ATHLETIC TRAINING STUDENTS' PERCEPTION OF EFFECTIVE CLINICAL INSTRUCTION

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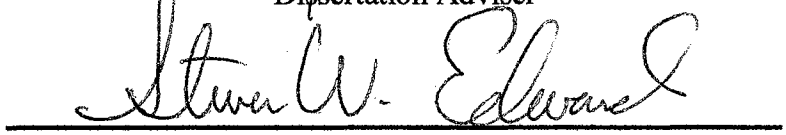

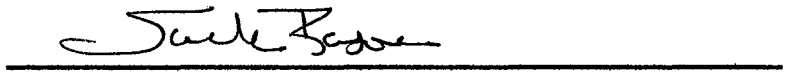

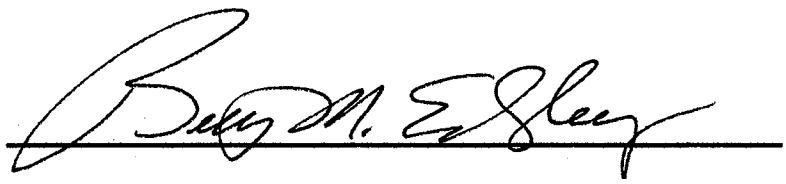

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CHAPTER I

INTRODUCTION

Athletic Training is an allied health profession that works in conjunction with physicians and other health professionals who are responsible for the health and well being of the physically active population. Certified Athletic Trainers (ATC) are skilled professionals specializing in athletic health care, professional sports programs and other athletic health care settings (NATA, 1990), who are recognized as an allied health profession by the American Medical Association.

The educational requirements to become a certified athletic trainer are set forth by the Joint Review Committee for educational programs in Athletic Training (JRC-AT), which is a sub-committee under the Commission on Accreditation of Allied Health Education Programs (CAAHEP, 1998). The knowledge base of the ATC is quite broad to encompass a number of roles and domains of responsibilities. These domains include prevention, evaluation, management of athletic injuries, rehabilitation of injuries, organization and administrative tasks such as insurance and injury/evaluation reports, and professional development (NATA, 1998).

This broad range of roles and employment settings creates many difficulties relative to the education of athletic training students. As the profession is still relatively young, research on the education of athletic training students is limited, and objective professional standards and competencies have only been developed recently. These advances have meant a notable increase in the awareness of the education of athletic training students. In light of this awareness, athletic training education programs are in the midst of drastic changes. The athletic training education program is composed of two

major parts, the classroom and the clinical experience. The aspect of clinical instruction in accredited athletic training education programs has been the topic of much discussion. Since clinical experiences comprise such a large portion of the program, many certified athletic trainers are active in this aspect of educating the athletic training student. Furthermore, the recently formed Education Council of the National Athletic Trainers' Association (NATA) has cited clinical education as one of the most pressing issues needing to be addressed (Starkey, 1997).

There is little research documenting the most effective method of clinical instruction in athletic training. Even more rare is the examination of students' perceptions of clinical instruction, which is accompanied by a gap in the existing literature regarding students' understanding of effective clinical instruction. In view of the changes in athletic training education and the limited information available, the subject of clinical education calls for greater examination. In an effort to fill the gaps that exist in the literature, this research is an exploratory qualitative case study of students' perceptions of effective clinical instruction in accredited athletic training education programs.

Background of Athletic Training Profession and Education

The profession of athletic training has undergone rapid growth in a relatively short amount of time. In a little over 50 years, the profession has progressed from the equipment room to the athletic training room, and Certified Athletic Trainers are now entering clinics, hospitals, and industrial settings. While the face of the client population base has changed rapidly, educational methods and content have been slow to evolve (Starkey, 1997).

In 1950, the NATA was founded to "build and strengthen the profession of athletic training through the exchange of ideas, knowledge, and methods of athletic training" (O'Shea, 1980, p. 3). Developments regarding the educational aspect have been a part of the organization from the beginning. Through a series of developments, the National Athletic Trainers' Association Professional Education Committee (NATAPEC) was formed. The NATAPEC committee was constructed to oversee athletic training education program development (Newell, 1984). The first athletic training curriculum model was proposed in 1959 with a strong flavor of physical education. It was not until 1969 that the first attempt at formal curriculum guidelines was completed. In 1969, the NATAPEC recognized the first undergraduate athletic training education programs: Mankato State University, Indiana State University, Lamar University, and University of New Mexico (Newell, 1984).

In the 1970's prolific changes were made to the athletic training curriculum. With the increased number of athletic training programs and students interested in athletic training, athletic training curriculum began to form its own identity and became more specific to athletic training. During the mid-1970's classes such as coaching techniques and organization and administration of health and physical education were dropped from the required athletic training curriculum. Athletic training education programs continued to be evaluated and in 1982 a national role delineation study conducted by the National Athletic Trainers' Association (NATABOC) identified 175 competencies that should be part of athletic training programs with competency-based subject matter (Delforge & Behnke, 1999). In 1988, the NATA mandated that all approved athletic training programs become major fields of study at post secondary institutions. In June of 1990,

the American Medical Association formally recognized athletic training as an allied health profession (NATA, 1990). In addition, in 1993 the NATA initiated the affiliation with CAAHEP in an attempt to upgrade athletic training education (Mathies, Denegar, & Arnhold, 1995). CAAHEP is a non-profit allied health education organization whose purpose is to accredit entry-level allied health education programs such as medical assistant, emergency medical technician-paramedic, and physician assistants (CAAHEP, 2001).

In 1994, the NATA's Board of Directors was motivated to establish the Education Task Force in response to competition in the healthcare field, inconsistencies in the preparedness of entry-level athletic trainers, and the upsurge of new work environments. This committee's charge was to evaluate athletic training education and make recommendations for improvements. The Education Task Force supplied the Board of Directors with 18 suggestions for enhancing athletic training education. The Board acted by forming the Education Council which was charged with implementing these recommendations and providing ongoing vision and leadership for education (Starkey, 1997). In 1999 the Education Council developed a new role delineation study. This study updated the entry-level athletic training competency list from 175 to 191.

Today the field of athletic training is still in the midst of change. Currently, there are two routes an athletic training student can pursue to become a nationally certified athletic trainer. The first option is the internship route, which requires the student to work directly with a certified athletic trainer for 1500 hours in addition to earning a bachelor's degree. Regardless of the degree, a student must complete minimal course work requirements such as anatomy, care and prevention of athletic injuries, advanced athletic

training, and physiology. The second avenue a student can take is through an accredited athletic training program. This requires the student be accepted into and meet the requirements of the specific program and university. Each program can set its own hour requirements for graduation, but in order to be eligible to take the national certification exam, the student must have completed 800 hours with a National Athletic Trainers Association Board of Certification (NATABOC) certified athletic trainer or clinical instructor. In conjunction with the hour requirement, a student must also complete a core set of classes and demonstrate competence in a prescribed set of skills (NATABOC, 2000). Current athletic training curriculum subject matter requirements include prevention of athletic injuries/illnesses, evaluation of athletic injuries/illnesses, first aid and emergency care, therapeutic modalities, therapeutic exercise, administration of athletic training programs, human anatomy, human physiology, exercise physiology, kinesiology/biomechanics, nutrition, psychology, personal/community health, and instructional methods (NATABOC, 2000).

All of these changes have produced many improvements for the profession, but it has also resulted in more confusion and change for the educational aspect of the program. One result of these changes is the internship route to certification will be eliminated by 2004 and all approved curricula must comply with the new requirements and become accredited under the new CAAHEP guidelines for an athletic training education program. In addition to changes in structure and accrediting bodies, there has also been a change in curricular domains and competencies. CAAHEP and the JRC-AT have stated that all Athletic Training Education Programs must incorporate all the Athletic Training Education Competencies and Clinical Proficiencies within their curriculum. The only

instructions given to meet these criteria is that the program should be set up in a manner that the clinical experiences are used to allow the students to learn and perform these competencies over time (NATA, 2001). In addition, these clinical experiences must work in conjunction with academic coursework and have measurable outcomes. Furthermore, the accreditation process requires every program to have a plan that ensures all athletic training students meet the minimum competency requirements (Cagle, 2001).

The use of clinical instructors to aid in the facilitation of competencies is essential to achieve this requirement. While the clinical instructor (CI) is charged with supervision, teaching and evaluating athletic training students during the field experience, the clinical instructor is not charged with the final formal evaluation of athletic training students' integration of clinical proficiencies. In contrast, the approved clinical instructor (ACI) provides the formal instruction and evaluation of clinical proficiencies in classroom, laboratory, and/or in clinical education experiences through direct supervision of athletic training students (NATA, 2001). To clarify, a certified athletic trainer is hired by the institution's athletic department to provide care for the athletes. At an institution with an athletic training education program, the certified athletic trainer may also be asked to serve as a clinical instructor and supervisor athletic training students during the clinical or field experience. Team doctors, physical therapist, or another professional associated with the athletic training department may also serve in this capacity. In addition, the certified athletic trainer may be asked or volunteer to serve as an approved clinical instructor (ACI) for the athletic training education program. This requires a little more time and dedication of the individual as this person will also supervise the athletic

training student as well as be responsible for formal evaluation of the student. The ACI position can only be filled by an NATABOC certified athletic trainer.

In order to qualify as an ACI the individual must attend a workshop provided by the institution's coordinator of clinical instruction. This course was developed by the Education Council's Clinical Education Committee in order to "provide a more consistent method of teaching and measuring the acquisition of skills used in athletic training clinical education" (NATA, 2001, p. xii). This course is one of the most recent approaches to move to a more centralized and formal approach to educating athletic training students in the clinical setting. However, this course focuses on more on the policies and procedures of each institution's athletic training education program and learning styles than it does on ways to improve the approved clinical instructor's instruction techniques.

Statement of the Problem

A review of the literature indicates a limited amount of research on effective clinical instructors in athletic training education. The research is even more limited on students' perspectives of effective clinical instruction. The limited research that is available is quantitative and focuses on traits predetermined by the researcher (Andersen, Larson, and Luebe, 1997; Curtis, Helton, and Domsohn, 1998; Laurent and Weidner, 2001;Vanic, 1998). As students are the primary recipients of the changes in the athletic training education programs, it is important that their voices are heard. Therefore, the purpose of this study is to explore students' perceptions of effective clinical instruction in an athletic training education program. In an attempt to explore these issues, the study asks the following questions:

Focus question:

What are students' perceptions of effective clinical instruction?

Sub questions:

1. What is the relationship between classroom instruction and clinical application?
2. What do athletic training students do during clinical rotations?
3. What do clinical instructors do during clinical rotations?
4. What, if any, differences exist between first-year, second-year, and third-year athletic trainings students' perceptions regarding the perceived importance of quality clinical instruction?
5. What, if any, difference exists between male and female athletic training students' perceptions of effective clinical instruction?

In light of vast changes in athletic training education and limited information about clinical instruction specifically from the students' view, this study is an exploratory qualitative case study of students in three accredited athletic training education programs. By investigating the students' perceptions and understandings of their clinical education, the gap between what is known and what is to be developed in regards to clinical instruction can be narrowed.

Research Framework

This exploratory, qualitative case study seeks to examine athletic training students' perceptions and understanding of effective clinical instruction. The study is exploratory in view of the general lack of a documented body of knowledge concerning these issues. As a case study, it is undertaken in order to provide insight into athletic training and better understand clinical instruction in an athletic training education program. Framing it as a case study, the context is conceptualized as a complex entity, which is influenced by interrelated physical, economic, historical, and ethical issues (Stake, 1994). The

holistic study of these complexities is the basis for qualitative research (Glesne & Peshkin, 1991; LeCompte & Preissle, 1993).

Creswell (1998) states that an individual undertaking qualitative research needs to provide a strong rationale for using qualitative methodology. These reasons include the nature of the research question, a need for the topic to be explored, the need to present a detailed view of the topic, and to study individuals in their natural setting. The use of a qualitative approach involves a study of the phenomena in the natural setting and attempts to investigate the phenomena in terms of the meanings or interpretations employed by the participants (Denzin & Lincoln, 1994). In a naturalistic case study, the researcher seeks to personally see the activities and operations of the case and to interview those who were participants. At the same time, qualitative research adopts a postpositivistic stance that holds that "reality can never be fully apprehended, only approximated" since all observations are filtered through the socially situated perspectives of language, race, class, gender, and so forth. (Guba, 1990, p. 22). Research must rely on the verbal and written expressions of the perspective of the participants studied and of the researcher, and therefore the results reflect choices made by the researcher regarding questions deemed worth asking, data perceived and recorded, and reports put forward (Denzin & Lincoln, 1994).

Conceptual Framework

Qualitative methodologies attempt to understand phenomena holistically in order to provide a context for data. The holistic study of phenomena may be aided by a mechanism to focus the study (Patton, 1980). The use of a conceptual framework provides a lens through which to view the phenomena under study. Use of a framework

allows the researcher to isolate and concentrate attention on a specific area for detailed study while retaining a holistic sense of the total phenomenon. The conceptual framework used in this study illustrates the multifaceted and complex relationship of teaching and learning.

While clinical instruction is a large and important part of an athletic training student's educational experience, it is only one portion. Clinical instruction takes place within a larger context of athletic training. Athletic training education takes place within the larger macro view of the teaching and learning process in general. This study then contributes to understanding about clinical instruction in athletic training education programs in addition to the teaching and learning process in other allied health fields and in the education experience in higher education as a whole.

Paulo Freire (1999) discusses the typical teaching and learning process as banking education. In the banking education approach the teacher is the sole knower who deposits his/her knowledge into the students. Freire disputes this approach and supports "dialogical education". Under the dialogical theory the teacher is removed as the sole knower and the equation is readjusted so that both the teacher and student participate mutually in the teaching and learning process. Aron's (1996) and Mitchell's (2000) research in social work education advances Freire's view through a relational perspective. A relational approach is one that views the worker (clinical instructor or supervisor) and client (student or supervisee) as reciprocally and mutually influencing on another.

Dialogical education and relational perspective frameworks provide a base for exploring and coming to understand the complex teaching and learning relationship. By

acknowledging that student's play a role in the teaching and learning relationship, it becomes logical to seek the student's view of what makes this process effective.

Limitations

As a qualitative case study this research project provides a holistic and in depth understanding of clinical instruction in athletic training education programs. The weaknesses of this approach are the small sample size and a sample of three campuses from a limited geographical area. These limitations prevent broader generalizability of the findings. However, these limitations can be offset by the advantage of a concentrated in-depth study, appropriate to the emerging nature of the topic. In consideration of the discussed weaknesses and in light of the need for expanding the knowledge base on effective clinical instruction in athletic training education programs, I conducted this study using the described qualitative methodology.

Definition of Terms

Athletic Training Student (ATS) – An individual enrolled in a CAAHEP-accredited entry-level athletic training education program (NATA, 2001).

