graduates describe their experiences in clinical education?

**Sub-Question One:** How do participants describe the type of learning opportunities they were granted during clinical education?

**Sub-Question Two:** How do participants describe the influence of clinical preceptors on the overall experience of clinical education?

**Sub-Question Three:** How do participants describe the influence that the clinical setting has on the overall experience of clinical education?

### **Setting**

To be eligible to participate in this study, participants had to have graduated and left the setting that created the phenomenon. That setting was clinical education sites to which students were assigned as graduate AT students. The sites at which they have completed clinical education varied by participant. Participants had several clinical education sites that they recalled when sharing their experiences of this phenomenon.

Based on the described delimitations and limitations, participants were found from various sites, as they had already graduated from a professional master's ATP. Data was collected at a location that was convenient for the participants, in many cases this being electronically. Initial contact was made with PDs from all professional AT graduate programs

who have had a graduating class, requesting that they invite alumni to participate in this study. I sent an email to PDs, addressed to possible participants inviting participation, which can then be forwarded to alumni. The PDs of graduate level professional ATPs were identified through the CAATE website database. Participants from small, large, private, and public programs were recruited, which encouraged maximum variation sampling (Creswell, 2013). All programs included in this study have been accredited at the graduate level for a minimum of two years, allowing for the required time of two years for graduates to be produced.

### **Participants**

Graduates of professional master's ATPs served as the participants in this study. I used purposeful sampling (Creswell, 2013) to seek out those who have graduated after the spring of 2014. The current accreditation standards were adopted by CAATE and subsequently by accredited programs in 2012, so by setting inclusion criteria as graduating after spring 2014, it was ensured that all participants had completed clinical education under the latest standards. As the researcher, I contacted the PDs of accredited entry-level ATPs, asking that they distribute an email to alumni who met the criteria, requesting participation.

Participants were also recruited through the use of snowball sampling (Creswell, 2013) and social media. Snowball sampling is a technique used to identify possible participants. Participants were recruited through professional contacts as well. Those in the profession with whom the researcher has a relationship suggested people whom they believed to qualify and would be information-rich (Creswell, 2013). The profession of AT has a strong network, which supported snowball sampling for this research. I personally contacted those identified as possible participants, requesting participation. Social media was also utilized to recruit participants. A general statement was placed on my personal social media account asking my

professional contacts if they knew of any possible participants. This resulted in both information about possible participants being provided to me, as well as participants contacting me directly, asking to participate. Any possible participant information that was provided to me, I asked that the contact ask them to contact me if they were interested in more information about the study. This ensured that participants did not feel pressured to participate nor did they feel that their privacy was invaded by having their contact information being distributed. Once interested participants were identified, a letter was sent to them formally requesting participation and explaining details and requirements of participation. A copy of this letter can be found in Appendix C.

The target sample size was 12-15 as recommended by Creswell (2013), with the total number of participants being determined when saturation was achieved. Saturation is defined as the point at which it is unlikely to get any new information through data collection (Mason, 2010). To determine participant qualification based on the delimitations, a demographic questionnaire was distributed to all those who responded to the participation request. The questionnaire was used for identification purposes only. The questionnaire was administered through email, and once returned to the researcher, they were evaluated to determine qualified participants. It included identifiers such as what institution the participant completed a master's level AT degree from, year of degree completion, and verification that clinical education was a component of their education (see Appendix B). This ensured that all participants met the set requirements for inclusion in the study.

The study included 12 participants. After the interview with the 12th participant, it was concluded that data saturation had been achieved. Of the 12 participants, ten were female and two were male. The participants represented a total of six different CAATE-accredited entry

level masters' programs; however, six participants were alumni from the same ATP. All participants had completed a minimum of two years of clinical education. All participants completed clinical education experiences at least three different clinical sites.

### **Procedures**

Prior to collecting data, permission was obtained from the degree-granting institution as noted by Creswell (2013). For this research, Liberty University is the degree granting institution. This step in the research process is required to ensure that the study is developed and designed in an appropriate and acceptable method and is conducted in an ethical manner, protecting the welfare of study participants as well as the investigator (Joyner, Rouse, & Glatthorn, 2012). Any data collection prior to Institutional Review Board (IRB) approval is received is prohibited and that data is considered unusable and invalid. Data collection did not begin until the dissertation committee had approved the research proposal and the IRB committee had also approved the study, as recommended by Joyner et al. (2013).

After IRB approval was received (see Appendix E) and the dissertation proposal was approved, identification of participants commenced by contacting the PDs at the selected sites, requesting them to distribute an introductory email to alumni (see Appendix C). The letter introduced the research topic, explained the significance of the study, described the participation qualifications, and listed the requirements of the study as well as the risks of participation and explained that voluntary withdrawal from the study was available at any time. The letter also contained instructions for completing the screening survey for those interested in participating.

Participants were selected based on their completion of the online screening survey, and I contacted them to schedule an interview and plan for the other data collection. Participants were required to return a signed consent form (see Appendix D) before any data was collected. Data

was collected through the use of semi-structured interviews which were audio recorded and transcribed professionally. While the preference was for interviews to be conducted face to face, a majority of them occurred via telephone or Skype due to limitations of distance and schedule.

When saturation of data was becoming evident in the interview data, I invited all participants to interact through an online discussion board, giving opportunity for sharing of experiences. These online asynchronous focus group discussions were completed using the platform of focusgroupit.com. Prompts were provided to start discussion among participants. The discussion boards were available for two weeks for participation. A reminder email was sent out once to participants encouraging participation. After discussion board conversation had ceased, the conversations were be saved as a Word document for storage purposes and to be used in data analysis.

The third method of data collection was that of prompted journaling. I asked each participant to identify one preceptor that they felt was influential in their learning during clinical education and explain the role they played in learning and overall experience during clinical education. In a second journal entry, they were asked to identify one clinical site that was influential in their professional preparation and explain why. These journaling prompts were sent out as a Word document through email, and participants were instructed to email responses back electronically.

Data was analyzed through coding, and themes were formed following the procedure recommended by Moustakas (1994). This included several episodes of coding of data to identify common themes among participants and data collection methods.

### **The Researcher's Role**

I am employed at a small university in southern West Virginia as the CEC and instructor for a professional undergraduate CAATE-accredited ATP. The responsibilities of my role as a CEC are to manage the clinical education aspect of the ATP curriculum. This includes assigning students to approved clinical sites and clinical preceptors, delivering continued training to clinical preceptors, ensuring that all clinical sites meet specified requirements, and recruiting new clinical sites and clinical preceptors. I also manage the tracking system used to monitor students' clinical experience hours and collect evaluations completed in association with clinical experiences. I mediate any issues, concerns, or situations that arise involving AT students and clinical preceptors. My ultimate responsibility is to ensure that the students in the ATP for which I work are getting the best possible clinical education experiences. I serve as an advocate for their learning. Through this role, I have developed a thorough understanding of the role that clinical education plays in an undergraduate program. Through trial and error, I have determined what I believe to be best practices for designing and managing an undergraduate clinical education program, but have never had any direct connection to the clinical education program of a professional master's program.

The undergraduate program for which I work utilizes graduate students who are already nationally certified ATCs as clinical preceptors. They are not graduate students in a professional AT master's program, but rather in a health promotions degree program. They are working in the AT rooms as certified graduate assistants rather than students gaining clinical education experience. Because of their classification as certified graduate students, they would not meet the eligibility requirements to participate in this study, therefore creating no conflict of interest, nor having an influence over the interpretation of data.

Through my experience as a CEC, I have developed my own set of biases regarding the role of clinical education in ATPs, which I bracketed out in an effort to obtain a state of epoche. Epoche is described by Moustakas (1994) as a situation in which the researcher consciously suppresses their own thoughts, experiences, and perceptions in regard to the phenomenon being studied. Through bracketing, or writing out my own identified feelings and experiences (Creswell, 2013), I tried to remove my biases and experiences from the data analysis of this research.

As a student, I completed three years of clinical education experiences as a required curricular component. I consider my experiences to be positive in nature, as they provided to me excellent learning opportunities. Based on my experiences, I have a strong belief in the benefits of clinical education. I believe that the more active a student is in their clinical experience, the more they will learn. I came to this belief through my own experiences. I can remember being a first-year clinical student and being very reserved. The second two years I was in the ATP and completing clinical hours, I took a much more proactive approach to my clinical time and was much more involved. I actively sought out learning experiences and skills practice as opposed to trying to hide behind others. Because of this experience, I can easily make a connection between the student involvement theory (Astin, 1999) and the amount of learning that occurs during clinical education. To analyze the data I collected for this research accurately and objectively, I bracketed out my experiences as a student, recognizing that not all clinical experiences are the same and not all students interpret situations the same way I do.

It is also important to note that, based on Kolb's (1999) Learning Style Inventory, my dominant learning style is accommodator which pairs well with hands-on learning. Because of my learning style, it would make sense that I have a strong belief in the value of clinical

education. As the researcher, I recognized that all participants may not share my learning style, which may influence their experiences of clinical education and the value they place on it.

In regard to biases and connections to professional master's programs, I have never worked for a program of this level. I have no direct experience with professional master's degree ATPs. I have worked with several graduates of a professional master's program and heard their stories of their experiences. It is anticipated that as of the August 2020, I will be teaching in a graduate level program, and managing the clinical education aspect of the curriculum. This degree shift is what drives my interest in this research. To best fulfill my role as CEC, I need to be armed with knowledge on the best practices in designing a graduate level clinical education program but want to discover these best practices objectively and not based on biases or past personal experiences.

### **Data Collection**

Qualitative research relies on rigorous and varied data collection techniques. Creswell (2013) referred to data collection as a "series of interrelated activities aimed at gathering good information to answer emerging research questions" (p. 146). Though traditional data collection in qualitative studies has focused on interviews and observations, Creswell (2013) encouraged researchers to incorporate new and creative methods of data collection as well. Data for this study was collected through the use of semi-structured interviews, asynchronous online focus group discussions, and prompted journaling.

### **Interviews**

Both Moustakas (1994) and Creswell (2013) agreed that during a phenomenological study, data is often collected through in-depth interviews with participants. Moustakas (1994) recommended addressing two main ideas to drive the semi-structured interviews: identifying



what participants have experienced in terms of the phenomenon and what contexts or situations have typically influenced or affected the experiences of the phenomenon. Interviews primarily use open-ended questions to collect thick, rich data. The questions should build on each other and allow for further exploration of ideas that may surface from participant responses (van Manen, 1990). Interviews were used to collect data for this research project, with at least one interview being conducted with each participant. Interviews were conducted in person, over the phone and through the use of Skype. Prior to the interview, the method was agreed upon by the researcher and the participant. The type of interview that was conducted was heavily influenced by the participant, their schedule, their location, and their preference. All interviews were conducted in quiet environments that lacked distractions and background noise. Interviews were guided with the use of the developed interview guide (see Appendix F), but questions did vary slightly based on the answers that the participants provided and the experiences that they shared.