Approved Clinical Instructor (ACI) – An NATABOC Certified Athletic Trainer with a minimum of one year of work experience as an athletic trainer, and who has completed Approved Clinical Instructor training. An ACI provides formal instruction and evaluation of clinical proficiencies in classroom, laboratory, and/or in clinical education experiences through direct supervision of athletic training students (NATA, 2001).

Case Study – An exploration of a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context (Creswell, 1998).

Clinical Education – also termed supervised clinical practice or clinical education experience. Clinical education represents the athletic training students' formal acquisition, practice, and ACI evaluation of the Entry-Level Athletic Training Clinical Proficiencies through classroom, laboratory, and clinical education experiences under the direct supervision of an ACI or a clinical instructor (NATA, 2001).

Clinical Education Experience – Clinical education experience provides an opportunity for the integration of psychomotor, cognitive, affective skills, and clinical proficiencies within the context of direct patient care. An ACI must directly supervise formal clinical education experience (NATA, 2001).

Clinical Instructor (CI) – an NATABOC Certified Athletic Trainer or other qualified health care professional with a minimum of one year of work experience in their respective academic or clinical area. Clinical instructors teach, evaluate, and supervise athletic training students' integration of clinical proficiencies (NATA, 2001). A clinical instructor, also referred to as a clinical educator, is an individual who mentors and teaches professional, leadership and clinical skills to the student athletic trainers who are placed under his/her direct supervision in the place of employment (CAAHEP, 1998).

Clinical Instructor Educator (CIE) –or clinical education coordinator, an NATABOC Certified Athletic Trainer or physician (MD or DO) who attends the NATA CIE Seminar and is subsequently qualified to conduct an ACI training workshop. The CIE assists in

developing, implementing, and evaluating the clinical education program at the academic institution (NATA, 2001).

Commission on Accreditation of Allied Health Education Programs (CAAHEP) – A non-profit allied health education organization whose purpose is to accredit entry level allied health education programs. This organization accredits programs for athletic training upon the recommendation of the Joint Review Committee on Educational Programs in Athletic Training (www.cewl.com).

Educational Council of the NATA - Task force created to provide leadership for educational policy and to develop and deliver professional preparation and continuing education for athletic trainers (Starkey, 1997).

National Athletic Trainers' Association (NATA) – The professional organization of athletic training.

National Athletic Trainers' Association Board of Certification (NATABOC) – The certifying agency of athletic training.

Supervision – Applies to the field experiences under the direction of a clinical instructor. Daily personal/verbal contact at the setting of supervision between the athletic training student and the ACI or CI who plans, directs, advises, and evaluates the students' athletic training field experience (NATA, 2001).

Significance of Study

The intent of this study is to contribute to the further understanding of clinical instruction within accredited athletic training education programs. According to Marshall and Rossman (1989), research should be "important for policy, for practice, and as a

contribution to fundamental knowledge" (p. 31). The following demonstrates the applicability of this study to each of these areas.

Policy

In light of the changes in the profession and educational programs and the scarcity of research in the area of athletic training education programs, this study can serve to inform and drive the policies being implemented. By stimulating discussion and further research concerning what students perceive as effective clinical instruction, this study will contribute to the resources the NATA will have to inform and improve decisions affecting students and the clinical instruction within the athletic training education program as well as the profession.

Practice

Through this examination of student's understanding of effective clinical instruction, clinical instructors, program directors, and NATA professional committees may be allowed a better method for assessing or understanding the appropriateness of employing specific techniques within the curriculum. Uncovering complex interactions, taken for granted processes, and the often-overlooked beliefs and values of athletic training students can provide the potential to improve athletic training educational practices.

Knowledge

The limited research on athletic training education programs has previously focused on clinical instructors' personality or characteristics or the requirements of the clinical experience. This research attempts to add to the relatively non-existent professional literature, which explores students' perceptions of effective clinical instruction, as well as fundamental knowledge through an analysis of cases in which clinical instruction is

emphasized. Although findings from individual cases cannot be generalized, they can be used to "alert researchers to themes or events which might be common to similar phenomena under different conditions" (LeCompte & Preissle, 1993, p. 119). Also, as athletic training education programs move toward accreditation it is important to know what makes clinical instruction effective.

Chapter II highlights research and other literature relevant to this study. Chapter III explains the research method that was used and includes a description of the research sites, research design and procedure, data collection, and data analysis. Chapter IV will continue to discuss data analysis and provide results of the study. Chapter V provides discussion of the analysis, implications for educators, and recommendations for further research.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

A comprehensive review of the literature indicates that a limited amount of research is available regarding clinical instruction in athletic training education programs. Furthermore, the information that is available focuses on personal characteristics and attributes of effective clinical instructors and not their instruction. In addition, little attention has been given to students' perceptions of effective clinical pedagogy. However, there is a significant amount of research available on effective teaching in other allied health education programs as well as other factors, which have led to the need for this research. This chapter is divided into four major sections. Section one examines the pertinent research related to athletic training education reform and accreditation, section two reviews the clinical instructor literature, and section three examines the effective teaching or instruction literature in allied health fields and in general. The fourth section looks at the teaching/learning relationship and process, which provides the theoretical grounding for the study.

Athletic Training Education Reform and Accreditation

From the inception of the athletic training profession and the founding of the National Athletic Trainers' Association (NATA) in 1950, there have been efforts to continually enhance athletic trainers' knowledge and skills by improving educational experiences within education programs. As a result of concerns regarding athletic training education at all levels (entry level, advanced and continuing education) an educational task force was commissioned in 1994 by the NATA to study athletic training education. The task

force presented eighteen proposals to the NATA. From these recommendations, the Education Council was formed in 1997 with the charge of reviewing each proposal and creating a plan of action. The most noted change is the elimination of the internship route to certification. By January 2004, all athletic training students must complete their education through the Commission on the Accreditation of Allied Health Education Programs (CAAHEP) accredited athletic training education program in order be eligible to take the National Athletic Trainers' Association Board of Certification (NATABOC) examination.

Academic programs are often accredited by outside organizations. Accreditation shows that the school is willing to open itself to outside scrutiny in order to increase accountability (CAAHEP, 1998). Accreditation for entry-level athletic training education programs is granted by CAAHEP. These entry-level standards are based on the role delineation studies completed to outline the tasks performed by Certified Athletic Trainers. Employment tasks, responsibilities, and necessary knowledge are translated into education competencies. Students are expected to master these competencies in order to function in entry-level positions. Accreditation ensures that a school's curriculum is designed to provide students with the knowledge and skill necessary to master all athletic training competencies. The transition of athletic training education from an internship program to a CAAHEP-accredited competency-based program has helped standardize athletic training education and improve its consistency with professional preparation in other allied health disciplines.

A second important change that emerged from the Task Force and Education Council's work is that clinical instructors are required to have some pedagogy training so

that they can assist the learning process. An athletic training curriculum consists of didactic and clinical education. Didactic education calls for simultaneous integration of theoretical information and professional knowledge. Clinical education is a multidimensional, hands-on learning experience involving: 1) a clinical instructor, 2) student or students and 3) the clinical environment (Jarski, Kulig & Olson, 1990). During the clinical experience students are expected to put theoretical information into practice on actual patients under the direct supervision of a clinical instructor. This experience provides students with the opportunity to apply didactic information to real-life situations while having an instructor available to teach about unique situations or reinforce newly learned material or skills in both clinical and classroom settings. In a typical athletic training education program this is achieved by aligning the course work and labs or practicums. Below is one example of a curriculum sequence for an athletic training student. This sequence is a reflective combination of several different accredited athletic training education programs.

Freshman Year	Prevention and Treatment
	Prevention and Treatment Lab/Practicum
	Anatomy and Physiology
	Anatomy and Physiology Lab
	Responding to Emergencies
	Anatomy and Kinesiology
Sophomore Year	Orthopedic Assessment – Lower extremity
	Orthopedic Assessment Practicum
	Drug Education/ Pharmacology
	Nutrition
	Orthopedic Assessment – Upper extremity
	Orthopedic Assessment Practicum
	Exercise Physiology
	Therapeutic Modalities
	Therapeutic Modalities Lab/Practicum
Junior Year	Biomechanics
	Psychology
	Therapeutic Rehabilitation

	Therapeutic Rehabilitation Lab/Practicum
	Instructional Techniques
	Community/Personal Health
Senior Year	Organization and Administration
	Organization and Administration Lab/Practicum
	Current Issues or Applications in Athletic Training

In addition to the course sequencing and alignment of practicums and/or labs, beginning in the spring of the freshman year or fall of the sophomore year students are assigned to an ACI each semester for the clinical experience portion requirement. These assignments are typically done to match the student's course work or level in the program. For example, efforts are made to place a student taking orthopedic assessment of the lower extremities with an instructor working primarily with a lower extremity sport. Because clinical education helps students learn skills and apply theoretical knowledge, improvement of athletic training professional services depends to a great degree on maintaining high quality clinical education (Blue, Stratton, Plymal, DeGnore, Schwartz, & Sloan, 1998). As the number of CAAHEP- accredited athletic training programs continue to increase to meet the NATA 2004 mandate, an increase in the number of quality, qualified athletic training clinical instructors will be required. In addition to the increase in number of clinical instructors, an elevated reliance on such individuals is also occurring. Consequently, there is a need for a deeper look into the role of the clinical instructor, as well as, a need to develop a form of accountability in the area of clinical instruction.

Clinical Instructor

There is a stark contrast in the plethora of changes being implemented in the athletic training profession and the scarcity of focus on clinical instruction in general and more specifically on ways of improving clinical education for athletic training students

Typically, clinical instructors are certified athletic trainers employed by the athletic department of the institution, the certified athletic trainer at a local high school or clinic affiliated with the athletic training education program. Whether the clinical setting is the athletic training room, sports setting, clinic, or high school the athletic training student is the primary responsibility of the clinical instructor during the daily supervision of the clinical experience. Therefore, knowledge and insight with respect to the changing educational needs of the student should prevail as the chief priority for clinical supervisors involved with student instruction. In athletic training the clinical instructor, also referred to as clinical educator, is a faculty or staff member who provides direct supervision and instruction of students in the clinical aspect of the athletic training education program (CAAHEP, 1998). As part of the "educational team", these individuals educate and mentor athletic training students in the cognitive, affective, and psychomotor domains in athletic training (Anderson, Larson & Luebe, 1997). More specifically, clinical instructors help students develop advanced clinical skills over time, through numerous clinical experiences and effective clinical mentoring which allows the student to become a competent entry-level athletic trainer (Foster & Leslie, 1992). The only requirement, as set forth by the accrediting body (CAAHEP), to become a clinical instructor is to have one year of professional experience, post athletic training certification. After successful completion of the NATABOC national examination and one year of employment as a certified athletic trainer, an ATC may be invited or appointed to serve as a clinical instructor by a college/university's accredited athletic training program director to educate students who are studying to become athletic trainers (CAAHEP, 1998). This appointed or invited position, in most cases, is a volunteer

position for interested persons who have the dedication, desire, and teaching skills to foster clinical instruction and growth in athletic training students. Based on this, CAAHEP (1998) recommends a clinical instructor demonstrate effective clinical teaching abilities and express a sincere interest in the professional preparation of athletic trainings students.

The Education Council's Clinical Education Committee announced all clinical instructors responsible for student instruction will be required to possess a certificate of advanced qualifications and become an Approved Clinical Instructor (ACI). To become an ACI, the certified athletic trainer must attend a workshop conducted by an approved Clinical Instructor Educator (CIE). To maintain their status, an ACI must acquire a minimum of five hours of continuing education in an NATA approved Clinical Instructor's Workshop within each continuing education 3 year reporting period (NATA, 2001). However, since this requirement does not go into effect until the 2002-2003 academic year there is no research available on the impact of this program on effective clinical instruction.

Research that is available on the issue of the clinical instructor has been conducted using quantitative methods with a limited focus mainly on clinical instructor's characteristics. Research by Vanic (1998) looked at the perceived importance of effective clinical instructor characteristics in athletic training education. He used the Clinical Instructor Survey Tool (CIST), which he developed, to determine if there were differences between the supervising certified athletic trainers and athletic training students regarding their perceived importance of clinical instructor characteristics. Besides providing athletic training education programs with a useful tool, he found that

there is a significant difference between certified athletic trainers' perceptions and athletic trainings students' perceptions. Characteristics involving professional competence received higher mean results from the certified athletic trainers than the athletic training students. Yet, athletic training students rated the involvement/receptivity domain higher than the certified athletic trainers (Vanic, 1998). This data suggest that certified athletic trainers place importance on their personal knowledge and competency where as the student places more importance on the interaction level between themselves and the certified athletic trainer. These contradictory viewpoints are yet another piece of evidence supporting the need to gain students' perceptions. Having more knowledge and understanding of what perspective the student is coming from should make it easier to provide effective clinical instruction.

Laurent and Weidner (2001) expanded this line of inquiry by comparing the perceptions of students and clinical instructors regarding the most and least helpful clinical instructor characteristics. The researchers devised a survey containing helpful clinical instructor characteristics for fostering student learning from a review of the medical and allied health clinical education literature. Two hundred and eight athletic training students and 47 clinical instructors completed and returned the questionnaire. According to the data, both students and clinical instructors perceive modeling professional behavior as the most helpful category of clinical instructor characteristics in student learning. Integration of knowledge and research into clinical education was considered the least helpful characteristics. A list of teaching tips for clinical instructors was developed based on the findings. These techniques include the instructor displaying confidence, demonstrating respect for students, and demonstrating skills for students.

Curtis, Helion, and Domsohn (1998) reported that supervising athletic trainer behaviors had a profound effect on the professional development of athletic training students. Athletic training students' growth and development is affected whether this interaction is negative or positive. They conclude by noting athletic training students can provide insightful information that can be used to enhance the clinical experience and education. These authors used the critical incident technique to identify essential behaviors of supervising athletic trainers from the viewpoint of athletic training students. The sixty-four students that volunteered to participate reported more helpful behaviors than hindering behaviors. These behaviors included mentoring, acceptance, nurturing, and modeling. Actions that humiliate the athletic training students and lack of availability by the supervisor were reported as hindering behaviors.

Andersen, Larson, and Luebe (1997) conducted a study to assess the skills of supervisors in both internship programs and NATA/CAAHEP approved programs. They investigated the viewpoints of the supervisors and students. They hypothesized that older, more mature students would be more critical of their supervisors than young students and that supervisors would rate themselves higher than their students would. They reported no significant differences between supervisors of the two types of programs, supervisors were more critical of themselves than the students were, and older students do not rate their supervisors as positively as younger students. In conclusion, the authors' caution interpreting these results incorrectly. They contend that overall, both the students and supervisors were satisfied with the supervision they gave or received.

While this information is valuable for helping programs and individuals know what type of characteristics athletic training students want in their instructors, it does not

answer what type of instruction is most effective. An important part of continuing to improve clinical education starts with having effective clinical instructors; however, there also needs to be a focus on improving the clinical teaching in athletic training education. Since a large part of students' education is received through the daily supervision of the clinical instructor, these individuals need to have knowledge of the most effective way to help students learn through this experience.