All interviews were audio recorded and transcribed by a professional transcription service. Interview transcriptions were saved digitally on a password protected computer to ensure confidentiality and privacy was maintained. Data collected during the interview process contributed to all four of the posed research questions (see Appendix F for the Interview Guide):

1. Why did you choose to earn a degree in athletic training?
2. How would you classify yourself as a learner? Describe the type of learning experiences that you benefit most from.
3. Describe your experiences as an athletic training student.
4. How would you describe your clinical education experiences?
5. Describe the role, if any, that clinical education played in your formal education and learning?

6. Explain any aspects of clinical education that you found most helpful in your learning and degree pursuit?
7. Explain any aspects of clinical education that you found most frustrating? Include any challenges that you experienced with clinical education.
8. Describe the influence of your clinical experiences on your ability to work as an ATC post-graduation?
9. Identify and discuss the clinical preceptors to whom you were assigned during clinical education experiences. Feel free to share both good and bad experiences.
  - a. Discuss the characteristics of the most influential clinical preceptor with whom you worked during clinical education.
10. Explain the clinical sites you were assigned to during clinical education experiences. Feel free to share both good and bad experiences.
  - a. What were the most influential clinical site you were assigned to work at during clinical education.
11. Recall a time when you had a significant learning experience during clinical education. Explain what made it significant or memorable?

The interview questions were designed to support and provide data that would be useful when answering the research questions. The questions investigated the participants' lived experiences as an entry-level AT graduate student in clinical education. Questions one, two, and three are ice breaker questions, used to encourage dialogue and get the participants thinking back to their time and experiences as an AT student. Questions four and five began to focus the interview on clinical education and seek to get an overall essence of the experience, answering

the central research question. Question seven also helps to explain the overall experience of clinical education.

Questions six, eight, and eleven were asked to allow the participants to reflect on their learning experiences, which allowed for comparison of their experiences and Kolb's (1984) experiential learning theory. These questions were posed to collect data that was be useful in answering sub-question one.

Interview question nine provided useful data to formulate an answer for sub-question two, relating to clinical preceptors. By asking the participants to reflect on the preceptors they worked with during clinical education, I sought to gather information about how preceptors influence the learning experience. Interview question ten provided data to guide in formulating an answer for research sub-question three. Kolb's (1984) experiential learning theory and Astin's (1999) student involvement theory were examined through interview questions nine and ten.

### **Asynchronous Online Focus Group Discussion Forum**

After data saturation from interviews was achieved, all participants were invited to participate in an asynchronous online focus group discussion, through the use of an online discussion board forum, focusgroupit.com. This discussion board served as a place for digital conversation between participants. Asynchronous online focus group discussion forums bring together participants to discuss a particular topic or a range of issues (Schwandt, 2007).

Asynchronous online focus group discussion forums offer identity protection that in-person focus groups do not. They also allow for connection of participants regardless of geographical location (Woodyatt, Finneran, & Stephenson, 2016). The nature of the profession AT calls for

abnormal and busy work schedules. An asynchronous format was chosen to allow participants to comment and contribute to the discussion when their schedules allow.

The asynchronous online focus group discussion forum gave participants an opportunity to hear others' experiences (Woodyatt et al., 2016) which may have reminded them of significant experiences they did not mention in the interview portion of data collection. Multiple discussion forum threads were created, asking participants to post responses to the initial thread or to the posts of other participants. Appendix G contains the prompts. Participants were asked to make at least one primary response to each forum question and respond to at least two other participants' primary responses. This encouraged discussion to develop. Each discussion forum thread had a unique guiding question. All discussion forum posts were downloaded and saved on a password protected computer. Participant confidentiality was protected by assigning each person a pseudonym which they used when logging responses (Woodyatt et al., 2016). The data collected from the asynchronous online focus group discussion forums aided in answering all four of the posed research questions: (see Appendix G):

1. What is your favorite memory of your AT clinical education?
2. What do you believe are characteristics of a strong clinical education experience?
3. If you could choose one requirement that is mandated for students during clinical education experiences what would it be?

### **Journaling**

Following each participant's interview, he/she was asked to journal about their clinical experiences. Specifically, I asked each participant to identify one preceptor that they felt was influential in their learning during clinical education and explain the role he/she played in learning and overall experience during clinical education. Some participants included personal

stories or feelings as to why that preceptor was significant and how he/she made a difference, while others shared a list of attributes that made them influential. A second prompt was given, asking participants to describe their most influential clinical site and why they believed that to be the case (see Appendix H).

Journaling is useful in qualitative research as it offers a chance for storytelling and possibly drawing out rich data when the participant is allowed time as he/she reflects and converts his/her thoughts and experiences to text (Creswell, 2013). Journaling about clinical experiences after the interview allowed participants to tell stories based on memories that may have surfaced following the interview.

Participants were asked to submit their journals via e-mail. After I received the responses, they were saved on a password protected computer and assigned pseudonyms that matched those assigned during interview transcription. I used data collected through journaling to assist in primarily answering research sub-questions two and three.

### **Data Analysis**

Phenomenological research methods should “develop individual textual and structural descriptions; composite textural and composite structural descriptions, and a synthesis of textural and structural meanings and essences of the experience” (Moustakas, 1994, p. 182). In this study, I used the data collected to develop a thick, rich description of what it is like to be a graduate AT student in clinical education.

As recommended by Moustakas (1994), data analysis began prior to data collection with bracketing and epoche. Creswell (2013) said that full removal of personal bias is not possible, but bracketing can minimize the effect on data interpretation. Moustakas (1994) said, epoche can prepare the researcher to receive new knowledge and see the phenomenon through a clean

lens as if it were for the first time. I wrote out a description of my personal experiences with the phenomenon and any related experiences that may have influenced my interpretation of data. I kept a journal which housed my experiences, biases, and preconceived thoughts and referred back to it whenever I felt that bias was interfering with objective data analysis. There were several times during the analysis section when I referred back to my journaling to remind myself of my preconceived beliefs and experiences. Setting aside my prejudgments about the phenomenon helped to limit their influence on the data interpretation.

After data had been collected and interviews transcribed, data analysis continued in a systematic manner as recommended by Moustakas (1994) for effective for transcendental phenomenology. Creswell (2013) explained that the researcher analyzes the data by reducing the information to significant statements or quotes and combines the statements into themes, a process he referred to a phenomenological reduction. The process started with an initial read-through of the transcripts of the interviews and focus group texts and of the journal documents. I made simple notes during the first read-through, including my initial thoughts and biases that I recognized. This process is called memoing (Creswell, 2013). This helped to bracket my bias out of further analysis.

I identified statements that were significant to the research topic in the next read-through. A list of significant statements were compiled by highlighting the text manually on data print-outs, registering each statement as having equal worth. This technique is called horizontalization. Statements that were repetitive or overlapping were only listed once. I compared each significant statement to the purpose statement and research questions to ensure that they were in fact significant to this particular study. I repeated this activity several times in multiple read-throughs to ensure that I had significantly identified all of the statements.

I then assigned the significant statements a code, which was the beginning of theme identification. Creswell explained that “Coding involves aggregating the text or visual data into small categories of information” (Creswell, 2013, p. 184). By lumping significant statements by codes, I began the process of whittling down the amount of data that was being analyzed. These processes were all done manually. The goal prior to data analysis was to identify 25-30 codes as suggested by Creswell (2013). At the conclusion of code identification, a list of 29 codes was compiled.

I then grouped the codes into themes, giving each theme a description of what makes it relatable to the current research. A textural description of the phenomenon was then compiled based on the themes. Verbatim examples are included in Chapter Four in telling the story of the phenomenon and the shared experience of graduate level AT clinical education, or what the participants experienced. The structures of the experience, or how the experience happened is also written based on the themes that presented. I blended the textural and structural descriptions to create a composite description of the phenomenon. This composite description provides an in-depth view of the phenomenon and describes the essence of the experience.

### **Trustworthiness**

The quality of this research is reliant on the trustworthiness in which it is conducted. To ensure that trustworthiness was demonstrated, I addressed credibility, dependability, transferability, and confirmability. Lincoln and Guba (1985) defined trustworthiness as the quality of an investigation and its findings. I also gave attention to ethical considerations to demonstrate that the research was conducted in an ethical manner maintaining the quality and trustworthiness of the study.

### **Credibility**

Proving the integrity of the research and analysis establishes credibility (Ary, Jacobs, Razavieh, & Sorensen, 2006). I have demonstrated credibility through member checks and triangulation of data. I sent each participant a copy of their transcribed interview as well as the completed analysis to review and asked them to respond if they disagreed with the context in which the data was interpreted.

Triangulation of data occurs when “researchers make use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence for validating the accuracy of their study” (Creswell, 2013, p. 302). I compared data from all three data collection methods, looking for common themes found across methods. Themes were identified in multiple methods of data collection to ensure there was triangulation. These themes were then used to answer the research questions.

### **Dependability and Confirmability**

Dependability and confirmability is demonstrated through the use of peer review by an external auditor. An individual that has an understanding of AT education, but no connection to the study (Creswell, 2013) was asked to review the data and confirm the analysis. Peer review provides an external check of the research process, with the reviewer either confirming the assessment of the researcher or arguing against it (Lincoln & Guba, 1985). I sent my analysis to a peer auditor for review to ensure that they find the same themes as I have identified. A peer debriefing session was held to discuss the findings, as suggested by Lincoln and Guba (1985). I met with the peer auditor to discuss their assessment of my analysis. The data analysis should be agreed upon by the peer auditor, confirming the initial researcher’s findings (Lincoln & Guba, 1985). In regards to this research study, the peer auditor agreed with my findings, establishing dependability and confirmability.



## **Transferability**

As Creswell (2013) suggested, transferability is demonstrated by comparing research findings with other related literature. Transferability refers to the ability of the data to be generalized over a larger population than just the sample size (Schwandt, 2013). The likelihood of transferability increases with a varied sample in which participants represent several different master's level ATPs of varied size, location, and curriculum design. Participants were recruited from multiple educational programs to improve the transferability of this study, allowing for the findings to be generalized beyond that of a single ATP. In all, six different programs were represented, of varied size, type, and geographical location. This variety promotes the idea that the findings of this research can be applied to many members of the studied phenomenon.

## **Ethical Considerations**

Before I recruited any participants or collected any data, I submitted the research proposal to Liberty University's IRB. They reviewed the plan and before giving approval for research to commence, ensured that proper precautions were going to be taken to protect the rights and welfare of each participant and participant's alma mater (sites). The IRB approved the research study as proposed (see Appendix E).

When recruiting participants, the general purpose of the study was disclosed and it was clearly explained that participation is voluntary (Creswell, 2013). Also included in the informed consent letter (Appendix D) is the estimated time requirement that participants could expect. Informed consent was granted by each participant prior to any data collection. The informed consent form was sent to possible participants with the participation questionnaire, ensuring that all possible participants were aware of the participation requirements and risks before being approved for participation.

With any research study, the issue of confidentiality is always a concern. To address this, I utilized pseudonyms for both the study participants and sites (institutions from which participants graduated) when mentioned by participants. Protection of data has also been addressed for security reasons. All transcribed and downloaded data is stored on a computer which is password protected, including the recorded audio files. Transcription services will be completed by a professional who has an understanding of the need for confidentiality.

There was also a concern with the use of sensitive or protected material. Participants could have violated Health Insurance Portability and Accountability Act (HIPAA) regulations when recounting their specific experiences while in clinical education. For example, a participant might use a patient's name when describing an injury that they evaluated and treated. To discourage this type of violation, I reminded participants of HIPAA regulations in the consent for participation letter and encouraged them to either leave out names when sharing experiences or to create their own pseudonyms. To further protect the participants and anyone who they may share protected health information about, I planned to convert all first names found in transcriptions to an alternative name. There were no patient names used in the interviews, asynchronous online focus group discussions or in the journaling; therefore, there was no need to substitute alternative names.

CAATE accreditation violations could also be another area of sensitive material that may have been exposed. Reporting accreditation violations can result in accreditation probation or withdrawal. It was my intention to prevent any potential identified violations from having any accreditation effect on the identified ATP. Again, pseudonyms were used in the textual data to protect the site from identification, which was done to encourage the participants to speak openly

and honestly in regards to their experiences, without fear of consequences. This was explained in the consent letter distributed to all participants.

Lastly, participants were made aware of the possibility that undesirable or stressful memories may be elicited during this process. It was not my intent to bring distress to participants by reminding them of negative experiences; however, participants were made aware of the possibility. Should a participant have reported negative psychological or physiological responses to the data collection experience, they would have been referred to professionals who are qualified to treat such issues. There were no reports from participants having negative side effects from participating in this study.

### **Summary**

This proposed transcendental phenomenological study included participants who are graduates of professional master's ATPs and who completed clinical education as a graduation requirement. Purposeful and snowball sampling were conducted to recruit participants, and data was collected through interviews, asynchronous online focus groups, and journaling. Moustakas' (1994) technique for qualitative data analysis was followed, finding first significant statements, which were grouped into themes and used to create the final description or essence of the phenomenon. This chapter allows the reader a glimpse at the lens the researcher viewed the data through and disclosed any bias or personal experiences that could have influenced analysis. Careful and supported planning throughout this research study has ensured that it is trustworthy and ethical.

## **CHAPTER FOUR: FINDINGS**

### **Overview**

This chapter will introduce the participants of the study and present the results of the data analysis. The purpose of this study was to identify the shared experiences of graduate level AT students in clinical education. Twelve participants contributed to the data, sharing their experience of clinical education as graduate level AT students. Data was collected using three different methods: semi-structured interviews, asynchronous online focus group discussion, and prompted journaling. Four themes were identified in the data through analysis. These themes are: opportunities for hands-on learning and real-life experiences, access to educational resources and settings, mentorship and professional socialization, and commitment. These themes will be used to address the research questions of this study.

### **Participants**

Twelve participants provided data for analysis as part of this research study. The participant group consisted of ten females and two males, representing six different graduate level professional ATPs. The following descriptions provided insight into each participant's background and professional life as an athletic trainer. To protect the identity of the participants and the institutions they attended, each individual and institution is identified and described using a pseudonym. Table 1 summarizes all participants.

#### **Ann**

Ann was a 2016 graduate of a CAATE-accredited AT professional graduate level program. Her alma mater was a mid-sized East Coast university in a metropolitan area. Ann's clinical education experience consisted of four semester long rotations along with shorter experiences in physical therapy clinics and doctor offices. Overall, Ann described her

experiences as a graduate student of AT as strong and felt that her clinical experiences prepared her sufficiently for autonomous clinical practice. When asked about her clinical experiences, a majority of her reflection was related to mentorship and relationships and less on actual AT skills and knowledge.

After graduation, Ann entered the profession of AT as a collegiate athletic trainer, providing care for athletes who compete at the NCAA division II level. She served as a clinical preceptor for current AT students at an institution near her place of employment. She reported during the interview regularly reflecting back on her clinical experiences as a student when situations arose in her current position and felt that that reflection helped to guide decisions she has made as a professional.

### **Bill**

Bill was a 2014 graduate of a small mid-west institution. He completed a master's degree in AT from a professional CAATE-accredited ATP. He was a non-traditional student, having worked in another profession for several years before returning to school to earn his AT degree. He completed four semesters of clinical education to meet the requirements of the ATP at a variety of locations. Bill reported in his interview and in the asynchronous online focus group discussion that the hands-on learning opportunities that were available in his clinical experiences were what most prepared him for autonomous clinical practice. Overall, Bill reported feeling satisfied with the clinical experiences he had as an AT student.

Following degree completion and certification Bill took the role of head athletic trainer at a small Division II institution which offered a CAATE-accredited ATP. This job required Bill to serve as a preceptor for this program. In his interview, he stated that he felt that he had modeled his preceptor practices on the experiences he had as a student. The program that he served as a

preceptor for was offered at the graduate level, so he was working with graduate level AT students on a regular basis.

### **Claire**

Claire was a Spring 2014 graduate of a small east coast institution. Athletically, the school competed at a Division III level. Claire explained in her screening survey and in her interview that her clinical experiences consisted of four semester long rotations in which she gained experience at the sponsoring institution as well as local physical therapy clinics. Following graduation, Claire completed a one-year internship at a large Division I institution before obtaining a full time position as a collegiate athletic trainer. She explained in her interview that she chose to complete the internship following graduation as a way to gain more experience before working on her own, as she felt that she was not prepared for autonomous practice straight out of graduate school. The main contributing factor to this lack of confidence, she believed, was limited variety in experiences. When asked about her overall experience as an AT student, Claire explained that she felt that she had chosen the right profession to enter but wished that she would have attended a different school that provided her with more opportunities.

### **Diane**

Diane was a Spring 2018 graduate of a CAATE-accredited professional graduate program offered by a mid-sized institution in the mid-Atlantic region. Athletically, the institution competed as an NCAA III school. The program lasted for two full years (summer, fall and spring semesters), with clinical experiences occurring in the fall and spring semesters. Diane completed four separate clinical experiences while completing the ATP. Overall, Diane described herself as an auditory and visual learner. She explained in her interview that clinical

education was a challenge for her since hands-on learning and skills were not her strong suit. She embraced this challenge by using the required clinical experiences as a way to gain the hands-on skills needed in the profession and trained herself to learn through kinesthetic activities. She recognized that she was entering a hands-on profession and had to make this a priority. Clinical education gave her the opportunity to do this and played a “huge role in increasing confidence.”

### **Eric**

Eric was a Spring 2017 graduate of a CAATE-accredited professional graduate program offered by a mid-sized institution in the mid-Atlantic region. Athletically, the institution competed as a NCAA III level institution. Eric reported on his screening survey that he completed four separate clinical experiences at both the high school and collegiate levels. After degree completion, Eric entered a physical therapy program to earn a DPT degree. When asked in the interview, he explained that he chose to earn an MSAT degree prior to physical therapy school because of the hands-on clinical experiences that were required. He described his clinical experiences as “time-consuming but worthwhile.” At the time of data collection, Eric was beginning his second year of physical therapy school and felt that he was more prepared than some of his classmates for the rigor and content of physical therapy school because of his background in AT.

### **Faith**

Faith was a Spring 2018 graduate of a CAATE-accredited professional graduate program offered by a mid-sized institution in the mid-Atlantic region. Athletically, the institution competed as a NCAA III participant. Faith reported on her screening survey that she completed four semesters of clinical education as an AT student. She had a wide variety of experiences

both in setting and location, having two rotations that were in other states, requiring her to relocate for her clinical experiences and complete coursework online. This variety was mentioned both on her screening survey and in her interview and asynchronous online focus group discussion posts. She said she “couldn’t imagine not having clinical experiences” because they contributed so much to her professional preparation.

### **Ginger**

Ginger graduated from a CAATE-accredited professional ATP at the conclusion of the Spring 2018 semester. She completed four separate clinical experiences to meet the requirements of the ATP. The school was an institution of moderate size in the mid-Atlantic region. She described herself as a hands-on learner, and reflected that clinical education served her well for professional preparation due to her desired pedagogy style. She explained that, for her, clinical experiences really provided real-life opportunities to become prepared for autonomous practice. Overall, she described clinical education as “a lot of hard work” but beneficial.

Ginger explained in her interview that she initially chose to enter the field of AT in high school following an injury that resulted in her spending a significant amount of time with her high school athletic trainer. That relationship and experiences peaked her interest, which remained through graduate school. Overall, Ginger was very happy with the education and preparation she received as a graduate AT student.

### **Hannah**

Hannah earned an MSAT from a CAATE-accredited professional graduate program. She earned her degree upon completion of the Spring 2017 semester. The school she attended for her graduate degree was a mid-sized institution located on the east coast. The ATP was a two-year



program that required four semesters of clinical rotations. The clinical rotations that Hannah completed included two semesters at a private high school and two semesters at two different Division I level institutions. She reported in her interview that she completed on average 25-40 clinical hours each week.

Hannah initially chose to enter AT because it combined her desire to work in athletics, to help people, to not be chained to an office or desk all day and to work outside. In her interview, she classified herself as a hands-on learner and felt that clinical experiences were a great opportunity for her to put into practice what she had learned in didactic courses.

### **Isabelle**

Isabelle was a Spring 2017 graduate of a CAATE-accredited professional graduate program. She was an alumni of a mid-sized mid-Atlantic institution. The ATP lasted for two full years (fall, spring and summer courses) with clinical experiences occurring in the fall and spring semesters. Isabelle earned a kinesiology undergraduate degree with a concentration in pre-physical therapy. She said she realized partially through her undergraduate career that AT was the profession she wanted to enter and worked towards that goal of entering a graduate program.

Isabelle classified herself as a hands-on and visual learner. She felt that these learning styles paired well with clinical education because she could both watch clinicians perform skills and practice them herself. Her clinical experiences consisted of two high schools and a year-long rotation at a university that was in the western portion of the United States, requiring that she move for her clinical rotation and be fully immersed in the site. After graduation, Isabelle obtained a job at a large university as an athletic trainer.

### **Jenna**

Jenna was a Spring 2017 graduate of a CAATE-accredited professional ATP. Geographically, the school was located in the mid-Atlantic region and competed as a Division I institution athletically. She entered the master's program with an exercise science undergraduate degree. Jenna classified herself as a hands-on learner. She said in her interview "I need to see it done then I need to do it," which she said paired well with clinical education.

Clinically, Jenna had experiences at three different sites, over four semesters. She completed clinical experiences at two high schools and spent a year gaining experience at a Division III college. She gained confidence as she progressed through her clinicals and reported feeling that the progression of autonomy that she was allotted during her clinicals prepared her for clinical practice after graduation. After graduation, she began working as the athletic trainer for a high school.

### **Kate**

Kate was a Spring 2018 graduate of a large Division I institution, earning a MSAT from a newly accredited professional master's program. She was a member of the first graduating class from the program. She explained in her interview that she first became interested in AT following a personal injury in which she did not have an athletic trainer and wanted to know what the proper care would have been if she had had access to an athletic trainer. Her undergraduate degree in kinesiology confirmed this interest and resulted in her seeking a master's degree in AT.

She classified herself as a hands-on learner. She described her clinical experiences as hands on and not just observational. She completed clinical experiences in eight-week increments in a variety of settings, including high school, college, and general medical locations.

### **Lisa**

Lisa was a 2017 graduate of a CAATE-accredited master's ATP. She earned a Masters of Arts in Athletic Training from a large university in the mid-west. She completed four clinical rotations to meet degree requirements. The time spent in clinicals each semester averaged around 300 hours. She completed clinical rotations at a variety of sites, including the home institution, a junior college, and a semi-professional team.