Effective Teaching/ Instruction

Clinical teaching is the "process of transferring expert knowledge to learners by helping them to develop problem-solving strategies that reconstruct their knowledge around patient problems. It mimics the real world where real clinicians see real patients in a real setting" (Crandall, 1993, p.86). Clinical education is the process of applying didactic information to clinical experience (Irby, 1986). In most allied health professions clinical education is a major component in the educational process of students. Many names are used to describe the clinical education of allied health professionals: fieldwork, clinical rotations, internships, and externships (Duncan & Wright, 1992). In athletic training education, this learning practice is referred to as clinical experiences or clinical education. Clinical education is important for the preparation of students in health related fields. One goal of clinical instruction is to reinforce didactic learning by applying the knowledge and psychomotor skills to "real-life" patients care situations in traditional and non-traditional settings. The second objective is to allow for multiple repetitions and practice of psychomotor skills, in a supervised environment, to enhance the proficiency of the learned skills. Finally, clinical education provides a stage where students can use

information from the affective domain to apply their newly formed attitudes, values, and beliefs to assist in patient care management (Emery, 1984).

Clinical experiences in athletic training may be compared to the practical learning that other health related professional student, like dental or nursing students, obtain. In those clinical components, a defined knowledge base, psychomotor competencies, and experiences from the affective domain are utilized to assimilate the classroom learning into practice in the traditional hospital/ clinical settings. Further, clinical experiences are designed not only to challenge students to use the body of knowledge they have learned, concepts from the affective domain, and basic psychomotor skills and techniques to perform professional skills in field-based or clinical settings.

Certified athletic trainers agree that clinical instruction is an important component of athletic training education (Foster & Leslie, 1992). As the profession of Athletic Training continues to redefine the educational requirements for the preparation of entry-level professionals, it is increasingly important for the profession to work to address the needs and requirements of providing excellent clinical education for students (Starkey, 1997). However, the qualities that constitute effective clinical teaching in athletic training education are not well defined. In fact, a review of the research and clinical-based literature examining athletic training education revealed little emphasis or acknowledgement of effective instruction or its potential benefit for athletic training. On the issue of clinical instruction, Weidner and August (1997) stated "there is no body of information on clinical instruction in athletic training. Hence, clinical instructors have little guidance on how to instruct and evaluate students' clinical skills" (p. 52). They continued with recommendations for clinical instructors to focus on competency-based

clinical instruction. Several characteristics of effective instruction, as identified by Weidner and August, include organization and clarity, enthusiasm, instructor knowledge and competence, and interpersonal skills.

Since the literature was lacking on effective teaching or instruction in athletic training the search was widened to other allied health care professions. Kernan, Lee, Stone, Freudigman, and O'Connor (2000) asked medical students to identify effective teaching behaviors of preceptors of ambulatory care. Using the theory that students are a valid source of ideas for educational strategy, the authors conducted a survey among experienced medical students to ascertain their opinions on effective teaching behaviors. The survey was based on the responses given by the nine focus groups, which were comprised of third-year medical students from two universities. During these focus groups, students were asked to identify teaching behaviors that facilitated their learning. The transcripts were then analyzed and the 94 behaviors identified were used to construct a survey. One hundred twenty-two (122) medical students completed and returned the survey. The behaviors that rated the highest fell into the following domains: creating a favorable learning environment, teaching clinical skills, and teaching knowledge. Under the domain of creating a favorable learning environment, students felt strongly that attending to questions and giving students opportunities to do procedures were effective teaching behaviors. The largest number of effective teaching behaviors was identified in the domain of teaching clinical skills. These included responding to requests to confirm physical findings, assuring that the student had the opportunity to interview and examine the patient alone, guiding students in devising a plan of care and caring for the patient instead of replacing or teaching the student what to do, asking questions that lead

students to their own diagnosis or treatment, asking the student for their assessment and plan before giving your own, and challenging students to explain choices that they have made. Under teaching knowledge, using questions to help students improve their understanding of particular issues and respectfully directing the student in the right direction if an incorrect response is given. While a few of these are behaviors specifically related to medical students involved in ambulatory care, the majority can easily be implemented into the clinical experience by athletic training clinical instructors.

In 1995, Kirschling, Fields, Imle, Mowery, Tanner, Perrin, and Stewart conducted a study to evaluate teaching effectiveness as perceived by nursing students. A review of the relevant literature was conducted to identify the teaching behaviors evident in nursing education, particularly, the clinical experience. The identification of instructor efficacy was defined as the "teacher's ability to help students achieve their highest level of independent thinking and clinical competency. It requires "a blend of knowledge of subject matter, interpersonal style and flexibility and the use of a variety of teaching methods" (p. 403). From this interpretation, Kirchling, et al. (1995) developed a 24-item Likert scale instrument categorized into four essential domains indicative of teacher effectiveness. The four teacher effectiveness domains were: 1) personal style of teacher/interpersonal style, 2) teaching methods, 3) knowledge and experience, and 4) professional practice. A random sample of 26 courses was selected from the 46 available courses being offered on the undergraduate (19) and graduate (7) levels. A total of 416 respondents completed the 24-item Likert scale instrument. The results indicated a high degree of validity and internal consistency reliability.

This research was developed in response to a national movement to improve clinical nursing practices. As nursing education shifts away from the traditional didactic instructional processes, there is a growing need for a valid and reliable instrument to assess effective clinical behaviors. The evaluation of clinical instruction plays a vital role when trying to provide a quality clinical learning experience.

The majority of educational research relating to effective instruction has examined the classroom experience. Detailed research in the area of classroom teaching is widely available to every instructor regardless of his/her discipline. Research attempting to identify good teaching is also widely available. Since teaching is a complex act, developing a concrete answer defining effective instruction has not been easy or without much debate. There are numerous researchers who have conducted a multitude of research in attempt to develop ways to identify good teachers (Brophy, 1986; Gage, 1984; Kernan, 2000; Kirchling, 1995).

Sherman (1986) added to this attempt by compiling all the previous research in this area and breaking all the findings into the following five qualities of an effective teacher: enthusiasm, preparation and organization, stimulate thought and interest, knowledge and love of content, and clarity. Along these same lines, a team of researchers reviewed 10 years of research and hundreds of research studies to describe what effective teachers do in the classroom. Their list included classroom management, direct instruction, time on task, questioning, comprehension instruction, level of cognitive instruction, and grouping (Levine and Ornstein, 1990).

These findings are a valuable evaluative framework; however, several authors have taken the task a step further and have looked at specific aspects of teaching. One such

area is teaching/learning styles. In the field of athletic training a limited amount of research in this area has been conducted. Harrelson, Lever-Dunn, Wright (1998) concluded that when compared to national norms athletic training student's learning styles are consistent. Coker (2000) reported that athletic training students' learning styles shifted according to their setting – classroom verses clinical environment. Other researchers have done the same thing with numerous other traits to determine what makes an effective instructor. These researchers have studied aspects from personal characteristics to classroom set-up or methods employed. When the information from each specific aspect or subject area is added to the overall wealth of information on what is or what should be effective teaching, the need for accurate assessment of teaching is evident. While this literature is beneficial for the classroom instructor and general instruction, it does not address the issues faced in the clinical setting nor does it look at the macro view of teaching and learning relationships.

Teaching/Learning Relationship

The relationship between teaching and learning is complex. An individual's experience with this process influences one's perspective. In turn, this view determines the basis from which one comes when discussing the relationship. For example, an administrator looks at the relationship of teaching and learning from more of a financial view, whereas a classroom teacher might focus more on classroom power. Even two classroom teachers might have different views of how this power should be distributed.

Paulo Freire (1999) looks critically at the teaching/learning relationship as a way of liberation from oppression. Freire, a Brazilian professor whose literacy program caused him to be exiled from two different countries, is a strong advocate for humanization

and/or liberation through education. Freire relates the traditional teacher/student relationships to "banking". In banking education, the teacher deposits the knowledge into the student who stores the information until they need to make a withdrawal to answer a question. Freire contends that this model of banking education is a monological, mechanistic theory that reduces the practice of education to a set of complex techniques. He promotes a "dialogical" education model. Under this approach to education, learners and educators are regarded as equals with the dichotomy of student/teacher vanishing. The teacher is no longer merely the one who teaches, for the teacher is also taught in dialogue with the student. The student, while being taught, also teaches the teacher. In this way, teacher and student become jointly responsible for the learning process in which all grow (p. 53).

Mary Phillips Manke (1997) proposes a similar approach to the student-teacher relationship. In the book "Classroom Power Relations", Manke describes what has become the traditional way of seeing this relationship. She describes this as the teacher being perceived as having all the power. This view is in line with Freire's concept of banking education. In contrary to this common assumption, Manke proposes allowing the power to arise from interaction between students and teachers and being jointly constructed by all participants. While Manke was mostly concerned with the classroom structure, her proposal can easily be applied to clinical instruction. These views will be used as a lens to understand the students' perspectives of clinical instruction as well as the teaching and learning process in general.

Summary

The improvement of athletic training students' education has been a priority of the athletic training profession since the NATA was founded. One example of the strides that have been made is the recent transition in the accreditation process for athletic training programs. As a result of this approval process, a need for accountability in the area of clinical instruction has been established. Specifically, there is a strong need to identify effective teaching behaviors exhibited during the field experience. Since clinical experiences constitute a major portion of athletic training education programs, many certified athletic trainers are involved in this part of the athletic training student's education. The importance of the clinical experience, as well as the influence of the supervising athletic trainer upon this experience, is well recognized. It is the role of the certified athletic trainer to aid in the professional preparation of athletic training students. However, how they execute this clinical capacity is unknown (Foster & Leslie, 1992). The responsibilities of the certified athletic trainer as the clinical instructor are greatly increasing. With the change in athletic training education from NATAPEC to CAAHEP, the need for accountability in the area of clinical instruction is of great concern (Weidner, 1993).

A review of literature verifies that there is an aspect of clinical instruction that needs to be explored. The purpose of this study is to help fill this gap by gaining an understanding of the perceptions that athletic training students attach to their clinical instruction. This will be achieved by addressing the following research questions:

1) What are students' perceptions of effective clinical instruction?
2) What is the relationship between classroom instruction and clinical application?
3) What do athletic training students do during clinical rotations?

4) What do clinical instructors do during clinical rotations?
5) What, if any, differences exist between first-year, second-year, and third-year athletic trainings students' perceptions regarding the perceived importance of quality clinical instruction?
6) What, if any, difference exists between male and female athletic training students' perceptions of effective clinical instruction?

CHAPTER III

METHODOLOGY

A Qualitative Study

> Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting (Creswell, 1998, p.15).

Qualitative research seeks to examine the world in all its complexity, refusing to reduce that experience to a small set of facts or figures designed to capture the essence of the whole (Glesne & Peshkin, 1991; LeCompte & Preissle, 1993). Qualitative research arises out of several disciplines including anthropology and sociology, and involves the use of multiple methods to obtain an in-depth, interpretive understanding of human experience (Denzin & Lincoln, 1994). It is an endeavor that contradicts scientific research traditions and questions the unquestioned. For this reason, qualitative research is especially appropriate for my interest in investigating the complex relationship among clinical instruction, clinical instructor, and athletic training students.

Since I am significantly involved with athletic training students and clinical instruction in my daily activities, I seek understanding not negation. Qualitative research provides the tools for my quest as this approach involves a study of the phenomena in the natural setting and attempts to investigate it in terms of the meanings or interpretations employed by those who inhabit that setting (Denzin & Lincoln, 1994). In a naturalistic study, the researcher seeks to personally see the activities and operations in context, to

interview those who are participants, and to provide a dense, reflexive, richly detailed depiction. At the same time, qualitative research adopts a postpositivitic stance that holds that "reality" can never be fully apprehended, only approximated since all observations are filtered through the socially situated perspectives of language, race, class, and gender of both the participants and the researcher (Guba, 1990, p.22). Research must rely on the verbal and written expressions of the perspectives of the participants studied and of the researcher, and therefore the results reflect choices made by the researcher regarding questions deemed worth asking, data perceived and recorded, and reports produced (Denzin & Lincoln, 1994).

Case Study Research

As a case study, research is confined to the examination of a specific, bounded system such as an event, a person, a group of people or an institution. The study described here was undertaken in order to better understand athletic training clinical instruction at three different institutions and their athletic training education programs and to provide insights into athletic training students' perception of effective clinical instruction. The research was conducted at three different universities in order to focus on whether there is an alignment or a contradiction between students' perceptions at different types of universities and programs. Framing inquiry as a case study allows the researcher to wrestle with questions that are integrally tied to the social context, which is conceptualized as a complex entity, composed of interrelated physical, economic, historical, and ethical issues (Stake, 1994). The holistic study of these complexities is the basis for a qualitative case study (Glesne & Peshkin, 1991; LeCompte & Preissle, 1993).

Positionality

> Self-reflexivity involves professional self-critique, in which the researchers own up to their values and how they are present in their work as interested people. Self-reflexive material gives researchers a chance to learn how the personal interests of researchers might shape research questions, approaches, and findings (Anderson & Damarin, 1996, p.273).

Having been involved with athletic training curriculum in one way or another for the last eight years, I bring to this study a strong commitment to improving athletic training education and the profession as a whole. My seeking a doctoral degree began as preparation for entering academia and working within an athletic training education program. As one who would be responsible for overseeing the clinical education of athletic training students and as an educator who works within the field, I am committed to gaining the students' perception of effective clinical instruction in an effort to improve upon this aspect of athletic training education programs. My experience and review of the literature has reinforced my belief that there has been a lack of focus on the clinical education aspect of athletic training especially from a student's perspective. Because of my past involvement in athletic training, I undertook this study with certain perspectives. My undergraduate degree was obtained from an accredited athletic training program and I am currently assisting with the implementation of a curriculum program into an existing internship based program. This process has required me to become intimate (and often frustrated) with the guidelines and regulation of becoming a CAAHEP approved athletic training education program. My personal biases are that these changes have left the student completely out of the equation and the clinical instructor and clinical instruction

as a secondary concern. While I agree with the attempt to bring more prestige and cohesiveness to the profession, I do not believe it should be at the expense of the students. Students are the future of the profession and it is with this in mind that I preceded with this work.

Methods Used

As a case study, this research project relied on multiple sources of data and research methodologies. Use of the multiple methods of document analysis, observation, and interview provides a greater body of evidence for the researcher to use to understand the social phenomena under study. Personal field notes were also kept during the research process. Such evidence, whether consistent or contradictory, allows a more complex depiction of research findings (Mathison, 1998). To examine the complexity of effective clinical instruction within accredited athletic training education programs from the viewpoint of the student, multiple strategies were employed for data collection. These methods included: (1) observations of athletic training students and their clinical instructors in a variety of settings, (2) semi-structured, in-depth individual and group interviews with athletic training students and (3) document analysis of pertinent artifacts such as student handbooks and memos provided by the programs. The use of multiple and different sources, methods, and theories to "provide corroborating evidence" is referred to by many as triangulation (Creswell, 1998; Glesne & Peshkin, 1991; Lincoln & Guba, 1985; Merriam 1988). This process requires the use of substantial information from a variety of sources to identify themes or perspectives (Creswell, 1998).

The Programs on Paper -- Document Analysis

Document analysis is a technique for studying the content of written artifacts such as official program documents and policy statements. Document analysis can enhance data collected during interviews and observation (Strauss and Corbin, 1990). Further, document analysis is a means to triangulate the data and add credibility to the study. By closely studying a program's documents much can be learned about its organization and function. In this study, document analysis was used to corroborate students' views of clinical instruction and add credence to emerging themes.

Being in the Programs -- Observation

Observation involves the use of field notes to record interaction among subjects, various events, a participant's behavior, and provides a rich description of the site and context (Marshall & Rossman, 1989). One of the major sources of information for this study is the field notes made after observations and conversations with athletic training students, clinical instructors, and program faculty. Marshall and Rossman (1989) stated that observation could disclose the behaviors of participants and the meanings that participants attach to those behaviors. These behaviors are an expression of the participants' values and beliefs.

At each of the three sites, I visited a minimum of two full days. The days of the visits were consistent for each site. Site visits generally began by becoming familiar with the site including the main athletic training room, additional athletic training rooms, and various sporting facilities. Occasionally, all the students and athletes would leave the athletic training room, so I would stay and visit with the clinical instructors or look around to become more familiar with the setting.

After brief introductions and a tour by the program director, student, or clinical instructor, I was encouraged to make myself at home and go where I chose when I chose, and talk to anyone I wished. While I avoided disturbing treatments or practices, I observed students, clinical instructors, and all activities through out the day including evaluations, treatments, meetings, competency check offs, and practices. Such observations did not interfere in the daily activities of those being observed (Denzin, 1989). I also recorded field notes from observations of informal conversations and interactions between and among ATC, faculty, athletes, and students throughout the campus. After observing the interactions and events that took place, I found a quiet place to make notes on my observations. Often this was the room I used for the individual and focus group interviews, since this room was normally empty during my visit.

During athletic training room and different sport setting observations I moved around the room in order to get the best view or be able to hear the conversations. Sometimes a student, an athlete, or a clinical instructor would acknowledge my presence, but often I was ignored. I took notes openly during this time, writing down a description of what students and/or clinical instructors were doing and often recording what was said. Individuals rarely spoke to me directly but during the first few hours of my visit a few would ask others about me. Occasionally a clinical instructor or a student would ask me about my study. Most individuals seemed to unquestioningly accept the idea that I was there to study them and their program.

Interacting with Participants -- Interview

There are many factors in the research process that cannot be observed, therefore another major source of information for this study was interviews. With the focus of this

study student's perceptions, interviews were conducted to gain insight and understanding of these perceptions. Combinations of individual and group interviews were used to provide the study with more subjects and the benefit of individual perspectives and group understandings of effective clinical instruction. Qualitative, in-depth interviews are typically informal talks that seem more like conversations than interviews and comprise an interaction between the interviewer and the interviewee (Marshal & Rossman, 1989). The semi-structured interview uses a protocol as a guide but does not necessarily follow a prescribed sequence and generally allows open-ended questions that permit the interviewee more latitude to answer than a formal, structured interview (see Appendix B for individual interview guide). The conversational nature of this interaction, and willingness for self-disclosure on the part of the interviewer can help to break down the hierarchical position of the researcher over the researched (Anderson & Damarin, 1996). Each participant was interviewed in one formal individual session, in addition to subsequent substantive informal conversations with several interviewees. Immediately after these conversations I recorded field notes on the discussions that took place.

All of the interviews took place on campus. Students were interviewed in a room designated for interviews during my visit to the site. These rooms were generally located close to the main athletic training room except at one site. In this case, the interviews were conducted in the athletic training lab located in the academic building. Each interview was scheduled at a time most accommodating to the student's class and clinical experience schedule. All of the interviewees permitted me to make audio recordings of the interviews.

Interviews averaged 45 minutes, but they ranged from 20 minutes to over an hour depending on when the interview could be arranged and how talkative the student was. I interviewed 15 students individually (See appendix B for individual interview guide) and conducted 5 focus group interviews (See appendix C for focus group interview guide) with 22 students for a total of 37 athletic training students involved in the interview portion of the study. Demographically the breakdown of interviewees was evenly distributed. The individual interviewees included 8 females and 7 males. These students ranged in ages from 19 to 34 with an average age of 21.5. All levels of the programs were represented: 5 level ones, 5 level twos, 5 level threes. The student's level is based on his/her year in the program. Typically a first year student is a sophomore, second year a junior, and third year a senior. However, this varies per student based on year the student entered the athletic training education program. A break down of this information can be found in Table 1.

The interviews with the 15 individual athletic training students provided individual student's perceptions and understandings of effective clinical instruction as well as other issues each student addressed. A list of student's names in each program was provided by the program director. Based on a study done by Martin and Buxton (1997), the college student of the 21st-century is no longer a middle-class 21year-old male. These shifts effect athletic training population as more females, non-traditional students, and more racially diverse students enroll in athletic training programs. Therefore, the list was divided to represent diversity in level or year in program and gender. Based on these groupings, the students were then selected for the individual interviews. Before each

individual interview began, the consent form was reviewed with the student before they were asked to sign the form.

Focus group interviews provided a wider view of the topic. Education research has learned from marketing and advertising that focus group interviews offer opportunities to connect to their subjects' perceptions and interests by attempting to ascertain what individuals think about specific issues (Vaughn, Schumm, & Sinagub, 1996). Beck, Trombetta, and Share (1986) define a focus group as "an informal discussion among selected individuals about specific topics relevant to the situation at hand" (p. 73). The major assumption of focus groups is that with a permissive atmosphere that fosters a range of opinions, a more complete and revealing understanding of the issues will be obtained. The goal of focus group interviews is to create a candid, normal conversation that addresses in depth, the selected topic (Vaughn, Schumm, & Sinagub, 1996). The focus group interviews provided similar data as the individual interviews but with more depth. As is the nature of focus groups, students were able to draw upon other students' remarks and add more depth to the initial statement. As a group, the students were able to come up with more examples of the topics being discussed. These groups were composed of 3-7 athletic training students representing both genders and all levels in the program. Inclusions of participants in these groups were based on the student's willingness and availability. Twenty-two students took part in the five focus group interviews. Each individual in the focus group signed an informed consent form and agreed to be tape-recorded. At the beginning of each session each student would state his/her name allowing the voice to be matched with an individual during the transcription of the tape. In addition to the tape recording, notes of the conversation were taken. The

breakdown of participants was as follows: 17 females, 5 males, 10 level one, 7 level two, and 5 level three. These students ranged in age from 19 to 35 with an average age of 21.7. See Table 1 for a description of the sample.

Origins of the Individual and Focus Group Interview Questions

A series of possible interview questions were developed based on the research questions and derived from a pilot study, personal thoughts, and literature generated to guide and facilitate the interviews (Guide in Appendix B). Individual interviews were semi-structured as this format assumes that interviewees will explain, characterize, and define their contexts in unique ways (Merriam, 1998). Questions were meant to be open-ended, allowing the students to speak freely and set the tone for the interview. Probe questions were used as needed to add clarification.

The initial questions (1 & 2) were used to help the student feel comfortable with the interview and tape recorder as well as provide some background information on the student. Questions 3, 4, 7, and 8 were used to determine the relationship between classroom instruction and clinical application (research sub-question 1). Questions 3 and 4 were also meant to help the student start thinking about athletic training as a whole and not focus on a particular instance or past experience. Questions 3, 9, and 13 were designed to facilitate an answer to research sub-question two, what are athletic training students allowed (not allowed) to do during clinical rotations. Questions 6, 9, and 12 are aimed at exploring students' views of what clinical instructors do during clinical rotations in preparation of student's skills. Questions 9, 12, and 14 aid in understanding the interaction level of the athletic training students and clinical instructors. Questions 10

Table 1

Study Participants

ATS Initials*	University	Gender	Level/Class	Age	Interview Participation#
PC	Regional U	F	1st year / Jr.	20	I, FG
AD	Regional U	F	3rd year / Sr.	21	I, FG
KW	Regional U	F	3rd year/ Sr.	21	I, FG
RC	Regional U	M	1st year	21	I
EA	Regional U	M	3rd year / Sr.	34	I
LL	Regional U	F	1st year / S	19	FG
BA	Regional U	F	1st year / S	19	FG
KS	Regional U	F	1st year / S	19	FG
PT	Regional U	F	1st year / S	20	FG
FJ	Regional U	M	1st year / Jr.	20	FG
KR	State U	M	1st year /	19	I
JT	State U	M	1st year / Sr.	21	I
SS	State U	F	3rd year / Sr.	22	I
RA	State U	M	1st year / Sr.	22	FG
RL	State U	F	1st year / Sr.	24	I, FG
BT	State U	M	1st year / Jr.	20	I, FG
DB	State U	M	2nd year / Jr.	20	FG
ME	State U	F	1st year / S	21	FG
MC	State U	F	2nd year / Sr.	23	FG
CN	Liberal Art U	F	2nd year / Jr.	21	I
SB	Liberal Art U	F	1st year / S	19	I
SH	Liberal Art U	M	3rd year / Sr.	21	I
JS	Liberal Art U	M	1st year / S	19	I
NR	Liberal Art U	F	2nd year / Jr.	20	I,FG
KA	Liberal Art U	F	1st year / Sr.	35	FG
RH	Liberal Art U	F	1st year / S	19	FG
EB	Liberal Art U	M	1st year / Jr.	27	FG
TR	Liberal Art U	F	2nd year/ Sr.	21	FG
BL	Liberal Art U	F	3rd year/ Sr.	22	FG
TS	Liberal Art U	F	2nd year / Sr.	22	FG

*Initials are used throughout the study to refer study participants. All initials have been changed to ensure confidentiality.

Interview participation: Focus Group (FG), Individual Interview (I)

and 11 were included to offer the students a chance to summarize his/her perceptions and understandings about clinical education and the program. More specifically, these questions were aimed at determining if any differences exist between different genders and/or levels of athletic training students. Each interview was concluded by allowing the student a chance to add anything that may not have been addressed or of particular interest to the student.

The focus group questions were altered to better suit the nature of a focus group. These questions were developed in the same manner as the individual questions and are listed in Appendix C. Question one was again used to help the students' become comfortable with the tape recorder, the interviewing process, and myself. In addition, background information on the students and the programs were obtained from students' responses to this question. Question two and three were meant to address sub focus question one relating to the relationship between classroom and clinical instruction. Questions 4 and 5 are aimed exploring the interaction level between athletic training students and clinical instructors and/or classroom instructors. Focus group questions 6 and 8 were developed to ascertain athletic training students' perceptions of clinical instructors' responsibilities. While discussing the roles and responsibilities students most commonly also addressed effective clinical instruction. Questions 7, 9, and 11 were used as a base for students to express their feelings about athletic training from several different viewpoints. Question 10 was used to conclude the interview and allow the group or individual to add anything they felt needed to be addressed.

Entering the Field

Glesne and Peshkin (1991) suggest that in deciding on a site, the researcher must look to the needs of the study. A case study is defined by Merriam (1998) as "intensive, holistic description and analysis of a single instance, (the "case") phenomenon, or social unit" (p. 27). For this study, three accredited athletic training education programs were explored. The three sites were chosen because of their institution type, location, accreditation status, and the willingness of the program director and students to be involved.

Each of these programs is located in a different state in the Mid-West region of the United States. Liberal Arts University is a private university with a religious affiliation. The university, located in an older part of an urban Mid-Western setting, provides a personal academic experience for each of its 4,200 students. The mission of the university is excellence in scholarship, dedication to free inquiry, integrity of character, and commitment to humanity. The athletic training program is an undergraduate education program accredited by CAAHEP since 1997. At Liberal Arts University the athletic training major is housed in the College of Business and leads to a Bachelor of Science Degree in Athletic Training. There are currently 26 students in the program. Each of the 8 certified athletic trainers employed by the university serves both the clinical and didactic aspects of the program. Each ATC provides coverage for specific athletic teams while serving as an approved clinical instructor for two to three students during the clinical rotation. In addition, each ATC teaches at least one athletic training class a year.

Regional University is a comprehensive, broad-based, liberal arts education institution with more than 9,000 students. The athletic training program is recognized as an option

in the Health Management major and leads to a Bachelor of Science degree within the College of Health and Human Services, Department of Health and Leisure. The Athletic Training Education Program received CAAHEP approval in 1998. Seven on-campus and three off-campus certified athletic trainers serve as clinical instructors by provide clinical supervision and evaluation of clinical skills for the 24 students currently in the program.

State University is a land-grant college located on a 664-acre campus in northern part of a mid-western state. The campus is convenient to both business and residential districts. The mission of this comprehensive, research, land-grant institution is serving students and people of the state, as well as the nation and world. State University is a dynamic campus with enrollment of over 20,000 students from all 50 states and 70 countries. The athletic training program has been accredited since 1994 and obtained CAAHEP accreditation under the new guideline in1999. Athletic training is a non-degree program offered jointly through the College of Education and the Department of Intercollegiate Athletics. Currently, there are 25 athletic training students in the program and nine certified athletic trainers, which provide coverage for the university's 12 sports. All nine of the certified athletic trainers serve as clinical instructors for the students while three of the certified athletic trainers serve as classroom instructors within the curriculum program.

Analysis of the Data

Good research follows a framework developed from prior theory and research. Anderson (1998) claims the framework should "serve to clarify the problem and help determine the best approach to its solution" (p.57). Based on the fact that this is an exploratory case study, the inductive model was employed. Creswell (1994) describes

this model as allowing the theory to emerge during the data collection and analysis phase of the research.

The act of data analysis is the process of shaping meanings from the research data. It is a recursive, inductive process in which theoretical categories and relational propositions are shaped through interactions between the researcher and the data (Lincoln & Guba, 1985). This is most often an ongoing process, spread throughout the study. Early analysis in a study may lead the qualitative researcher to different questions or may alter the focus of the study (Stake, 1994). A case study analysis consists of making a detailed description of the case and setting (Creswell, 1998). Data analysis and interpretation will occur simultaneously with data collection. Merriam (1998) explains that after the initial observations, interviews, and reading of documents, "Emerging insights, hunches, and tentative hypotheses direct the next phase of data collection, which in turn, leads to refinement or reformulation of questions, and so on" (p. 151). Thomas (1993) stated that data analysis or interpretation is "never final, but only partial and always subject to rethinking. If done well, intellectual reflections create new ways of thinking" (p. 45).