Lisa described herself as a hands-on learner. She entered the master's program with an undergraduate degree in exercise science. She chose to pursue AT while participating on a club rugby team in college and meeting an athletic trainer at a tournament. After graduation, Lisa took a job as an athletic trainer at a small university.

### **Results**

The data collected from the twelve participants was analyzed using phenomenological methods as suggested by Moustakas (1994). Data from three collection methods were used in the development of four themes as discussed below.

Table 1

*Participants*

Participant	Degree completion date	ATP institution	Geographical location of school	Athletic competition level of school	Completed clinical education?
Ann	Spring 2016	Lake University	East Coast	NCAA Division I	Yes
Bill	Spring 2014	Plains University	Mid-West	NCAA Division II	Yes
Claire	Spring 2014	Valley University	East Coast	NCAA Division III	Yes
Diane	Spring 2018	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Eric	Spring 2017	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Faith	Spring 2018	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Ginger	Spring 2018	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Hannah	Spring 2017	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Isabelle	Spring 2017	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Jenna	Spring 2017	Rivers University	Mid-Atlantic	NCAA Division III	Yes
Kate	Spring 2018	Mountain University	Appalachian	NCAA Division I	Yes
Lisa	Spring 2017	City University	Mid-West	NCAA Division I	Yes

*Note.* NCAA= national collegiate athletic association

## **Theme Development**

Data was analyzed for the presence of themes among the participants. Data collection methods included semi-structured interviews, journaling, and an online asynchronous discussion group. Each participant was screened using a survey to ensure that they met the qualifications for inclusion. Once vetted, each participant first participated in a semi-structured interview which was audio recorded and transcribed by a professional transcription service. During the interview, initial notes were made regarding both the responses of the participants and the impression of the researcher. This was done to bracket out personal opinions and impressions and to document initial thoughts on participants' experiences. Data analysis was an ongoing activity. As soon as the transcription was received, I completed a first read-through of the data and made notes. I then completed a second read-through to identify significant statements and gave each statement a code. Each statement was evaluated for relevance by comparing it to the purpose of the research. Each statement was viewed as equal importance. This process is called horizontalization (Moustakas, 1994). The same process was done with the journal responses collected from participants and the complete threads from the asynchronous online focus group discussions. Repeated phrases or ideas were only listed once. The data was read-through multiple times to ensure all significant statements were identified.

Once all significant statements were identified and assigned codes, the codes were grouped together by similarities, forming themes. Initially, 36 codes were identified in the data. Of those 36 codes, 7 were found to be irrelevant when compared to the study's purpose statement. This process eliminated 7 codes, leaving 29 codes. These 29 codes were then categorized into themes which can be used to describe the phenomenon and answer the research

questions. Peer review of the data supported the themes that were found. Table 2 shows the common codes that were identified throughout the data and the themes that were established.

Table 2

*Theme Development with Associated Codes*

Confidence	Access to Educational Resources and Settings	Mentorship and Professional Socialization	Commitment
Hands-on learning	Lack of learning opportunities	Communication	Time consuming
Thrown into situations	Equipment-lots	Willingness to teach	High standards
Reflection	Limited exposure	Challenge	Hard work
Increasing responsibility	Lack of time	Poor example	
Feedback	Lack of space	Mentor/ role model	
Real-life experience	Lack of equipment/supplies	Professionalism	
Supervised autonomy	Variety	Patience	
Develop as an individual	Multiple ATCs/ medical professionals	Ask questions	
	Connect class to clinicals	Feedback	
	Thrown into situations		

The four overarching themes identified in the data provided explanations of the phenomenon of AT clinical education at the graduate level. These themes give a textural explanation for the phenomenon and an understanding of what it is like to be a member of the phenomenon.

**Opportunities for hands-on learning and real life experiences.** The first theme identified, opportunities for hands-on learning and real life experiences, was supported by experiences shared from all participants. Participants all agreed that having clinical experiences that were more than just observational in nature was a valuable experience. Ginger reported in her interview that the hands-on learning environment of clinical education paired well with her overall learning style. She followed up that thought by saying, “I was able to learn a lot more being able to actually do the things that I was learning in class.” She felt that despite the hard work that was involved in clinical education, the experience was valuable in that it prepared her for actual clinical practice, when she would be treating patients on her own.

Similarly, Isabelle, who classified herself as a person who prefers multiple learning styles, recognized the importance of clinical experience because it gave her the opportunity to observe others perform skills, and then to try the skill with guidance and feedback before finally feeling confident in performing the skill independently. In the asynchronous online focus group discussion, Isabelle and Diane conversed about hands-on experiences they had in clinicals, specifically with feeling a positive Lachman test for the first time. They agreed that skills such as that can be taught in a classroom using scenarios and models but “feeling the real deal is definitely something that is fascinating” and an invaluable experience. Ann agreed with this idea, stating in her interview that she was “auditory, visual and hands-on” in her learning style preference and appreciated the fact that clinical education gave the opportunity to learn in all three fashions. Jenna also described herself as a hands-on learner but appreciated the opportunity in clinical education to observe, do, and receive feedback when learning or mastering skills. She described this active style of learning in both interview and in her journaling activity.

Participants were asked in the asynchronous online discussion group forum what should be one requirement that is mandated for all AT students. There were three main requirements that were discussed among participants. They were traveling with sports teams, documenting and practicing an emergency action plan (EAP). Isabelle, Ginger, and Diane all agreed that travel was an important learning experience, and one that prepared them to enter the profession. Ginger, Isabelle, Lisa, Eric, Diane, Jenna, and Ann all said that looking back now that they have graduated and have either entered or were entering the profession, experience with documentation and other administrative tasks should be an exposure that all students receive in clinical experiences. Amongst those participants, some made comments about how they were given the opportunity to complete documentation in their clinical experiences and how it benefited them, and others on how the lack of that experience left them feeling unprepared when entering autonomous practice. Emergency action plan experience was the third component of clinical education that was suggested as mandatory. Eric first suggested that all students should be required to practice EAPs because of the severe consequences that can occur by being unprepared in this area. Lisa and Ginger agreed that EAPs are something that can be talked about repeatedly but actually practicing them provides invaluable experience. All three of these recommendations share the idea of actual hands-on practice and learning by doing.

The clinical experiences that were most significant in overall learning were described as clinical experiences that allowed for the most hands-on practice and real-life experiences. When participants were asked to identify the most influential clinical preceptors and clinical sites, they identified certain people and locations because of the opportunities for learning experiences that they provided.



**Access to educational resources and settings.** The second theme identified was access to educational resources and settings. This theme was created with codes such as: lots of equipment, lack of equipment and supplies, multiple ATs and medical professionals, thrown into situations and space. Participants described how the access to, or lack of access, to educational resources and settings had an effect on their experience in clinical education. For the purpose of this theme, resources included both equipment and supplies and preceptors and educators. In her interview, Claire described a valuable clinical setting as one that had “things for you to do other than sit there and fold towels and fill up water.” She described the desire to have educational experiences during clinical education rather than just doing simple daily tasks and manual labor. She preferred clinical experiences that had a variety of opportunities to see varied injuries, conditions, and treatments. Jenna supported this idea in her journal entry and interview, stating that she preferred clinical sites that allowed her to have educational experiences and develop herself as a professional through supervised autonomy. Ann further supported the benefit of educational settings. She discussed in her journal that she preferred clinical sites that allowed her to practice the skills she had learned in class by assigning her a patient to take responsibility of, making her in charge of developing and carrying out their treatment plan. She also preferred the sites that had multiple ATCs to work with and learn from. Ginger echoed Ann’s preference for clinical sites with multiple ATCs in her journal. This same preference was supported by Faith, who preferred to be at clinical sites that had multiple ATCs to work with, learn from, and gain a variety of experiences from. She discussed how each ATC had a different background and varied skill sets, and therefore each provided their own benefits to students.

Aside from the availability of multiple ATCs and the atmosphere of the site encouraging learning, access to educational experiences was also believed to be influenced by the preceptor.

If a preceptor did not have a desire to teach, the students felt limited in the opportunities they were granted. Diane explained in an interview that preceptors that are “hands off” with their students do not contribute as much to the educational experience. She said that in many cases it is the preceptor’s decision as to whether the student could take advantage of learning opportunities. A general consensus in the online asynchronous focus group discussion was that the preceptor was the most influential part of a clinical experience. The clinical preceptor can “make or break a clinical site” is how Diane explained it in the discussion. Isabelle agreed with this statement, sharing that a preceptor that grants the student the ability to practice skills is vital. Ginger added that preceptors who are willing to take time to educate and ensure that students are having a good and beneficial experience is important, to which Lisa agreed. Ann described her most influential clinical site as one where she was “put on the spot quite frequently” by preceptors, requiring that she think through situations and act based on her training.

Access to equipment was also a common discussion point among participants. Jenna, Lisa, Claire, and Kate all agreed in interviews that having access to equipment was vital to their learning, being able to actually use the machines they had learned about in classes. Hannah felt that while adequate space played a role in the opportunities for learning, she appreciated the sites that did not have as much technology and equipment because it taught her to be creative in her treatment and rehab plans. Despite the disagreement among participants regarding the ideal amount of equipment available at a clinical site, access itself was commonly discussed.

**Mentorship and professional socialization.** The third theme identified was mentorship and professional socialization. Codes pulled from the data that were used to create this theme included willingness to teach, feedback, mentor, and communication. These codes were found in interviews, focus group discussions, and journaling. Participants reported learning more than

just clinical skills from their preceptors and clinical sites. They were professionally socialized, learning how professionals work and interact and how to develop themselves professionally. Jenna reported in her journaling a preceptor who really pushed her and still served as a mentor to her even after graduation. She said, “I gained a lot of confidence and knowledge from each of my preceptors who all helped me in different ways prepare for clinical practice after graduation.” Ann reported in her journal having a preceptor she considered her mentor who taught her how to be a life-long learner in the profession. Eric said of one of his preceptors: “she had a really good work ethic, and a really good perspective of looking at the bigger picture.” Claire, who had a poor experience with some preceptors, felt that she viewed poor examples and lacked mentorship in her clinical experiences, but through those experiences she learned the type of professional she did not want to be. She discussed this in her interview, explaining that even though she did not have a great professional example, there was still value to her experience.

Participants commonly talked about the value of having a preceptor who was willing to teach and willing to learn. As Ann reported in her interview and journal entry, her best preceptor was one who showed interest in her learning, liked to learn from her, and modeled for her what it is like to be a professional who has a desire to continue to learn. Ginger agreed with her by saying in the focus group discussion that “it helps so much for a student to see that a preceptor is not only passionate about their athletes but they want to make sure the student under them gets the best experience possible.” Jenna echoed this in the focus group discussion by saying “strong clinical experiences require a preceptor who is open to new ideas and willing to teach, a healthy work environment and people who understand that work/life balance that is sometimes lost in this field.” Lisa mentioned in her journal entry that her most influential preceptor was so influential because of the passion she had for the profession and for educating future athletic

trainers. She considered that preceptor to be a role model. In her interview, Hannah described an influential preceptor who served as a mentor, demonstrating how to serve as a professional while maintaining life outside of work. She remembered this preceptor as one who kept her cool in stressful situations and was a good communicator. Diane had a poor preceptor who did not demonstrate a desire to teach and in general portrayed a professional who was uninterested in AT. Diane described this preceptor in the focus group discussion and went on to say that it was discouraging as a student to work with someone who was supposed to be a mentor but rather seemed more to discourage entrance into the profession. Kate expressed similar frustrations in her interview. She recalled working with a preceptor who saw the AT students as extra hands for giving out water and did not allow the students any part of evaluations and did not attempt to teach during evaluations. She felt lacking a preceptor who offered educational experiences hindered her professional preparation.

**Commitment.** The fourth theme identified was commitment. The codes associated with this theme were hard work, time consuming, and commitment. These codes and the theme mainly stemmed from the questions asked of the participants in the interview about what it is like to be an AT student in clinical education. Eric said in his interview that “it is time consuming but also very worthwhile.” Bill explained that commitment is needed to meet all the expectations of classes and clinicals. Ann said clinical experiences “are gonna be what you make it. Wherever you go, whether you love the clinical or you absolutely hate it, it all depends on you showing up every day ready to learn, making goals for yourself.” She explained that a commitment to learning is important to be successful, and that students control much of how their experience develops. Claire described in her interview that her experience as an AT student was a busy one, and that most of her time that was not consumed by classes was spent at

clinical. Diane agreed saying that being an AT student took over her life, doing classwork and committing full-time hours in clinical experiences. She summarized her experience as intensive, hard, and stressful but rewarding. In the journaling activity, Jenna described working with a preceptor who she thought hated her because of how hard he pushed her, and that at times it made her question her choice of profession. She completed the clinical experience because it was a commitment she made and later came to realize the preceptor was hard on her because he wanted her to be the best she could.

### **Research Question Responses**

The central research question, as well as the sub-questions, were answered based on the data collected and the analysis. Four themes were identified that can be used to address each of the questions posed in this research.

**Central Research Question: How do master's level athletic training program graduates describe their experiences in clinical education?** Participants in the phenomenon of graduate level AT clinical education describe their experiences as active and engaging. This common theme among the data can be further described as having the opportunity to learn and practice knowledge, skills, and abilities in real-life settings on real patient populations. Clinical experiences as a whole were described as active, as opposed to passive or observatory. Participants believed this active learning significantly contributed to their overall clinical experiences.

The other theme which described the overall experience of clinical education is hard work. Ginger described her experience as “a lot of hard work, but at the end of the day totally worth it because it allows you to be prepared for when you’re actually certified and actually have to do it on your own.” Similarly, Eric described his experience as “time consuming but also very

worthwhile.” The time commitment required of AT students in clinical experiences varied from participant to participant, but the overall range shared by participants was 25-40 hours a week. These hours were in addition to time spent in class or on coursework.

**Sub-Question One: How do participants describe the type of learning opportunities they were granted during clinical education?** Through data collection and analysis, sub-question one can be answered, providing information on the types of learning experiences and opportunities that were utilized in clinical education. Participants described the use of hands-on learning techniques as the major contributor to their learning. There was variety in the types of hands-on experiences and the ways in which the students were presented with the opportunities; however, the overlying theme of hands-on learning answers sub-question one.

Ann described the learning opportunities that she experienced during clinical education as active in the fact that once she learned a topic or skill in class, her preceptors would expect her to perform those skills on patient populations without further instruction. She remembered a time when she walked into the AT room while her preceptor was completing a knee evaluation. She mentioned that she had just learned knee special tests in class and, in response, her preceptor stepped back and told her to assess the patient using what she had learned in class. She said the preceptors she worked with loved to throw her into situations and see how she would handle them. She further went on to describe that after being thrown into situations, the preceptors would provide feedback and aid her in reflection on her choices in care and appropriateness. Ann felt that this type of teaching environment gave her confidence and the ability to be able to self-reflect as an autonomous clinician now. Bill shared the experiences of Ann, reporting that he was often “thrown into situations to either sink or swim.” The outcome of this method for him was a boost in confidence as a clinician when he would have a positive experience with a

patient, and when he would not, he had a learning experience of how to do better in the future. Isabelle believed “there’s only so much you can learn from scenarios,” explaining that the real-life experience is invaluable.

Several other participants supported the theme of active and hands-on learning contributing to their learning at their clinical experiences. Before practicing skills on a patient population, their preceptor required they demonstrate their ability to properly perform them on a model patient. Jenna, Lisa, Ginger, and Isabelle all described having to demonstrate their skills for their preceptor at the beginning of a clinical rotation before the preceptor would allow them to utilize the skills on actual patients.

Observation was also a code that was common in the data. Participants reported learning by observing their preceptor or other medical staff at their clinical setting. In some situations, preceptors were hesitant or resistant to students actively treating patients, and in these cases the students still reported learning through observation, though it might have been frustrating. Diane reported one clinical rotation she completed that did not allow her much hands-on experience but she did still learn. She said,

I was able to look at my preceptor’s decisions and kind of think them through for myself and be like “okay she did this, why did she do this? How would I have done it differently?” And I kind of like got to build how I would act as an athletic trainer in my head so that I knew I could carry out those skills when it came the time too.

The mentorship that students received during clinical education was also identified as a valuable learning experience. The professional socialization that the participants reported getting from their preceptors was cited as a learning opportunity outside of general skill practice. Participants stated that they watched their preceptors handle difficult situations and the use of

soft skills, and those observations taught them how to or how not to work as a professional. Diane remembered a clinical experience in a setting that lacked leadership and communication in which she learned the value of these in an organization. She can also remember clinical rotations that demonstrated a department that communicated well and could appreciate the differences between the two. Ann watched her preceptor work with a patient who was non-compliant and challenging and learned how to motivate patients and how the clinician can impact the overall atmosphere of the treatment sessions. Claire also saw examples of unprofessional athletic trainers and utilized those examples as a learning experience of how she did not want to present herself as an athletic trainer. Lisa reported observing preceptors who were great role models in how to “communicate effectively and efficiently with athletes as well as coaches, and how to be there for patients that are working in the training room on a daily basis.” Hannah learned how to build a rapport with the patients by observing her preceptor’s practices. She also learned how to maintain balance in life while working with a preceptor who was a professional athletic trainer and a mother and who demonstrated how to do both successfully.

**Sub-Question Two: How do participants describe the influence of clinical preceptors on the overall experience of clinical education?** Preceptors play a significant role in the overall experience of clinical education. They serve as mentors to their students in many fashions. They can serve as both good and bad examples of the profession. They also have significant influence on the amount of learning experiences and opportunities the students are exposed to. Codes such as willingness to teach and feedback were found repeatedly in the data. The participants saw their preceptors as education resources. One of the most common suggestions from the participants when talking about what characteristics made up an effective preceptor was that of willingness to teach. Jenna reported that there were times that she would go to her clinical



rotation and think her preceptor hated her but looking back now she realizes he was her biggest supporter and was only pushing her so hard to make her better as an athletic trainer. He would challenge her and provide feedback to make her a better clinician. Ginger had similar experiences working with a preceptor who constantly asked her questions and quizzed her. She believed these interactions were what helped her to learn as much as possible during clinicals. Eric reported influential preceptors who gave ample opportunity to grow, practice, and learn as a clinician.

Some participants reported negative experiences with preceptors. Those that shared these experiences reported that they were assigned to preceptors who were resistant to teaching, resistant to learning new ideas and lacked regular interaction with their students. Preceptors described as having these characteristics served as preceptors at clinical sites that were also described as inferior clinical sites. The preceptor plays a significant role in the overall experience and the amount of learning. Hannah had one preceptor who was a student in physician assistant school while at the same time serving as an ATC at a large Division I school. She did not see her preceptor do a lot of evaluations or treatment sessions due to their time being devoted to demands outside of work, which in turn decreased her exposure to learning opportunities that semester. Claire had a negative experience with a preceptor which she felt inhibited her learning in regards to developing treatment and rehab plans. She had a preceptor that would just tell her to “hook this person up to ice,” or “hook this person up to stim,” but never allowed her to contribute to the development of rehabs and never took time to explain the decisions they were making in patient care. This lack of experience left Claire feeling unprepared for autonomous practice following graduation, and instead, she chose to enter an assistantship program where she could gain more supervised experience. When asked how the

preceptors influenced clinical experience, Diane had this to say: “One of my preceptors literally told me she was burnt out from athletic training and it really turned me off from that site. She was uninterested in teaching me and uninterested in athletic training in general and it was very discouraging.”

The mentorship and development of learning opportunities in clinical experiences rely heavily on the clinical preceptors and their willingness to serve as a preceptor. The overall learning of the students in clinical education is significantly influenced by the preceptor supervising that clinical experience. Participants acknowledged the fact that their preceptors had much influence on the overall experience they had. The mentorship or lack thereof was a driving force in the amount and type of learning experiences they had.

**Sub-Question Three: How do participants describe the influence that the clinical setting has on the overall experience of clinical education?** Access to a variety of educational resources and settings was a common theme among participants. Variety in many aspects was coded in data analysis. Variety of settings, variety of equipment available for use, and variety of professionals at a site were all cited as influencing the experience the student had. Both great variety and lack of variety was mentioned as being influential. Participants reported that completing clinical experiences at a variety of settings was a valuable experience and an important part of their learning.

Several participants made mention of the wide variety clinical settings they were exposed to. All of the participants reported having clinical assignments in more than one type of setting. Clinical experiences in high school, small to large collegiate, professional athletics and clinic settings were all reported by participants. Ann completed rotations in a high school, with a professional basketball team, in a physical therapy clinic, and at two different colleges. Each of

those settings gave her a different experience and taught her different things. In the high school, she learned how to work with a small amount of resources serving a large population. At the professional team, she learned about the newest and latest technology and treatment options because that setting provided her with unlimited resources. The physical therapy clinic taught her how to work with a non-athletic population and at a different pace than is typical in the athletic setting. The college settings provided exposure to a variety of teams and athletes, again creating more opportunities for her to learn.

Kate also had a wide variety of experience. She was exposed to collegiate, high school, general medical, physical therapy clinic, and emergency medicine sites. This variety gave her experience with many different patient populations and the pathologies that are commonly associated with those different groups. Isabelle completed clinical experiences in three different settings, as did many of her classmates. Lisa had clinical assignments at high school, junior college, and large university settings. Hannah liked having clinical assignments that were very different from each other. She worked in a division 1 university and at a high school. She said “it was nice to see the two stark extremes because you know the minimum that you can work with and feel like you can be successful versus having pretty much everything at your fingertips.”

The variety of equipment and physical resources the clinical site had to provide also influenced the experience the student had. Interestingly, there was a mixed response to whether more or less resources created a better learning environment. Those participants, such as Kate, Faith, Lisa, and Isabelle, that felt that having access to a large amount of equipment and supplies created a better clinical experience, felt that having up-to-date equipment allowed them to practice all their skills and learn to use equipment that they might otherwise have only read

about. Claire did not have clinical experiences at clinical sites that provided a lot of new technology and equipment and she felt that hurt her learning and experience.