During my trips home after a campus visit, I either listened to interview tapes made during that visit or I tape recorded any subsequent comments and descriptions of observations. I also expanded upon ideas relating to the data or discussed observations as related to those conducted previously. This theorizing included the examination of consistencies or inconsistencies in responses to interview questions or the initial analysis of the meanings of certain comments or behaviors. I transcribed these recordings as soon

as possible into a Word document and created memos that helped focus my attention for the next set of interviews and observations.

As this process continued, themes were identified in the data and further examples were sought that might support or contradict the emerging concepts. After collecting all the data, the process of transcribing the interviews was completed. Upon completion of the site visits the complete data set included interview transcripts, field notes, documents such as memos to students, newspaper articles, and student handbooks provided by the program, and a personal journal. Personal observations and reflections about the research process were used to help guide the direction of further research by suggesting specific leads as well as assisting in the analysis of the findings (Merriam, 1998). Document analysis supplemented and helped provide context for assessing data obtained from observations and interviews (Strauss & Corbin, 1990). In order to manage this material, a system of reading and rereading the data was used to allow these documents to be broken down into passages (Lather, 1991).

The data collected during this study were analyzed using the constant comparative approach (Strauss & Corbin, 1990). The constant comparative method operates by constantly comparing and contrasting the data. By closely examining the data, categories are identified. These categories are again compared and contrasted for similarities and differences.

The first step in the data analysis of this study was to make several copies of all the data collected. This allowed me to have a master copy and review all the material before starting any formal analysis. After reading and becoming more familiar with the material, initial codes or categories were developed. These codes were derived by using

Bogdan and Biklen (1998) steps for coding. The steps included reviewing all the data and developing a list of possible codes. The initial list contained approximately 80 codes. These codes were reviewed and condensed into categories, which were then condensed even further into themes. These codes were reviewed and collapsed to a manageable number but were still encompassing of topics explored and representative of different levels of information. Themes were derived inductively from topics that participants brought up, as others were directly related to specific questions asked during interviews. This is done by allowing themes to emerge out of the data as opposed to developing themes prior to conducting the study and analysis of the data (Patton, 1980). Once the codes were determined, the text was marked with the corresponding code.

Once some preliminary findings were identified, the analysis was extended to examine the findings in consideration of existing literature and theory. After reviewing the literature, the data was reanalyzed to see if the interpretations of the categories support the claims of the research (Creswell, 1998). Given the teaching and learning framework for this study, the data were analyzed inductively but mindful of the larger puzzle of the teaching and learning framework.

Rereading the literature as I worked with the data helped me collapse the original codes and categories into four main themes in addition to sub themes that spoke to student's perceptions of clinical instruction.

Trustworthiness of Research

Qualitative researchers strive for "understanding, that deep structure of knowledge that comes from visiting personally with informants, spending extensive time in the field, and probing to obtain detailed meanings" (Creswell, 1998, p. 193). During or after a

study, qualitative researchers ask, "Did we get it right?" (Stake, 1995, p. 107). Like good quantitative research, good qualitative research must meet the standards employed for judging qualitative research. Some writers use positivist terminology to facilitate acceptance of qualitative research in a quantitative world. Lincoln and Guba, (1985) have established alternative terms to the traditional quantitative approaches to validity. To establish the "trustworthiness" of a study, Lincoln and Guba use the terms "credibility," "transferability," "dependability," and "confirmability," as "the naturalist's equivalents" for "internal validity," "external validity," "reliability," and "objectivity" (p. 300).

Following Lincoln and Guba's definitions, credibility is how one establishes confidence in the truth and accuracy of the findings. Translated into practice, this was accomplished by persistent observation in the field, triangulation, and peer review or debriefing, negative case analysis, and member checks. Peer reviewing or debriefing is the process by which a peer reads, comments, and discusses the themes from the data and the developing paper. For this study, peer reviews or debriefings were done with several athletic training educators and clinicians. These discussions of specific themes or findings, as well as the research project in general, were useful in gaining new insights into the study. The process of member checking allows the researcher a chance to verify the accuracy of transcriptions and records. Telephone calls, emails, and face-to-face conversations were used in this study for the purpose of verification. Each program director or designated contact individual for the institution was given a chance to read the introductory paragraph on his/her respective institution for accuracy. Each athletic training student, who indicated they would be willing to participate in the member

checking, was emailed a copy of the transcript and a follow-up phone call was used to discuss the student's review of the transcript. This input from the students and program director or contact person added verification and reassurance of the fit and rightness of emerging elements.

Transferability, how one can determine the extent to which the findings of a particular inquiry have applicability in other contexts and/or with other participants, is achieved through rich, thick description (Lincoln & Guba, 1985, Merriam, 1988). Thick description is a term used to describe data that offer a complete description of a phenomenon (Anderson, 1998). Geertz (1973) wrote about thick description as an effort aimed at interpretation, at getting below the surface to the construction of meaning. This is achieved by including the voices of participants when possible, drawn both from interviews and from formal and informal member checks, in order to provide a sense of the data and to emphasize the multiple realities present in such research.

Dependability answers the question of how one can determine whether the findings of an inquiry would be repeated if the inquiry were replicated. Credibility is the degree to which the findings of an inquiry are determined by the participants and conditions of the inquiry and not by the biases, motivations, interest, and/or perspectives of the inquirer. Both dependability and credibility was achieved by an audit trail and a reflexive journal kept throughout the research process (Lincoln & Guba, 1985, Merriam, 1988). An audit trail is similar to the quantitative concept of reproducibility. An audit trail allows another researcher to review the original researcher's transcriptions and records of the study to determine the pathway of the results. For this study, I have organized the notes, tapes, papers, and tools in such a way to provide for an audit trail. More specifically, each site

has a notebook, which contains copies of the transcripts, all correspondents with the program director or contact person and students, schedules, observations, documents, and any other data collected for that site. A forth notebook contains copies of initial code breakdowns and further breakdowns, as well as, working drafts. The reflexive journal is also contained in the fourth notebook. This journal contains my thoughts, reactions, and plans throughout each step of the research process.

Credibility was further achieved by triangulation of the data. Statements made by the students during individual interviews, focus group interviews, or informal conversations were compared to the program documents and observations during the site visit. If a statement did not appear to be validated by both of these other sources, the student was asked to further clarify or other students were questioned in regards to the statement in question. If the statement was unable to be validated it was removed from the data set. This process was also applied to concepts in the documents as well as observations.

To add to the trustworthiness of the data, I included my position on the topic to illuminate the ways it has influenced the research and I have sought to acknowledge the role of the researcher along with the roles of the participants.

Summary

This chapter provides an overview of the methodology employed for this study. A position statement was included, as it has played a role in this work. Also an explanation of how the data was analyzed is included to provide the reader with increased insight to this study and with the tools to help interrogate this piece of research with more understanding.

In Chapter IV, the pertinent description of each individual setting, context of each setting is provided. In addition, the three sites are compared and contrasted for an overall view. Chapter IV presents empirical materials in the form of a case study developed from observations, artifacts, and interviews. Chapter V offers an analysis of the case study findings and attempts to illustrate how these findings can best be used to improve clinical instruction in athletic training education programs. The chapter concludes with a discussion of the study's findings and conclusions, as well as implications for athletic training education programs.

CHAPTER IV

DATA ANALYSIS

This chapter serves as an interpretive understanding of athletic training students' perception of effective clinical instruction. It also serves the function of telling a story about effective clinical instruction, told from the point of view of athletic training students matriculating through an accredited athletic training education program. That is not to claim that all, or even one participant, would completely agree with this version of the events described (Schwandt, 1994). Though it is constructed from interviews, and quotes are used to explicate parts of the story, as a researcher I can never produce a complete or objective interpretation since I cannot completely escape my own prejudices or pre-understandings. Therefore, I make no claim that this text contains the "real" meaning of events or perceptions of athletic training students; it is but one of many stories possible to construct. It is however, a compilation of my interpretation of how participants told their own story and the theoretical perspective of the teaching and learning relationship. In the following pages, an overview of the setting of each campus will be described. While overall, most students addressed the same concepts in regards to clinical instruction, the history of each program played into what the students focused or based their perceptions upon.

Liberal Arts University

Liberal Arts University situated in an older part of the city provides its student with a consistency that is hard to find in this rapidly changing education process. This stability is possible as the program has been an accredited curriculum program for 12 years and the current program director and assistant have been with the program for 8 years.

Additional continuity and stability is added to the program by each certified athletic trainer being active in both the clinical and didactic aspects of the program. On top of the certified athletic trainers' sport coverage responsibility, each ATC provides supervision for the athletic training student during the clinical rotation as well as teaching at least one course within the curriculum. During the program's tenure, steady strides have been made to stay current with the guidelines and changes while improving the educational experience for its students. As a result, the program has developed a strong reputation for education and continually makes a name for itself and its students. The passing rate of the NATABOC certification examination is among the highest and within the last three years every student that has taken the exam has passed all three parts on the first attempt, a feat copied by virtually no other program. This program's success is in line with the university's mission and historical status as a strong academic school. The consistency of the program and students' pride and confidence of their program showed as the focus of their comments were based on their clinical education experience, not other outlying factors such as personnel or policy changes. While discussing this issue with the program director, he verified the historical facts of the program. He was also quick to attribute success of the program to the quality and dedication students bring with them into the program. This high regard and respect for the students from the program director and other athletic training staff plays a large role in the students' happiness with the program and the satisfaction with the clinical experience.

At Liberal Arts University the athletic training education program requiring 63 hours of course work and seven semesters of clinical experience. As with most athletic training education programs, admission is limited and competitive. A student spends the first

semester at the university as a perspective athletic training student. During this semester, students observe in the athletic training room while completing introductory class work. Following formal admission to the program, students begin the sequence of "core" athletic training courses. These courses are taken in sequence and related practicum courses are taken concurrently. A predetermined number of clinical hours are required for successful completion of each practicum class. In addition to completing the required course work, athletic training students are required to obtain 800 clinical hours under the direct supervision of a clinical instructor.

Regional University

Regional University's location in a rural community of 40,000 citizens makes it a typical, rural comprehensive public university. The community offers the largest hub for retailing, medicine, manufacturing, communications and cultural activities between two of the largest cities in the area. Most of the student body is composed of individuals from the surrounding area. In 1980 a minor in Athletic Training was approved by the Health and Physical Education Department and transitioned to the Department of Health and Leisure in 1990. The head athletic trainer has been with the University for 6 years. Under the direction of a program director hired in 1992, the head athletic trainer, and an assistant athletic trainer - who has worked for the program for 8 years, the program moved forward towards CAAHEP accreditation. During this time these three individuals were responsible for coverage of the university's 14 sports teams with the aid of a graduate assistant, teaching the core athletic training classes, and supervision of the athletic training students. In October 1998 the program was granted CAAHEP accreditation. The same year the current Program Director left leaving the two staff

athletic trainers to manage both the academic and athletic aspects of the program. Two years later a Program Director was employed to run the educational side and move the program in line with the updated guidelines for Athletic Training Education Programs. In order to continue growing and meeting the Joint Review Committees requirements, the university approved an additional tenured faculty position in 2001 to help with the coordination of clinical instruction. With the addition of two tenure faculty members, a vast amount of responsibility was lifted from the athletic certified athletic trainers. This shift in responsibility has lead to many changes in the program structure. These changes in structure and individual responsibilities were the driving force of the student's focus during the individual and focus group interviews.

While students have expressed much satisfaction in the changes and improvements being made, students also expressed awareness of tension between the program staff. This tension is a result of the responsibility shifting which has been a common occurrence in athletic training programs across the country. Specifically to Regional University, one senior level, female student commented that the two academic staff work together very well. She also noted that students are aware of some competition between the head athletic trainer and the academic staff. Several other upper level students expressed this sentiment. A first year, male student noted, "I am aware of something, almost like tension between the academic and athletic side but I am not sure of the cause. Hearing the older students talk, I can only assume it is because of something that has happen before I got here".

During a focus group with all upper level students, the conversation or focus would always return to the conflict between academics and athletic or between the head athletic

trainer and the assistant athletic trainer regardless of the question. This also occurred in the older students individual interviews but less frequently. The younger students did not really address this issue. This seems to suggest that this is just an issue for the initial transitional period. Even though the upper level students really focused on this aspect, they also commented that this change has helped them see the good in what they had and where the program is going. These students had a wider base of experience to speak about clinical instruction from than students at Liberal Arts University.

To major in athletic training at Regional University, students must be accepted into the athletic training education program. Selection for admission is a competitive process that is completed at the end of the spring semester. Following acceptance, completion of the program requires a minimum of five consecutive semesters of clinical experience (at least 800 hours) and 40 hours of core course work. Each semester of the program includes clinical education experiences that are linked directly to the professional coursework. Students must comply with the following limits in regards to clinical education hours accrued during the academic year: a minimum of 10 or a maximum of 30 hours per week and a minimum of 160 or a maximum of 450 hours per semester. It is the responsibility of both the student and the clinical instructor to establish a daily and weekly schedule that complies with this policy.

State University

Nestled into the 315-acre campus State University gives its 20,000 plus student population a mixture of business and residential surroundings. The athletic training education program has been an accredited program for the past six years and has recently been through a site visit and reaccredidation. Currently, the program has 25 students and

nine certified athletic trainers. In May of 2000 the assistant athletic trainer was named head athletic trainer and curriculum director. Based on the guidelines and standards the reaccredidation review team recommended that an individual not act in both capacities. As a result, an assistant athletic trainer from within the program was named the new program director. This individual was already teaching most of the athletic training courses and was familiar with the program's administration side. In addition, the students were already familiar with this individual, therefore, the students did not have to make a big transition. Since this action had occurred a very short time prior to my visit and since the assistant had not officially been named the program director, the effects had not been truly identified or felt by the students. From the student interviews and informal conversations the students did not seem to be concerned about this change. It was also surprising to see that the students did not seem to be conscious of the latest accreditation guidelines. Comments from students at State University were focused on their typical day-to-day clinical experience and education. This lack of concern or focus on the changes could be attributed to the fact that the changes were only superficial; meaning that program personnel name changes had occurred but the program structure remained the same at the time of the site visit.

In order to be admitted into the program, a student must complete specific course work and up to one year of guided observation in athletic training. Students who have completed these requirements are evaluated and are formally admitted into the program on a competitive basis. Once admitted, students spend two years completing required course work and a minimum of 800 clinical experience hours.

Overview of Case Study Sites

While each university has a different focus and each program has a different historical background and makeup, the experience of being an athletic training student appeared to be uniform across geographic areas, university types, gender, and level in the program. Analysis of the transcripts support this claim as students from each program articulated similar desires and needs in regards to clinical education. Analysis of documents and observations made also affirm this declaration as procedures and policies seemed to be relatively consistent across all three programs. As all of the data was analyzed, this information emerged into themes relating to effective clinical instruction from a student's perceptions. As suggested by Bogdan and Biklen (1992), the data was read on several different occasions in order to determine these themes. During the analytical process coding categories were tested and modified until they become fixed for this research project. Rubin and Rubin (1995) suggested that the transcripts be revisited to check categories and to eliminate categories that only occur in one or two interviews. Once the coding categories were developed, they were applied to each sentence or paragraph of the transcripts. This involved scrutinizing sentences carefully and deciding what codes the material pertained to (Bogdan & Biklen). Each coded unit was then copied and pasted into a single coded Word document. The same procedure was followed for coding the documents and observation field notes.