In an opposing view, participants such as Bill and Jenna most appreciated the sites that did not offer the newest modality equipment and lacked large amounts of rehab equipment. They felt these clinical sites provided the best learning experiences because they were forced to learn creativity in patient care and how to work with the resources available. Bill felt the overall culture of the AT room was much more important in evaluating the clinical site than the amount of equipment and supplies the students have to utilize. He said

you might not have much at your disposal, but still it can be a fantastic clinical experience and clinical setting because it teaches you to be more resourceful and use your knowledge more, rather than having all this equipment available to you. It makes you use your hands more, makes you use your head more, and apply your knowledge better.

Multiple ATCs was a code in the data that showed up many times. Participants felt the sites that were strongest and provided the best learning opportunities had multiple athletic trainers or other medical professionals as employees. In traditional clinical experience design, students are assigned to a single preceptor to serve as their supervisor for the length of the rotation. Participants reported that having access to more than one ATC at their clinical site gave them the opportunity to have more people to learn from and more knowledge to gain. Those participants who described poor experiences with preceptors because they lacked a willingness or excitement for teaching appreciated the fact that there were other professionals for them to learn from during their clinical experiences.

### Summary

Twelve participants contributed to the data used in this study. Data from all three collection methods were used in analysis and formulation of themes. I identified four themes through data analysis, stemming from the codes found in the data that was collected. The four themes included *opportunities for hands-on learning and real-life experiences*, *access to educational resources and settings*, *mentorship and professional socialization*, and *commitment*. These four themes were used to address the developed research questions, with some theme overlap in the answers provided. Participants described their experiences in clinical education as active and requiring commitment. Preceptors and clinical sites both played a significant role in the overall experience of the participants and controlled much of the learning experiences the participants were offered.

## **CHAPTER FIVE: CONCLUSION**

### **Overview**

The purpose of this transcendental phenomenological study was to describe the shared clinical education experiences for post spring 2014 graduates of CAATE-accredited professional master's degree programs. This chapter will summarize the findings of the study by describing the phenomenon, discussing those findings and how they contribute to current literature, and the implications the findings may have, state the delimitations and limitations of the study, and pose recommendations for future research based on the findings of this study.

### **Summary of Findings**

Four themes were developed from the data analysis process. These four themes are opportunities for hands-on learning and real-life experience, access to educational resources and settings, mentorship and professional socialization, and commitment. These four themes were used to answer the research questions posed for this study.

The primary research question asked was "how do master's level athletic training program graduates describe their experiences in clinical education?" All four themes were useful in answering this question as each of the themes contributed in some way to the overall experience of clinical education. Sub-question one asked "how do participants describe the type of learning opportunities they were granted during clinical education." This question is answered primarily through explanation of theme one: opportunities for hands-on learning and real-life experiences. A majority of participants described themselves as hands-on learners and felt that clinical education worked in their favor by allowing for hands-on learning opportunities. Participants also described their learning processes during clinical education in two ways. They were either thrown into situations to react and learn as they go, testing out their ideas and

knowledge; or, they first observed a preceptor perform a skill before trying it themselves. Feedback was also referred to by many participants as a valuable contributor to their learning. Sub-question two, “how do participants describe the influence of clinical preceptors on the overall experience of clinical education,” is answered with multiple themes, but mainly those of hands-on learning and mentorship. Participants claimed that the learning opportunities they were offered were heavily driven by the willingness of the preceptors to educate and the example they set. Sub-question three, “how do participants describe the influence that the clinical setting has on the overall experience of clinical education,” is answered using the theme described as access to educational resources and settings. The clinical setting does contribute to the overall experience of the student based on the available resources, both human resources and equipment and through the populations the students are exposed to. The overall atmosphere of the site also was significant in the learning environment.

### **Discussion**

The findings of this research study both support and build on previously published studies. The topic of clinical education in AT is a highly researched one; however, by limiting the participation requirements and the focus of this study to graduate level clinical education, it filled a gap in the literature that was not previously researched. It is also timely research with the degree level change deadline mandated by CAATE looming in the near future.

### **Empirical Literature Discussion**

This research study and the findings associated with it contribute to the literature on clinical education and AT education. Though the amount of research related to clinical education in AT is extensive, there is very little that directly addresses that of clinical education at the graduate level. This research helps to fill that identified gap and encourages future

research. With all CAATE-accredited programs being required to be offered at the graduate level after 2022, this research study is a great starting point for the significant amount of research that is missing specific to graduate level professional AT education. It provides a snapshot of what it is like to be a graduate student in a CAATE-accredited ATP in clinical education. The participants explained the commitment that is required to be successful in clinical education and the preferred methods for teaching in clinical settings. With all accredited programs being required to maintain a clinical education program and clinical education making up a significant portion of the overall education of graduate AT students, having an understanding of how they best learn will help in determining best practices of a clinical education program. While there was little empirical research to compare the findings of this study to, there were some notable similarities and connections with research that has been conducted on undergraduate AT populations.

Just as Morin et al. (2014) and Benes et al. (2014) found of undergraduate level AT students, the participants in this study felt that clinical education played a significant role in their education and professional preparation at the graduate level. Smith et al. (2010) explained that the ideal learning environment promotes motivation in students to acquire a deep understanding of material and master content, while at the same time developing the skills for independent and self-directed study. Just as Smith et al. (2010) explained, participants in this study described a strong desire to practice vocational skills as a way to master the knowledge and skill base required for the profession of AT. The participants described a strong desire to learn by doing through hands-on activities and real-life experiences. When hands-on learning was not an opportunity for participants during their clinical experiences they listed it is a frustration. This study is useful in connecting the findings of Morin et al. (2014) and Benes et al. (2014) in



regards to undergraduate students and the suggestions of Smith et al. (2010) regarding preferences of graduate level students. Morin et al. (2014) and Benes et al. (2014) both reported that undergraduate AT students felt that clinical education played a significant role in their overall professional preparation. Mazerolle et al. (2014) found that undergraduate AT students believed they best learned when engaged in hands-on experiences. Smith et al. (2010) found in a study that graduate students had a stronger desire to learn vocational skills through hands-on learning because they can better envision why those skills will be useful. While this study did not compare undergraduate and graduate student experiences to determine if the graduate students did in fact place a greater significance on clinical education, the findings of this study paired with those of Morin et al. (2014), Benes et al. (2014), Mazerolle et al. (2014) and Smith et al. (2010) suggest that graduate students do recognize the value of clinical education in their overall learning because they can recognize how practicing and gaining real-life experience will prepare them for future clinical practice. This is a connection that was absent from previous literature.

Rindflesch et al. (2009) contributed to the literature regarding clinical education in physical therapy and occupational therapy preparation, stating that students in these educational programs significantly benefited from clinical education. These programs are taught at the graduate level only (Arena et al., 2011). The NATA TFPEAT (2013) explained that one reason for the suggested shift from the undergraduate to the graduate degree for AT was to keep pace with the other allied health professions, such as physical therapy and occupational therapy. This current study suggests that clinical education is important to overall education, just as it is in other comparable allied health professions who are taught at the graduate level. This supports the continued use of clinical education in graduate level AT.

Specifically, the participants in this study revealed that clinical education provided the opportunity of active and hands-on learning. These opportunities were perceived by AT students to increase their overall learning and professional preparation. This is a similar finding to Mazerolle et al. (2014) when data was gathered from undergraduate students. Study participants shared stories of active learning experiences they had, such as feeling a positive Lachman test for the first time, evaluating an athlete for a concussion, developing rehab plans for a non-compliant patient, and managing a sideline at an athletic event. These experiences are all hands-on activities and were cited by participants as being significant learning experiences.

Many participants agreed that the preceptor plays a significant role in the overall experience that a student has in clinical education. In previous research, preceptors were given credit for controlling the amount of active participation opportunities that students have access to (Aronson et al., 2015; Benes et al., 2014; Mazerolle et al., 2014). When participants in this study reported a lack of active and hands-on learning, they also reported being assigned to preceptors who did not take an active role in their education. Preceptors who engage with their assigned AT student and who encourage or require their AT student to practice skills and make clinical decisions create a clinical education environment that encourages learning. Many researchers support the idea that preceptors who are actively engaged in a student's clinical experiences contribute to the overall learning environment. This is a topic that should be addressed as a part of mandatory preceptor training (CAATE, 2012).

Feedback from preceptors contributes to overall learning of students in clinical education. Participants felt that receiving feedback from their preceptors was significant in their overall learning in clinical education. Participants discussed the value of receiving feedback from their preceptor regarding their clinical practice and decisions. These findings parallel those of

Nottingham and Henning (2014a), who suggested that feedback should be considered an integral part of AT education. They found that undergraduate AT students found feedback from preceptors to contribute to learning as well. The similarities of these findings supported the need to encourage preceptors to provide feedback throughout clinical experiences. The type or frequency of feedback that is preferred or most beneficial to learning was not identified in this study but is something that may be researched in the future with graduate students.

Mentorship was also a significant role played by preceptors. There has been many research studies that demonstrate the role that mentorship plays in clinical education and in professional preparation (Nottingham et al., 2016; Benes et al, 2014). This theme continued in this research with the term mentor being used multiple times by participants when describing their most influential preceptor. Preceptors served as mentors by not only teaching clinical skills but also by demonstrating how to act in certain situations and how to act as a professional. The participants in this study reported learning more than just clinical skills from their preceptors. Some of the contributions that the participants said that their preceptor made to their professional socialization was how to work professionally in challenging work environments, how to be a life-long learner, and how to find and maintain work-life balance. There were some participants who reported having preceptors who mentored them as positive examples, and some who witnessed negative examples. Both were reported as positive learning experiences.

One finding of this research study that has been addressed on a limited basis in the literature is the role that the clinical site played in the overall learning of the student. This study found that the clinical site itself did influence the overall experience. The amount of learning experiences that students had was affected by the patient population that the site served and the overall atmosphere of the site. The amount and types of resources at the sites were mentioned by

many participants but there was not a consensus on how important access to new and modern equipment and resources was. There was appreciation for both sites that offered many resources and sites that offered very little in the way of resources. This leads to the conclusion that a variety of experiences is beneficial, teaching students how to work new and modern modalities, and how to be creative in treatment protocols when resources may be lacking. Morin et al. (2014) found that students feel most competent in their ability to treat traditional populations such as athletes because of extensive clinical education experiences at sites that treat athletes. This idea can carry over to this study, encouraging ATP faculty to develop clinical sites that give varied experiences both in population and in amount of resources available. Experience at clinical sites that offer a variety of resources will prepare students to work in many types of settings.

### **Theoretical Literature Discussion**

Astin's (1999) student involvement theory and Kolb's (1984) experiential learning theory both support the findings of this study. Participants reported that they preferred hands-on learning to keep them involved and were frustrated when they were limited in the amount of participation they had in clinical decisions and care. The student involvement theory (Astin, 1999) states that students who actively participate are more likely to be successful in their educational goals. Despite the fact that this theory is traditionally used in regards to student retention, some researchers (Young et al., 2013) support the application of the student involvement theory in other educational realms. Morin et al. (2014) and Mazerolle et al. (2014) supported the idea that students who are actively involved in clinical education garner a better learning experience than those who do not actively participate. This research specifically

supports the application of the student involvement theory (Astin, 1999) to graduate level clinical education.