This chapter includes excerpts from the interviews to illustrate and substantiate the assertions made. Quotations from the interviews provide the evidence for the themes and at the same time enable the researcher to evoke the interviewees' words accurately and

vividly (Rubin & Rubin). The intent of using the participant's own voice is to provide enough information to allow the reader to make his/her own connection and see the foundation for the analysis. Document analysis and observations also lend credence to the claims. Information gained from these sources was used to validate student's comments and are cited throughout the document as appropriate. Student participants are referred to by initials, which are in Table 1, throughout the narrative.

The major themes that emerged from the data as athletic training students' perceptions of effective clinical instruction are the focal part of this chapter. Each major theme is supported by several sub-themes. The break down of the themes and sub-themes is organized as follows: (1) Roles and expectations of clinical instructors/instruction - mentor, (2) Teaching clinical and "other" skills - personal and professional actions, dealing with people, hands-on, critique, and critical thinking, (3) Interaction, and (4) Clinical Environment. Each of these themes represents a part of a whole therefore; some overlap might be encountered in the reading. This overlap was not an oversight but a result of the interaction between each part of the complex relationship of students and clinical instruction.

Theme One: Roles and Expectation of Clinical Instructor/ Instruction

Clinical instructors are ultimately responsible for a student's clinical instruction and it is therefore important to identify the role this instructor has and the responsibilities he/she does and should fill. Most individuals involved in the clinical instruction process seem to agree that not all clinical instructors share the same perspective with regards to the exact purpose, function, and role of the clinical educator. According to CAAHEP Standards and Guidelines for the Athletic Trainer, Standard IB1c (2)(a)(b) "A clinical instructor

shall provide direct supervision of students in athletic training and other health care settings during the field experiences." Standard IB1c (1)(a)(b) states in regards to approved clinical instructors, "an ACI shall be a faculty, staff, or adjunct allied health or medical community member of the sponsoring institution or affiliates who provides formal instruction and/ or evaluation of students in the clinical proficiencies of the athletic training education program. An ACI shall perform psychomotor and/or clinical proficiency instruction and evaluation at some point during the education experience" (CAAEP, 2001). Even with this description provided by CAAHEP, most Certified Athletic Trainers are still confused as to what and how exactly a clinical instructor or an approved clinical instructor fulfills this role and responsibility. The students also experience this confusion felt by the clinical instructor. As an older, level one, female student from Liberal Arts University stated, "They have way too many roles and responsibilities, so it is hard to pinpoint just one" (KA).

As athletic training students struggled to concretely identify and articulate the clinical instructor's main role, they expressed an appreciation and respect for everything that the clinical instructors does and gives of themselves to fill this role. While students were not able to state exactly what the role of a clinical instructor might be, students were very clear about what role they desire for the clinical instructor to fulfill. Simply stated, students want their clinical instructor to serve as a mentor. This is not a surprising revelation as mentoring is illuminated often in the literature as an important component of learning a professional role (Cahill, 1996; Daloz, 1986). In research dealing more directly with characteristics of effective clinical instructors, Anderson, Larson and Luebe (1997), stated that as part of the educational team, clinical instructors are individuals that

educate and mentor athletic training students in the cognitive, affective, and psychomotor domains in athletic training. Foster and Leslie's research maintains that clinical instructors help students develop advanced clinical skills over time, through numerous clinical experiences and effective clinical mentoring which allows the student to become a competent entry-level athletic trainer (1992). Curtis, Helion, and Domsohn's (1998) research on clinical behaviors of clinical supervisors mentions mentoring as being identified by athletic training students as an effective clinical supervisor behavior.

The concept of mentoring has its roots in the epic poem of Homer's Odyssey where the character Mentor acted as a guide to King Odysseus's son Telemachus (Harris, 2000). Even in the 21st century athletic training students still look to their clinical instructors to serve as a guide. The response given by a third year, male student proved to be very representative of student's expressing this view of mentoring.

> The most important role is a guide. They are there when you need them but they are not doing everything for you. They just provide the guidance we need if we get lost or confused. (SH)

This typical response indicates that students want a mentor or guide to help them develop the skills and attributes of a successful entry-level athletic trainer. Considering that the clinical experience portion of an athletic training student's educational experience comprises such a large and important part of the overall education, students deserve and expect after matriculating through an athletic training education program to be proficient as practitioners. Across the board, athletic training students spoke of the vast opportunities for learning during the clinical experience. Simply placing a student in the clinical setting does not ensure understanding or learning. Having a clinical instructor

there to explain or provide "guidance or mentorship" increases the chance for learning moments to be seized and meaningful (SH).

Since Homer's use of the character Mentor serving as a guide, the roles of a mentor has diversified significantly. Current perceptions have expanded to include guardian, protector, counselor, advisor, listener, director, teacher and confidante (Samier, 2000). Athletic training students' views of a mentor discussed in this study reflect a number of these current perceptions.

Students often spoke of their clinical instructor mentor as fulfilling the teacher role. Students used phases such as, "my clinical instructor tries to use everything as a teaching or learning experience" (PC) or "I think of my clinical instructor as a teacher, not like a classroom teacher but a hands-on teacher. One that makes you show them you understand by performing the skill" (RC). These statements show that students want and need the clinical instructor to teach. In contrast or addition to being a guide, some students expressed a desire to have the clinical instructor actually teach. While formal theoretical education takes place in the classroom, many students need to see and understand the practical application of a theory before they can completely grasp the concept. Providing this link between theory and practice is the role many students see the clinical instructor fulfilling.

While these perceptions are closely related and could be considered to have some overlap, each meets a different need of the student. It is important for the clinical instructor to be aware that these very subtle differences exist in students' perceptions. If the subtle differences are not acknowledged and the clinical instructor treats every student the same, each student may not perceive the instruction as effective, or more

importantly, every student may not benefit from his/her clinical experience. Knowing which role to act in will help come up with the best solution for a particular individual. Mentors must adjust their methods for each student they mentor. A better understanding of mentoring can serve to inform the development and application of mentoring relationships in the clinical education to professional growth and development. Difficulty in defining a clinical instructor's main role/responsibility along with the subtle difference in perceptions of a mentor adds to the complexity of establishing a system on which to measure effectiveness of clinical instruction.

Theme Two: Teaching Clinical Skills

Defining or identifying the roles and responsibilities of the clinical instructor from the student perspective is not enough. Considering that most clinical instructors are not professionally prepared teachers, but health care professionals who have been assigned instructional responsibilities, it is shortsighted to expect a CI to automatically know how to approach clinical instruction.

During the interviews, observations, informal conversations, and review of the transcriptions it became evident these students have experienced both "good and bad" clinical teaching. It is also clear that these students were happy to have a chance to discuss these experiences and express their opinions. While these athletic training students do not have the language to identify specific teaching methods or strategies commonly discussed in a teaching methodology class, they clearly articulate their wants and needs in clinical instruction.

Choosing the typical comment from the students' responses is difficult as the responses are so varied, therefore numerous quotes have been provided to illustrate the

varying perspectives. A first year male student from Regional University spoke about clinical instructors being willing to take the time to listen and explain the information the student is struggling with. "All of our CI know so much and have so much to teach but some of them have better ways of presenting it. Those that understand that I don't know as much as they do and that I am still a student and bring it down to my level really helps. When a clinical instructor takes time to explain or listen it really helps." (PC)

Another first year student from the same program focused more on the clinical instruction presenting the information on the student's level.

> My clinical instructor might have some techniques but I am not aware of them. She just makes you think, she never, ever gives you the answer. She will try to sway you a little to get the answer but she will not give it to you. She makes you look for it; she makes you work a 110 percent everyday, which keeps you from getting bored. (KW)

A third year female student mentioned a different aspect of clinical instruction. She expressed a desire for the clinical instructor to always challenge her.

> Showing me what it is really like to be an ATC but more importantly understand what level I am at and talking to me at that level. If they talk over my head then we have both wasted time. The same is true if they keep it too simple. (FJ)

From this collection of student quotes it is apparent that these views do not all fit into one narrowly defined theme. However, the students' statements and sentiments about clinical instructors teaching techniques can be broken down into several sub-themes including using a hands-on approach, providing constructive criticism, promoting critical thinking, and helping develop "other" skills.

Hands-on

Considering that the majority of the skills an athletic trainer performs are tasks that require direct hands-on interaction, it seems ludicrous that teaching these clinical skills would be taught in any other manner. It is common practice for allied health educational programs to involve a focus on hands-on clinical experience. Learning in the clinical setting is not a passive process that occurs merely though the physical presence of a student in the clinical setting or through observations. Becoming competent and confident in these skills requires the student to be able to physically feel a deformity, perform a special test, or manipulate a structure. To maximize learning in the clinical setting, the student must be actively engaged in the process and given feedback on the performance. Fortunately, observations during each site visit indicated that several clinical instructors are aware of this need and are allowing students this opportunity. During all three-site visits, instances of students directly working hands-on with an athlete were observed.

One example occurred during an afternoon observation at Liberal Arts University. An athletic training student was performing a calf massage on a soccer player. The student asked his clinical instructor, who was working with an athlete on the next table, if he was using the right techniques and pressure. The clinical instructor came over, watched for a second, and then physically manipulated the student's hands on the athlete and explained the reasoning for the adjustments. In addition to the students' comments and observations made, all three programs discuss the importance of this hands-on experience in program documents. For example, State University spells out the requirement within

the second paragraph of the student handbook. This requirements states that once admitted into the program, "students must spend a minimum of two years completing the core courses and working hands on with a variety of the university's varsity athletic programs and other clinical affiliations".

Unfortunately even with the program documents requiring and past research suggesting the need for hands-on practice, not all clinical instructors use this approach. Additionally, even clinical instructors who do use this technique occasionally tend to step in and take over if the student is not performing as quickly or as proficiently as the clinical instructor expects. Several students noted such experiences and numerous observations made during site visits supported these claims. Typically a clinical instructor steps in to help the student make a small adjustment that is needed to perform the skill correctly and ends up completely taking over. For example, an athletic training student was performing a knee evaluation on an athlete. The clinical instructor was hooking an athlete up for treatment on the next table while watching the student's evaluation. The student asked the clinical instructor a question regarding proper hand placement on a certain test. The clinical instructor came over and performed the test. The clinical instructor explained why the hand placement needed to be precise. Then the clinical instructor went on to perform the rest of special test for the knee and explained to the athlete what he had found. Many variations of this same scenario were observed at each site on several occasions. During an informal conversation, one clinical instructor even mentioned having been the one to take over. The clinical instructor expressed regret for this action but commented that sometimes it is just instinct to take over and other times it is just quicker to personally take care of the athlete or given situation.

It is understandable that in some situations, time constraints or other conditions are going to demand immediate action. In these cases, the certified athletic trainer has to take over and make the athlete's well being the priority. Fortunately, most situations are not emergencies and allow the certified athletic trainer to sit back and wear the hat of the clinical instructor allowing the student to learn from the situation.

Several respondents noted that the hands-on in the clinical setting allowed them to make a connection to the theory discussed in the classroom. One respondent, for example, explained: "I think the hands-on experience you get with the ATC and the athletes is vital. You can read a book all you want but you're never really going to know until you have the hands on experience "(RC).

In addition to the connections being made between theory and practice, students also commented on being able to "feel" for themselves what a certain condition or defect feels like. The following quotations have been included in hopes of capturing the essences of the students' feelings.

> I think that hands-on experience is the only way to become a successful athletic trainer. They [clinical instructor] can be there when you need them but they [clinical instructor] are not there doing everything for you and you are just watching. You don't know what a torn ACL feels like until you have done a Lachman's and felt the positive result. Just seeing someone doing it does not let you really know. You may learn how the test is supposed to look when it is performed but you don't know how it feels. I am going to be out there on my own pretty quick so I am going to need to know what things feel like and look like. Once I am on my own, I am not going to have them right there to tell me what I am feeling so it is important that I get that now.

(SH)

I think it is best if it is hands-on. For example, if the ATC is working with an athlete and they call us over and tell us what she has done and then lets us actually do it so we can feel it; it is so much better than us just watching. You can only get so much from a book. (ME)

From these quotations it is clear that students in the study perceived that this is very important to enhancing the clinical education experience of athletic training students. It is through this process that the student learns to combine classroom knowledge with psychomotor skills that are key to being successful in this predominantly hands-on profession.

Constructive Criticism

Yet another sub theme identified by students as an effective clinical instruction technique is the use of constructive criticism or critique. Student's repeatedly expressed a desire for the clinical instructor to give feedback so that the student can improve on the task or skill. Typical comments include:

There is always room for improvement so there will always be a need for feedback (FJ)

Having a CI that is able to let you know when you are wrong without criticizing you is wonderful. That is one of the great things I like about here. When you mess up they are like don't worry about it, you will have 300 more ankle injuries to look at so don't worry about that one, just remember it for the next one. The CI's here let you know it is not the end of the world when you mess up or miss something. They are always encouraging which makes you want to learn more. (JS)

In talking about the need for feedback, even those students who felt relatively confident about their skills expressed concern about the nature of the feedback. For example, on student stated, "My skills are decent but I know I can still improve so I am thankful for all the critique I can get." (BL) In the next statement, however, the students claimed, "When a CI belittles you, or cuts you down, your confidence is gone." (BL) Another student echoed the need for constructive and tactful way of presenting feedback. "They [CI] need to make sure they use tact when they are trying to correct us or show us what we did wrong. I know they were all students at one time so they should understand how it feels" (BA). Actions that humiliate the athletic training student have been cited by Curtis, Helion, and Domsohn (1998) as hindering behaviors. The following scenario described by one student really drives this point home.

> One day I overheard a couple of CI make comments to each other about how stupid a student was or how they couldn't believe that this certain student did not know the answer to a basic question. If they had been talking about me I would have been devastated, my confidence would have been completely destroyed. Even though they weren't talking about me I walked away from that experience upset and feeling really bad for the student they were talking about. (EA)

Fortunately, not all students expressed negative experiences regarding feedback from their clinical instructors. One student was very eager to point out that the clinical instructors he had worked with were very skillful at providing tactful and timely critiques. Another student claimed that her CI's light-hearted but helpful comments kept her sane when she messed up. A typical response from her CI would be "Well, if that is

the worst thing you do today, you will be still be ahead of me". She added that her CI will usually then follow up with some advice on how to do the skill better.