Of the five components of the student involvement theory (Astin, 1999), this research specifically parallels one component. Astin (1999) discussed in his theory that the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement. Participants reported that active participation in their clinical experiences was a significant factor in their learning. They learned more in their clinical education experiences when they had opportunities to utilize their skills and participate in decision-making processes than they did when simply observing their preceptor act as a clinician. The amount of participation was not solely up to the desires of the student, however, and also relied on the preceptors to create or allow for active participation by the students. Athletic training students work throughout their education to become competent athletic trainers and are more likely to do so when involved in the educational process through hands-on learning and gaining real-life experience. The value placed on active participation in clinical experiences extends the student involvement theory (Astin, 1999) to the arena of master's level AT education. This connection had not previously been made with this specific population.

The experiential learning theory (Kolb, 1984) has been suggested to be useful in multiple fields (Raschick et al., 1998; Witt et al., 2013) because of its encouragement in combining sensory, motor and cognitive learning processes (Haraldseid et al., 2016). This study supports the use of the experiential learning theory in master level AT education, and more specifically clinical education. Participants reported benefits of observing, practicing skills hands on, evaluating their decisions or ability to perform the skill with their preceptor, and having discussions on how they may make changes in their clinical practice in the future. These steps

move through Kolb's (1984) experiential learning theory, demonstrating how AT students and preceptors can utilize this theory and process as a learning or teaching technique. Athletic training graduate students can move through the four steps of the experiential learning cycle: reflective observation, abstract conceptualization, active experimentation, and concrete experience (Kolb, 1984). Because this is a cycle, a student may start with reflective observation and learn first by reflecting on an experience they had or observed, or they may start with a concrete experience by doing or having an experience and then move into the process of reflecting on it. The nature of clinical education in AT provides the opportunity to utilize this cycle as a learning technique because of the fact that patients tend to return regularly for treatments and the same injuries, conditions or scenarios may be seen multiple times in a short time frame (semester, season, etc.). Preceptors can contribute to the use of this theory in clinical education by encouraging students to move through the described learning cycle, creating opportunities that promote this type of critical thinking, or by helping students to apply this learning cycle if they are not yet prepared to do so on their own. Program administrations should provide training or encourage preceptors to learn about the experiential learning theory (Kolb, 1984) and the student involvement theory (Astin, 1999). Including this type of training for preceptors will provide knowledge on how to create strong clinical experiences for their AT students.

### **Implications**

This study has implications on current and future graduate level ATPs. Theoretically, this study applied two theories (Astin, 1999; Kolb, 1984) to an area of study that they were not initially designed to contribute to. This research helps to extend these theories into allied health and AT education. Empirically, this study contributes to the literature by filling a gap. This is a

timely study based on the progression of ATP accreditation standards and contributes to literature on clinical education at the graduate level. Practically, this study may be useful to ATP administrators as they develop or manage clinical education programs.

### **Theoretical Implications**

This study extended the experiential learning theory (Kolb, 1984) and the student involvement theory (Astin, 1999) to graduate level AT clinical education. The use of these theories in the design of clinical education programs may be useful. These theories and the learning styles and teaching techniques associated with them should be incorporated into clinical education programs. This may be accomplished by promoting hands-on learning in clinical education and encouraging students to be active in the day-to-day happenings at their clinical sites and when interacting with their preceptors and patients.

Participants in this study confirmed that clinical experiences are the most educational when they are hands-on and provide opportunities for students to learn and think actively. Kolb's (1984) experiential learning theory allows for students to learn by doing and then reflect on that experience, plan based on that reflection, and test out their new theory or knowledge. Participants described having this experience in their clinical education, either self-led or led by their preceptor, and that they felt this process was useful in their learning and professional preparation. These findings support the encouragement of this process as a teaching technique.

By teaching students and preceptors the value of implementing the principles of the experiential learning theory (Kolb, 1984), it can boost the overall learning value of completing clinical education. If students are not cognitively able to self-navigate the experiential learning cycle, preceptors can help guide them through it. This theory should be considered when ATP

faculty evaluate the learning processes that take place at their clinical sites and how they can maximize the opportunity of learning for AT students.

Hard work and time consuming were used repeatedly by participants to explain their experience in clinical education. However, commonly following up those descriptive words was the term rewarding. The participants linked these together, demonstrating that they valued the requirement of the time commitment the clinical experiences required. This matches the student involvement theory (Astin, 1994). Athletic training programs and the faculty who design clinical education should continue to set standards for clinical education that require commitment and hard work. By encouraging students to be actively involved and immersed in their clinical experiences, they are encouraging practices that should promote a stronger clinical experience. Based on the student involvement theory (Astin, 1999), AT students will be more likely to persist to degree completion and therefore more likely to be successful at becoming an athletic trainer when they actively participate in their clinical education.

### **Empirical Implications**

Empirically, this study has provided much needed research and literature regarding graduate level AT clinical education. Prior to this study, there was a gap in the literature directly addressing research on AT clinical education beyond that which has been completed in the undergraduate world (Aronson et al., 2015; Benes et al., 2014; Mazerolle et al., 2014; Mazerolle et al., 2016). This research helps to fill the gap in the literature and will provide information for ATP faculty and administrators who develop and evaluate clinical education at the graduate level. The lack of research in this area limits amount of empirical guidance ATP administrators have. As undergraduate ATPs transition to the graduate level to meet new CAATE accreditation standards, there is a need for literature that provides best practices in program development and



maintenance. This research will provide a view of what it is like to be an AT student at the graduate level and what student preferences are in regard to learning experiences. By knowing the preferences that graduate AT students have in regard to learning experiences and the types of interactions that occur during clinical education, program administrators can develop programs specifically designed to promote learning experiences.

### **Practical Implications**

Practically, this research provides ELM program administrators with a textual description of shared experiences of those who have completed the phenomenon. This knowledge will be useful to program administrators when designing or evaluating a master's level clinical education program. Program administrators can design the requirements of their clinical education program better by knowing how ATP graduate students view clinical education, the value they place on it and the structure they prefer to optimize learning.

Aside from ATP administrators, clinical preceptors can also utilize this research and information when developing plans for daily interactions with their AT students. This research supports the idea that preceptors play a significant role in the overall experience of clinical education and how they interact with the student can be influential. By understanding the learning process that ATP students go through clinically and how opportunity contributes to that learning, preceptors can provide an experience that fosters learning. This research suggests that preceptors should encourage active participation of the AT students and help the students learn through the experiential learning cycle.

As the profession of AT continues to change and grow, the education of future athletic trainers must be adjusted as well. The future strength of the profession relies on the ability of students to transition successfully into professional practice. Being prepared for autonomous

clinical practice can be fostered through strong learning experiences in clinical education (Bowman & Dodge, 2011). The finding of this study supports that and suggests that clinical education that promotes learning will aid in the development of clinicians who are ready for autonomous practice. Athletic training students, preceptors, and administrators, as well as future patients, will all benefit from having clinical education programs that stimulate strong learning experiences, therefore, preparing students to be competent AT professionals.

### **Delimitations and Limitations**

The delimitations of this study included the requirement that participants graduated from a CAATE-accredited graduate level clinical education program after spring 2014. This delimitation was selected based on the current accreditation standards in place for CAATE accreditation. The current standards were required of all programs beginning in 2012 and call for a minimum of two years of clinical education for all students enrolled in ATPs. By setting the delimitation as graduates post spring 2014, it ensured that all participants completed clinical education based on the current accreditation standards.

Limitations of this study mainly relate to the participant sample. The participants were overwhelmingly female, with only two of the twelve participants being male. While six different CAATE-accredited programs were represented in this study, six of the twelve participants all were alumni of the same ATP. There was no data collected outside of the student group; therefore, the data and findings lacked any influence or perspective from program administration or preceptors. Additionally, this study could have been strengthened through the use of traditional focus groups as opposed to the online asynchronous focus group discussion.

### **Recommendations for Future Research**

Based on the limitations of this study and the limited research in the area of graduate level AT clinical education research, future research is needed that further investigates the role that clinical education plays in the overall preparation of graduate level AT students and the design of clinical education that is most effective. The design of the clinical education program varied among participants and included both traditional models that call for students to complete in-person didactic coursework while completing clinical education and students who completed online coursework while completing immersive clinical experiences. Similar studies to this one should also be conducted to further describe the experiences of phenomenon members, giving a larger sample a voice and having more ATPs represented. Other topics for future research might include specific preceptor qualities that enhance learning in clinical education at the graduate level, the role that ATP faculty and administrations play in clinical education learning and the perceptions of program administrators and clinical preceptors of graduate level clinical education.

### **Summary**

This study examined the phenomenon of graduate level AT clinical education. The value of this study lies in the fact that all current undergraduate ATPs must transition to the graduate level by 2022 to maintain national accreditation, and there is a lack of research surrounding graduate level AT clinical education. As ATP administrators begin the transition process, any added knowledge of this phenomenon will be beneficial.

Participants of the study were all recent graduates of CAATE-accredited master's level ATPs. They all completed clinical education as a requirement of degree completion. Data was collected to identify common experiences of those who completed clinical education at this

designated level, specifically in regard to the types of learning experiences they encountered.

Common themes among the participants were the value of hands-on and real-life learning experiences, the commitment required to successfully complete clinical education, the importance of mentorship to a strong clinical experience and the need to have access to educational resources and sites. Participants agreed that having hands-on experiences, clinical preceptors that had a willingness to teach and mentor, access to resources, and having commitment to their own education were all very significant factors in their overall learning and the impact that clinical education had in their professional preparation.

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## APPENDIX A: Permission for Use of Image

Hi Laura,

Please feel free to use the images with the relevant citation.

Saul

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**From:** Laura Wamsley [lwamsley@concord.edu]

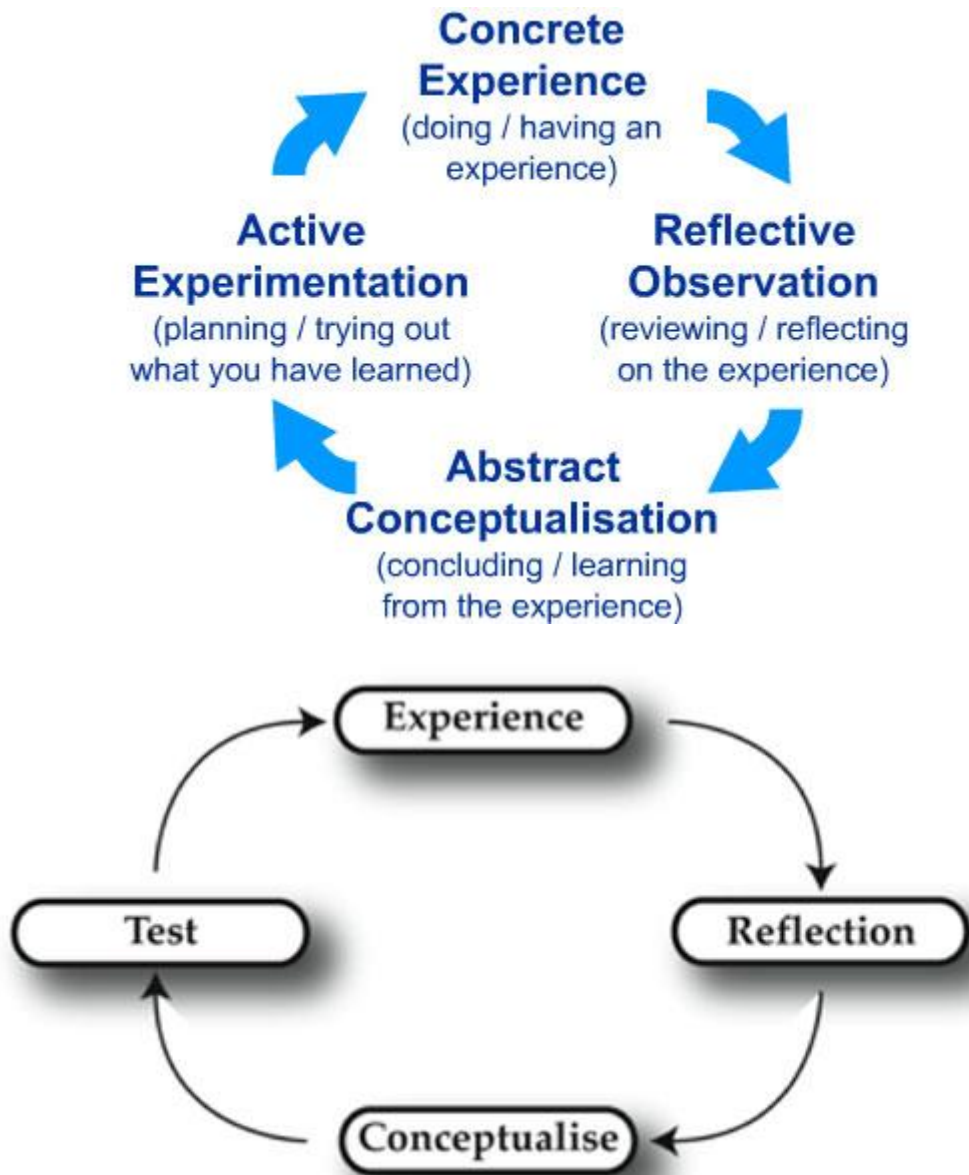
**Sent:** 27 January 2017 15:29

**To:** Saul Mcleod

**Subject:** Requesting permission to use figures from simplypsychology.org

Dr. McLeod

I am a doctoral candidate at Liberty University, currently working on my dissertation which is entitled A PHENOMONICAL STUDY OF PROFESSIONAL MASTER'S ATHLETIC TRAINING GRADUATES' LIVED CLINICAL EXPERIENCES. My theoretical framework is partially based off of Kolb's Experiential Learning Theory. I would like to use the two figures below that are presented on your webpage, giving credit to your page through citation. I will use them to explain the Experiential Learning Theory and how it may be applied in clinical education. Would you grant me permission to use these images in my dissertation?



Thank you for your time and consideration of my request.

Laura Wamsley MEd, ATC

Liberty University Doctoral Candidate

## **APPENDIX B: Screening Questionnaire**

The following is the questionnaire used to identify qualified participants who meet all participation requirements. It will be distributed to possible participants for identification either electronically or in person.

### **Screening Survey**

Instructions: Please complete this survey in your own words. The answers will be used to determine participation qualification for the research study. If selected, participation instructions will be received from the researcher. Participation is voluntary and can be terminated at any time.

1. From what professional master's athletic training program did you graduate?
2. What semester and year did you graduate from a professional AT master's program?
3. Did you complete clinical education requirements as a component of your degree curriculum?

Please return completed survey to Laura Wamsley at [lwamsley@liberty.edu](mailto:lwamsley@liberty.edu).

## **APPENDIX C: Invitation to Potential Participants**

March 23, 2018

Dear Possible Participant:

As a graduate student in the School of Education at Liberty University, I am conducting research to better understand the clinical education experiences of entry-level graduate athletic training students. The title of my research project is A Phenomenological Study of Professional Masters' Athletic Training Graduates' Lived Clinical Experiences, and the purpose of my research is to describe the shared clinical education experiences of those who have completed clinical education at the graduate level. I am writing to invite you to participate in my study.

If you are 18 years of age or older, graduated from a Commission on Accreditation of Athletic Training Education (CAATE) certified entry-level masters athletic training program after Spring 2014, and are willing to participate, you will be asked to complete a semi-structured interview, online asynchronous focus group discussion, and journaling prompts. The time required for your participation is estimated at approximately to 2-3.5 hour. Your name and/or other identifying information will be requested as part of your participation, but the information will remain confidential.

To participate, please complete the attached survey to confirm your eligibility and return to me through email at lwamsley@liberty.edu.

A consent document is also attached to this letter. The consent document contains additional information about my research. Please sign the consent document and return it to me before participating in the study. You may choose to either return the signed consent document electronically to lwamsley@concord.edu, or at your scheduled interview.

If you choose to participate and complete all parts of the study, you will receive a \$25 gift card as a token of appreciation for your time.

Sincerely,

Laura Wamsley Masters of Education, Certified Athletic Trainer Liberty University Doctoral

Candidate

Doctoral Candidate, Liberty University



## APPENDIX D: Consent Form

The Liberty University Institutional  
Review Board has approved  
this document for use from  
3/21/2018 to 3/20/2019  
Protocol # 3114.032118

### CONSENT FORM

A Phenomenological Study of Professional Masters' Athletic Training Graduates' Lived Clinical Experiences  
Laura Wamsley  
Liberty University  
School of Education

You are invited to be in a research study on the clinical education component of graduate level professional athletic training programs. You were selected as a possible participant because you earned a graduate degree from a Commission on Accreditation of Athletic Training Education (CAATE) certified professional athletic training program after the Spring 2014 academic semester. Please read this form and ask any questions you may have before agreeing to be in the study.

Laura Wamsley, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

**Background Information:** The purpose of this study is to describe the experiences of graduate students in athletic training clinical education.

**Procedures:** If you agree to be in this study, I would ask you to do the following things:

1. Semi-structured Interview: Either in-person or via Skype, which will be audio-recorded. **Estimated Time: 30-90 minutes.**
2. Journaling Activity: Submitted through email -**Estimated Time: 30-60 minutes.**
3. Asynchronous Online Focus Group Discussion, which will be audio-recorded. - **Estimated Time: 45 minutes.**

**Risks:** The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

**Benefits:**

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include the development of athletic training graduates who are prepared to practice clinically following a strong clinical education. Future athletic training students may benefit from this research by having clinical education programs that are designed to maximize learning.

**Compensation:** Participants will be compensated for participating in this study with a \$25 gift card delivered by US Mail to a major retailer at the conclusion of the study. Participants must complete all three procedures listed above to be eligible to receive this token.

**Confidentiality:** The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

The Liberty University Institutional  
Review Board has approved  
this document for use from  
3/21/2018 to 3/20/2019  
Protocol # 3114.032118

I may share the data I collect from you for use in future research studies or with other researchers; if I share the data that I collect about you, I will remove any information that could identify you, if applicable, before I share the data.

To protect the identity of participants, the following precautions will take place:

- Participants will be assigned a pseudonym.
- All interviews will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password locked computer, separate from the list of pseudonyms assigned to participants.
- Data may be used in future presentations, but confidentiality will be maintained.
- After three years, all electronic records will be deleted, and any future presentations or reports will be based on the data analysis and dissertation report only.
- Interviews will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher and the professional transcriptionist will have access to these recordings.
- I cannot assure participants that other members of the focus group will not share what was discussed with persons outside of the group, but the use of pseudonyms during discussion boards will encourage confidentiality.

**Voluntary Nature of the Study:** Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**How to Withdraw from the Study:** If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from the asynchronous online focus group discussion, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

**Contacts and Questions:** The researcher conducting this study is Laura Wamsley. You may ask any questions you have now. If you have questions later, you are encouraged to contact her at 540-421-7870 and/or [lwamsley@liberty.edu](mailto:lwamsley@liberty.edu). You may also contact the researcher's faculty advisor, Dr. Kimberly Brown at [kbhall5@liberty.edu](mailto:kbhall5@liberty.edu).

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

*Please notify the researcher if you would like a copy of this information for your records.*

**Statement of Consent:** I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

The Liberty University Institutional  
Review Board has approved  
this document for use from  
3/21/2018 to 3/20/2019  
Protocol # 3114.032118

The researcher has my permission to audio-record me as part of my participation in this study.

---

Signature of Participant

Date

---

Signature of Investigator

Date

**APPENDIX E: IRB Approval****LIBERTY UNIVERSITY.**  
INSTITUTIONAL REVIEW BOARD

March 21, 2018

Laura Wamsley MEd, ATC

IRB Approval 3114.032118: A Phenomenological Study of Professional Master's Athletic Training Graduates' Lived Clinical Experiences

Dear Laura Wamsley MEd, ATC,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,



**G. Michele Baker, MA, CIP**  
*Administrative Chair of Institutional Research*  
The Graduate School

**LIBERTY**  
UNIVERSITY.

*Liberty University | Training Champions for Christ since 1971*

## APPENDIX F: Interview Guide

The following is the data collection documents which will be utilized by the researcher.

### Interview Guide

1. Why did you choose to earn a degree in athletic training?
2. How would you classify yourself as a learner? What type of learning activities do you benefit the most from?
3. Tell me about your experiences as an athletic training student.
4. How would you describe your clinical education experiences?
5. What role do you believe that clinical education played in your education and learning?
6. What aspects of clinical education did you find most helpful in your learning and degree pursuit?
7. What aspects of clinical education did you find most frustrating? Tell me about some of the challenges you experienced with clinical education.
8. How do you feel that your clinical experiences have affected your ability to work as an ATC post-graduation?
9. Tell me about some of the clinical preceptors you were assigned to during clinical education experiences. Feel free to share both good and bad experiences.
  - a. Tell me about the most influential clinical preceptor you worked with during clinical education.
10. Tell me about some of the clinical sites you were assigned to during clinical education experiences. Feel free to share both good and bad experiences.
11. Tell me about the most influential clinical site you were assigned to work at during clinical education.

12. Tell me about a time when you can recall having a significant learning experience during clinical education. What made it significant or memorable?

### **APPENDIX G: Journaling Prompts**

Please read the following journal prompts and respond in your own words. You may reflect on your thoughts and journal over time or complete this activity in one sitting. Any identifying characteristics will be removed or masked for publication to protect your identity. Once you have completed this activity please email your journal responses to [lwamsley@liberty.edu](mailto:lwamsley@liberty.edu).

Prompt 1. Identify one preceptor that you feel was influential in your learning during clinical education and explain the role they played in learning and overall experience during clinical education. You may include any personal stories or feelings as to why that preceptor was significant and how they made a difference.

Prompt 2. Describe your most influential clinical site. Why was this site significant? How did this site prepare or fail to prepare you for clinical practice?

**APPENDIX H: Asynchronous Online Focus Group Discussion Forum Prompts**

1. What is your favorite memory of your AT clinical education?
2. What do you believe are characteristics of a strong clinical education experience?
3. If you could choose one requirement that is mandated for students during clinical education experiences what would it be?