Similar to input on the nature of criticism, student's talked about the timing of constructive criticism in the following terms:

> Almost all clinical instructors I have worked with wait until after the athlete is gone to critique me. Even then when they are correcting me they never say okay you should have done this test or you need to do it this way. They will usually just say you might want to try doing it this way or I have found it is easier to do it like this. (KA)
>
> I have found that even in the real situations, as long as I am not hurting the athlete, my CI will wait until after the athlete is gone to discuss what I could have done or what I need to work on. This is important because if the CI corrects you in front of the athlete, the athlete may lose confidence in your abilities and not come to you in the future. (SH)

While specific expectations of feedback varied for students, it is clear that students want and need feedback on their performance. Feedback is vital in the development of the student's clinical skills. Previous research has determined that feedback should be delivered as soon as possible, be objective and focused on the task and not on the personality, emphasize progress in the task, and given frequently, especially for small things. It is also suggested that every criticism given should be accompanied by a positive suggestion for improvement. Praising things done well not only reinforces commendable actions, but it also mollifies the negative feedback that may come later. The delivery and timing of these critiques is critical to the student's development.

Thinking it Through

A third sub-theme of teaching clinical skills identified by athletic training students involves promoting critical thinking. The literature supports the students' view of critical thinking. Several authors identified the need to encourage critical thinking or problem solving not just factual recall as an essential instructional skill for effective clinical teaching (Jarski, Kullig, Olson, 1990; Kassier, 1995).

When first learning a skill a student needs to be given guidelines and "typical" rules to follow. However, truly effective clinical instruction goes beyond teaching the how and why to include being able to think through a given situation for themselves, applying the knowledge they have and developing a plan based on this information. A third year female student from Regional University expressed the need for the clinical instructor to help students think through situations. "Taking us through a situation and making us think is a great approach. I have seen clinical instructors do this. They will say what have we done, okay think about it what should we do next? They start at a basic and work to the harder. This really pushes me to think." (KW)

While observing in the main athletic training room at Liberal Arts University, a situation mirroring what this student had discussed occurred. The following is a description of the situation.

> When I entered the treatment area I observed an athlete on the treatment table with an athletic training student (ATS) on one side and a clinical instructor on the other. The ATS was conducting a low back evaluation of the athlete while the clinical instructor watched. The ATS completed the history and begun palpating structures in the area. The ATS made a comment to the clinical instructor

regarding the athlete's spine alignment. The clinical instructor stated, " for now why don't we concentrate on the area that is most painful and we can check the alignment at the end". This statement made it clear to the student that the clinical instructor was saying the ATS needed to continue the evaluation focusing on something else. The ATS refocused the evaluation and continued to fumble through the evaluation. The ATS repeated several special tests but performed a very complete examination. After approximately 25 minutes, the ATC tells the clinical instructor that she is having trouble getting a true reading as the athlete's pain level is limiting the test she can do. The clinical instructor makes a comment very softly (I am unable to hear). The ATS said she agreed and then instructed the athlete to go get in the cold whirlpool. The clinical instructor explains to the athlete that the cold will help numb the area and then they will be able to get a better test and a more accurate assessment. The athlete went to the hydro room and after a few minutes when things started to calm down, the student and clinical instructor were able to discuss the part of the evaluation that had been completed.

This whole process took approximately 30 minutes. Most evaluations take around 5 – 10 minutes unless they are really involved. The clinical instructor could easily have completed the evaluation in a lot less time but she refrained and remained patient and quiet so the student could think through the process and gain the confidence from completing an assessment. During the evaluation the clinical instructor watched patiently and gave her complete attention to the student.

After observing this situation I spoke to the clinical instructor about her approach. She stated that it is hard at times for her to sit back and watch the student fumble and

struggle through the process. The clinical instructor went on to say that when she was an athletic training student her clinical instructor used this approach and it helped her so she has attempted to always use it with her students. She also mentioned that it had been amazing the amount of growth she had seen in this particular student within the short amount of time she had been working with her.

In addition to students developing self-confidence and proficiency in skills, critical thinking helps the student move in the direction of developing his/ her own philosophy and thought process. This is very important for all athletic training students as a great amount of what athletic trainers do relies on being able to critically analyze what has happened and what the athlete or their body is telling you in order to make a decision about the proper steps to take in caring for the athlete.

"Other" Athletic Training Skills

In addition to the athletic training skills needed for an entry-level athletic trainer, athletic training students noted a fourth sub-theme of teaching clinical skills. Students' claimed they learn "other" skills from clinical instructors. These alternative skills include dealing with people in difficult situations, understanding what it is like to be an athletic trainer in the "real world", and developing professional and personal philosophies and ethics. A major portion of an athletic trainer's time is spent dealing with coaches, athletes, other athletic trainers, administrators, parents, physicians, insurance companies and other members of the sports medicine team. As one student put it,

> I have learned so much in the time I have spent in the athletic training room, practice, or other clinical setting. It is not only just how to take care of athlete's injuries but more people skills. How to relate to people and develop relationships,

as well as knowing what people are thinking. I have really learned to tell when athletes are malingering or lying and how to handle these situations. (PC)

The old adage about the "rubber meeting the road" applies to clinical education in two ways. The first and probably the most common meaning is that of theory meeting practice, which is certainly true in athletic training education. Students are introduced to athletic training theories in class everyday and given an opportunity to apply this knowledge everyday in the clinical experience. However, another view is that during the clinical experience students are also gaining a sense of what future employers are going to expect as well as a reality check to what it really means to be an athletic trainer in the working population. During an interview with a first year male student from Regional University, the student referred to his clinical experience as helpful. In addition, he also mentioned that besides the competencies he was learning what "to expect when you graduate" (RC). Most students agreed that experience was important as it gave a real picture of the hours and responsibilities of athletic training. Another student commented that the hours were long but "unlike other majors on campus, athletic training students don't graduate, get a job, and then learn what it is like" (BL). This student went on to explain that several of his friends were actually envious of him because he was "getting to do what they were only reading about" in their respective majors.

A self-proclaimed outspoken, outgoing student articulated a third skill students give their clinical instructors credit for helping them develop or understand.

> By far, she [clinical instructor] has the knowledge. She has also taught me that my personality can be a good thing. I do tend to voice my opinion more than I

should. And that is part of being a good instructor, is helping students understand themselves and how they fit into the profession. (KW)

This student was speaking specifically about herself and her strong personality but other students mentioned different features about themselves that their clinical instructors helped them realize and/or develop. Traditionally college students are still maturing and developing. During this period these students need reassurance about themselves as well as advice on how to make certain features work for them.

From these students words it is evident that the students are always watching the actions of the clinical instructor even when true athletic training skills are not being covered. This is an important aspect for the clinical instructor to remember. Many students, especially the younger students, are developing their personal views and professional ethics along with his/her athletic training skills. These students watch every move the clinical instructor makes in order to facilitate this development. Therefore, as a clinical instructor one must remember how impressionable these students are. Even when the clinical instructor is having a bad day, disagrees with a doctor, has an argument with a coach, believes an athlete is malingering or lying, or any number of the other daily "problems" encountered by certified athletic trainers, the clinical instructor needs to act in a professional and ethical manner. A mature third year student who has a limited background in elementary education, as this was the student's original major, sums this thought up succinctly in the following quote:

> I think being a CI should definitely be a privilege because you get to help mold students and shape the human mind and get to see them grow. I think it is extremely important for the CI to WANT to teach and do it well. (KW)

This information from the student makes it apparent that a clinical instructor must keep in mind the nature of the clinical instructor position requires more than being proficient in athletic training skills. Certified athletic trainers are typically hired officially as an athletic trainer to provide their clinical skills to care for the athletes. This individual may also take on the additional role of being a clinical instructor or an approved clinical instructor. It is important that this individual have a firm understanding about the added responsibilities before assuming this position. Not one document that I was able to secure provided the clinical instructor or student with this information. Actually, the only information included in the documents related to clinical instructors, and the role they play in the clinical experience, was a brief statement indicating that students would be assigned to work with a clinical instructor during the students' clinical experience.

Theme Three: Interaction

Students in this study agreed with previous research that the interaction of clinical instructor and student is a dynamic relationship that has an effect on the educational process. Several authors have conducted research on the effect of teacher-student interaction and found it has a broad impact on students' educational outcomes (Endo & Harpel, 1982; Pascarella, Terenzini, & Hibel, 1978). It has been shown through research that increased student-faculty interaction has a broad impact on student's general way of hinking, methods of problem solving, and interests in various life goals (Bean, 1980). pecifically related to athletic training students and clinical instructor's interaction, irtis, Helion, Domsohn (1998) indicated "interaction between supervisors and students sitively or negatively affect athletic training students' growth and development" (p.

250). Another study looking specifically at athletic training students was conducted by Stigler, Etzel, and Lantz (2001) looked at how stress affected athletic training students over the course of an academic year. This research showed that athletic training students have the typical stress of college students relating to grades. However, there seems to be additional stress placed on athletic training students with the time demands required for the clinical rotations. Most athletic training students spend an average of 20 to 40 hours a week, in addition to class time, in the clinical setting. This time commitment means less time to study and work. While most college students worry about money, athletic training students have the added stress of not being able to work to make money to pay for their education and living expenses. Stigler, Etzel, and Lantz's research suggested that certified athletic trainers who work with these individuals could have a significant effect on the daily function and development of these future professionals. In addition to making sure that students understand athletic training concepts, attention needs to be given to the athletic training student's health and welfare. Some of the essential characteristics of clinical instruction these authors discussed include the following techniques that clinical instructors can use to interact with the athletic training student. These techniques include being an effective listener and being sensitive to the concerns of students, having an open door policy, providing students with the opportunity they may need to talk, encouraging a student to check in once a week, getting to know students on an ethically appropriate personal level rather than just through the superficial daily interactions in the clinical setting, and asking simple questions that show genuine interest and concern for students as people and not merely students. (Stigler, Etzel, & Lantz, 2001).

Athletic training students expounded upon several of these suggestions. During a focus group at Liberal Arts University, several of the students mentioned that amount of interaction they had with their clinical instructors. The felt that they were lucky because their clinical instructors were also classroom instructors so they were able to get to know these individual better. As one student put it, "Interactions between students and clinical instructors occur on a daily basis. We spend more time with these people than our own families or friends" (TR). Considering the amount of time the student and clinical instructor spend together interaction between the two would seem to be natural. However, with all that takes place during the clinical experience interaction between the student and clinical instructor it is not always a priority or a naturally occurring event. As with any relationship, both parties must work to improve the interaction. A truly effective relationship is the perfect blend of personal and professional skills and attitudes. If this balance is not maintained or achieved the relationship can suffer. A relationship that is not open will not allow a free exchange of ideas. A first year, male student from Regional University expressed this sentiment after being asked if he felt his interaction with his clinical instructor played a part in his learning.

> I think learning would be limited because I would not be asking questions and we would not be communicating. If you don't feel comfortable or feel like the CI cares you just put in your time and go home and hopefully learn it later. I am lucky because my CI is nice to me and is easy to get along with. The fact that I am around her everyday and that she talks to me makes me feel comfortable around her so I feel free to ask questions. If I did not feel comfortable and free to

ask questions it would be hard to learn (RC)

Similarly, another student stated,

> I think if you have a better relationship with the CI it is easier to ask questions. If you are not comfortable it is hard to think of your name let alone an answer or intelligent question (RH)

From these representative quotations, it is evident that students desire an interaction that is educational but also friendly and relaxed. They want the CI to be professional but also personable. Considering the amount of time the student and the CI spend together it only makes sense that this time should be comfortable and relaxed.

Athletic training students also expressed a desire for clinical instructors to understand that there must be some one-on-one or actual interaction occurring. Unfortunately because of the hectic nature of athletic training and some individual's personalities, this interfacing does not always occur. As noted during an observation at one of the sites, some clinical instructors spend a large portion of time in their office while the student is left out in the main part of the athletic training room to complete tasks such as cleaning, filing, or giving treatments. This action is in stark contrast to what the three program's documents say in regards to a student's clinical experience. Each program states that during the clinical experience an athletic training student will learn by assisting a clinical instructor. This is obviously not happening if the clinical instructor is in the office working and the student is out in the athletic training room. One student expressed concern about this situation. "We are here to learn from them [clinical instructors] but if they seclude themselves in the office the whole time or on the phone the whole time how

or what can we learn from them" (JT). Another student spoke of the same issue but from a different angle.

> You have to be able to interact with people and teach them something during that interaction. You can't sit in your office all day. If you have to be in the office doing paper work let some of the students help – not do- help you with it so they can learn from it and have the staff alternate when they are doing office things so someone is always out interacting with the students. They need to say come on over here and watch or help me do this. Or talk about something each day. Just break it up or mix it up, challenge the students (RK).

It is clear that an important element of clinical instruction involves the working relationship and mutual association between the clinical instructor and athletic training student. Because this association may have a significant impact on his/her future educational endeavors, it is understandable that the student would be extremely interested in developing a positive working relationship with the clinical instructor.

Theme Four: Atmosphere

Clinical education is a multidimensional, hands-on learning experience involving: 1) a clinical instructor, 2) student or students and 3) the clinical environment (Jarski, Kulig & Olson, 1990). This clinical environment was identified by athletic training students an important component of effective clinical instruction. Other terms used in the literature to denote this concept are learning climate and environment. As the term "climate" implies, this is the overlying environment or learning "atmosphere" within clinical education. Given that athletic training students spending approximately 20 to 40 hours a week in the athletic training setting, the climate is embedded in each aspect and infiltrates

the teaching and learning process. The effective CI creates a positive environment for the teaching/learning exchange to occur (NATA Education Council, 2001).

Weidner and Laurent (2001) have conducted research about the clinical environment focusing on the selection and evaluation of clinical settings. These researchers found that more often than not, these settings are selected somewhat at random for convenience, geographic location, and availability of "slots" for students. This randomness in selection typically does not provide an ideal learning environment. While this research was looking more at the physical set-up including adequate equipment and resources, number of patients, and variety of patients, and a range of experiences of the clinical setting it still provides important information for consideration.

The learning environment students spoke of related more to characteristics of good management, high staff morale, and harmonious working relationships. Regardless of history of the program, length of existence, focus of program or university, or size of program all athletic training students want a comfortable, friendly, open, relaxed, family-like, positive environment or atmosphere. As a third year female student put it, "It is a positive learning environment I think is the whole of it. No matter what I do in here I know I can learn something. It is always something different. You learn as you go, you learn more sometimes by mistakes." (AD)

Another third year, female student spoke of how she used to dread going to the athletic training room but once she was placed at an off-campus site her love for athletic training and learning returned. Upon further discussion, the student claimed that her clinical instructors at both settings were very similar in their approaches to clinical

instruction. The only aspect she felt was different in these two settings was the atmosphere.

When posed with the question, What makes the atmosphere optimal for you?, students in this and subsequent interviews were very clear about what they wanted.

> The people and personalities. Our clinical instructors let us call them by their name although we want to show respect and use their titles, after all they have earned them but they all go by their first names. They treat us as equals. We know they are above us and we treated them that way but they talk to us and treat us like equals, which makes us comfortable. (JG)
>
> It is just in their [CI's] attitude most of them know we are just trying to learn. Knowing that someone is there to help you makes you want it more. (PT)

When the conversation went a step further is was very clear the amount of importance the students placed on the atmosphere. A first year male student hypothesized the "learning would be limited because I would not be asking questions and we would not be communicating". (FP) A first year, female, transfer student represented the students' perspective very well as she was comparing her former program with her current situation.

> I have friends that are in programs that are not student friendly, or easygoing. They are rather "uppity" and way too structured. This is actually why I left my first school. I know from experience that it is hard to learn because I would not feel free to ask questions. (PT)

A third year, male student also expressed similar sentiment:

> One of the great things that I see from our staff is that they are not afraid to learn

from each other. I see some of the certifieds right next to a student watching and learning from someone who does something well. They ask questions just like the students. It makes you more comfortable in that atmosphere to know that they are searching right along with you and they are not afraid to keep learning. That creates a really good environment. (SH)

Based on these statements, it is clear that students are very aware of the environment or atmosphere in a given setting. It is also clear that students place a great deal of significance on this atmosphere. Another important aspect that can be gained from these student's comments is that students are not asking for much from the clinical instructor regarding an appropriate atmosphere. Students want clinical instructors who enjoy the profession and working with the students. Furthermore, they would like clinical instructors to be approachable, willing to help, and to remember that they may be students, but they are still human.

My CI makes me feel at ease with what I am doing. She will tell me what I am doing right and give me some suggestions on how to fix something I might have done wrong or could improve upon. She gives a lot of reassurance and if I ask a question she is not for sure she will admit it and she will say let's go look it up. I don't expect them to know everything and it is nice to know they are human and still learning like the rest of us. (SS)

Summary

Based on an analysis of data several overriding characteristics of effective clinical instruction in athletic training emerged. Athletic training students expressed a desire for clinical instructors to act as a mentor. Students need the individual serving in this

capacity to be a teacher and/or guide to them as the student is developing as a person and an athletic trainer. Athletic training students also clearly expressed the need for a variety of techniques while teaching clinical skills. These techniques include allowing the student to learn by physically doing or applying athletic training theories through hands-on practice during the clinical experience, using appropriate critiquing or feedback techniques, promoting critical thinking, and helping students develop "other" skills. In addition, athletic training students expressed a strong desire for the clinical instructors to interact with the students on both professional and personal levels. Students were also very concerned about the overall learning environment. Students in this study wanted clinical instructors to understand that the environment of the athletic training room or clinical setting is an essential component of clinical instruction. Overall, students do not seem to be demanding much from the clinical instructor. Students want to learn from an individual who is concerned about the student, uses techniques that help the student gain confidence in themselves and their skills and treat them like humans in an environment that is enjoyable to be around. While previous research has validated these individual characteristics as effective clinical instruction, students in this study noted it is a combination of qualities within an optimal environment that aids in ensuring their development as a competent entry-level athletic trainer.

Chapter V summarizes the study, offers implications for further research, offers recommendations, and the impact of the findings on athletic training educators, clinical instructions, and athletic training profession.

CHAPTER V

DISCUSSION

Athletic training education guidelines and policies are changing rapidly and being implemented into programs based on research in other allied health programs or other historical educational practices without input from the athletic training students. For this reason, the present study was conducted to learn more about students' perspective of effective clinical instruction. The problem, purposes and theoretical background of this study have been presented in detail in the preceding chapters. This chapter presents the major conclusions of this study, as well as implications for practices and further research including recommendations based on the conclusions. The first part of the chapter briefly revisits the problem and procedures. Secondly, the research questions and findings are reviewed. The final section of this chapter provides a macro perspective looking at the future of research and practice in athletic training education.

Restatement of the Problem

Currently one of the major foci in the profession of athletic training is the improvement of athletic training education programs and the athletic training student's education. Literature on clinical instruction or effective clinical instructor is limited and the body of research dealing with clinical instruction in athletic training is deficient of students' perceptions of clinical instruction. Given the increased interest of clinical instruction as evidenced by new standards for athletic training education programs, there is a growing need to define and determine effective clinical instruction from the student's perspective.

Summary of the Procedure

A qualitative exploratory case study design best served this study as the purpose was to identify student's perceptions of effective clinical instruction that can be used to enhance clinical instruction and student's educational experience.

Three athletic training education programs were selected because of the institution's accreditation statutes, university type, and willingness of the program director and students to participate. The program director of each site was contacted and asked to participate in the study. Once consent was obtained from the program director, a list of current athletic training students within each program was obtained. Students at each program were divided into groups according to their year in the program and gender and then randomly selected for inclusion in the individual interviews. These groups were established to ensure a mixture of gender and levels for the interviews. A total of 5 focus groups with 22 students were conducted in combination with 15 individual interviews. A total of 37 students participated in the interviewing process. All interviews were tape-recorded and later the recordings were transcribed.

A two to three day visit was scheduled for each campus by contacting the respective program director. During the campus visit focus group and individual interviews were conducted with the students. In addition, the remaining time on campus was spent observing the students in the athletic training room, at practice, and other settings that were available and relevant. The transcribed interviews, observations, and several document provided by the programs were analyzed for emerging themes and concepts. All data collected were read and reread in order to develop a list of codes. These codes

were then applied to the data. As the process continued the list of codes became more refined and finally a list of four major themes with several sub themes emerged.

Research Findings

Clinical instructors are being asked to take on additional responsibilities and be accountable for a large portion of athletic training students' education. By providing these individuals with all the information available, clinical instructors can do a better job of educating these students. Athletic training students participating in this study voiced their opinions in regards to methods that are effective and appropriate for clinical instruction. The themes that emerged from this data were:

1. Clinical instructors role - Students see the clinical instructor's role as a mentor. This mentoring role can take on the form of a guide or teacher. Clinical instructors can enhance an athletic training student's clinical education by guiding students through the clinical skills or teaching students how to apply the physical part to the theory behind the given task.

2. Methods of clinical instruction – Methods identified as effective by athletic training students include hands-on, constructive criticism or feedback, encouraging critical thinking, and development of personal and professional skills or "other" skills. A hands-on approach allows the student the opportunity to physically see a deformity, palpate a structure, or feel laxity in a joint or ligament. Allowing a student this opportunity increases the student's confidence with his/her skills. Constructive criticism or feedback involves giving the student timely and constructive feedback on his/her actions or thought process. Clinical instructors who use this approach correctly can greatly increase the student's self-esteem and/or understanding of the issue at hand.

Encouraging and helping develop critical thinking skills gives students the ability to develop their own thoughts and procedures for doing certain athletic training skills with a sound theoretical rationale. Clinical instructors who help students develop "other" skills are not only helping the individual students but the program and profession as well. Students who understand what it is like in the "real world" are more at ease with making the transition and usually happy with their jobs. Helping a student develop skills to deal with difficult situations is also beneficial for all involved.

3. Students want a clinical instructor who will interact with them in an ethically appropriate personal and professional manner. Students want to be viewed and treated as a person not just a student. When students feel they are valued and appreciated they are more motivated to work hard to please or impress the clinical instructor. They also feel more satisfaction with the clinical experience.

4. Above all else the students identified a positive, relaxed, open, family-like atmosphere as the most important aspect of effective clinical instruction. Students who are comfortable and relaxed in the clinical setting are more inclined to enjoy the clinical education experience. Students who are intimidated or feel the environment is tense or depressing tend to dread going to the setting. This frame of mind makes it more difficult for the student to have a beneficial experience.

During the interviewing processes it became apparent that these students had encountered enough different teaching styles and techniques to know what was effective or detrimental to his/her education process. It was also clear that students were capable of seeing the big picture of how all the aspects work together. In addition to the students' voice, this overall view is what has been missing from previous research studies looking

at clinical instruction. The fourth theme, relating to the atmosphere of the clinic, conveys the importance of understanding and combining the entire process for effective clinical instruction. More specifically, students in all three programs commented on the fact that if they were not comfortable or relaxed in their main clinical setting, despite all the wonderful things the clinical instructor attempted with them, the learning process was stifled. While this may not be a revolutionary concept, it is a very practical aspect of clinical instruction, as well as the teaching and learning processes in general, that is most often overlooked.

As the overarching theoretical perspective for this study is the teacher and learning relationship, these themes, while derived from athletic training student relating to athletic training clinical instruction, also fall under the bigger view of the teaching and learning relationship. Traditional teaching and learning relies on the "banking" concepts. In this model the teacher actively deposits information while the student passively accepts deposits. Freire (1998) urges individuals involved in the teaching and learning process to move towards more of a dialogical method. Under the dialogical model the teacher and learner both actively participate in the learning and teaching. Information gained from students in this study indicates that effective clinical instruction follows Freire's suggested model. Effective clinical instruction moves the students into an active role and makes them fill the role of co-learner. Developing critical thinking skills in students is the foundation for Freire's dialogical education theory. In order for a student to gain these skills they must be put in the proper situation and given confidence. Appropriate feedback is essential for students to develop confidence and improve upon skills. Feedback is considered to be the heart of teaching learning relationship. Without

feedback, an individual does not have anything to measure his/her growth and development against. Evaluating the students' perception of effective clinical instruction against the teaching and learning relationship provides support and credence to the students' input. This support indicated that the students' views should be given serious consideration as valid in regards to effective clinical instruction and not dismissed as merely students' wants.

Research Questions

The main focus question driving this study was "What are students' perceptions of effective clinical instruction?" This question was addressed with the emerging themes. Each sub-question and the related data are discussed individually below.

Sub-question One:

What is the relationship between classroom instruction and clinical application?

In all three of the programs visited, a strong relationship exists between classroom instruction and clinical application. Students expressed more satisfaction with clinical instruction when the clinical instructors were also involved with teaching the core athletic training classes. As evident by several of the themes, students are able to make more meaningful connections to the material presented in class if the clinical instruction guides them through or allows them the opportunity to experience it for themselves. In a conversation I had with a new assistant athletic trainer she stated "This AT room is different than most." I asked how and she stated, "Students here are more confident". I ask what she thought this was due to and she replied " the integration of classroom and practice. Since we (clinical ATC) all teach a class and they (academic ATC) all have a sport there is an overlap of theory and practice". Not every program is set up in this manner but having an intermingling of the academic and athletic trainers is highly supported by athletic training students. Besides making the athletic training education program run smoother, a merger of the two makes it easier for students to understand how the two sides fit together and make the connection between the theory and application.

Sub-question Two:

What do athletic training students do during clinical rotations?

What athletic training students do during their clinical rotation varies greatly based on the sport they are with, the clinical instructor and/or coach's philosophy of the learning process, and the student's knowledge level. The majority of activities that athletic training students are engaged in during the clinical experience aid in the daily functioning of the athletic training room. These activities include cleaning, stocking, filing, field preparation, and administrating treatments. The student's level of involvement in more advanced athletic training skills such as evaluations and rehabilitation planning and implementation depends on the clinical instructor and/or coach's view on students performing these duties. A student's knowledge level also plays a factor in the student's activities. Students that are more confident in their abilities are more likely to take the initiative and be proactive in their involvement. Most students will stay within his/her comfort zone and not attempt new tasks or skill if they are not pushed. Therefore, it is imperative that the clinical instructor involves the student in all aspect of athletic training. The clinical instructor's confidence in the student's skill will be noticed and eventually mimicked by the student, the athletes, and the coaches.

Sub-question Three:

What do clinical instructors do during clinical rotations?

The actions of the clinical instructor vary upon the sport they are responsible for, the schedule for the day, and other responsibilities the individual is in charge of. A certified athletic trainer is officially hired to care for the well being of the athletes. Becoming a clinical instructor means taking on added responsibility of supervising and teaching one or more athletic training students. A clinical instructor must balance these two tasks. Individuals that are more successful at this balancing act seem to effortlessly combine these two tasks into one fluid action. This is accomplished by making every task that must be completed to care for the well being of the athlete into a learning opportunity for the athletic training student. For example, if an athlete comes in for an ultrasound treatment, instead of the clinical instructor completing this treatment or telling the student what setting to use, the clinical instructor would have the student figure out which protocol set-up is appropriate and perform the treatment. The clinical instructor would

follow up with the student to make sure the student picked the correct settings and understood why a particular setting would be more appropriate than another.

Unfortunately, not all clinical instructors are able to combine these two responsibilities into one as effectively. The above scenario would typically play out as follows. The athlete would come in and the clinical instructor would tell the student what to do. The student would perform the treatment while the clinical instructor completed whatever they might be working on in the office. In this situation, the student may be becoming more proficient with using the modality but the student is not broadening his/her critical thinking skills.

Sub-question Four:

What, if any, differences exist between first-year, second-year, and third-year athletic training students' perceptions regarding the importance of quality clinical instruction?

Athletic training students at all levels consistently spoke of similar issues in regards to clinical instruction. When discussing the extent of supervision the students felt comfortable with or needed a difference emerged. Third year students spoke more about the need to be independent while first year students expressed a desire for more direct supervision. Students of all levels commented that it was important for the clinical instructor to be aware of the student's level. If an instructor does not keep in mind the student's level, the instructor may present material that is too advanced or too elementary for the student. Overall, athletic training students of all levels perceived similar aspects as important for quality clinical instruction.

Sub-question Five:

What, if any, difference exists between male and female athletic training students' perceptions of effective clinical instruction?

No differences were noted between male and female athletic training students in regards to perceptions of effective clinical instruction.

Implications for Clinical Instructors

In light of the current climate of athletic training education, this study has implications for a variety of audiences. In this section, implications for the clinical instructor are addressed. Considering that a person's perception is his/her reality, it is important that

athletic training students' perception of effective clinical instruction be conveyed to clinical instructors. In an ideal world, all clinical instructors would receive information about effective clinical instruction through formal education along with gaining a background in educational methods and techniques. However, a large portion of certified athletic trainers fulfilling the role of clinical instructors have not received formal pedagogical training. A study by Foster and Leslie (1992) investigated clinical teaching roles and the effects of educational preparation on athletic training clinical instruction. In Foster and Leslie's study of 154 certified athletic trainers, it was concluded that teacher preparation and post-baccalaureate education appear to be desirable for athletic trainers who are supervising students in clinical education. Athletic trainers with education beyond a baccalaureate degree demonstrated a broader use of teaching activities. Experience level also influenced clinical instruction, certified athletic trainers with less than six years of experience finding less time to teach clinical skills while supervising students. Foster and Leslie's study could be interpreted to mean that the next best thing to a clinical instructor having a formal background in teaching would be having additional education beyond a bachelor's degree. Also from these author's study comes the issue of experience. According the CAAHEP guidelines for clinical instructors and approved clinical instructors, an individual serving in this role must have one year of experience. However, according to Foster and Leslie, a certified athletic trainer with less than six years of experience still struggles with finding time to manage all that is required of an athletic trainer plus the responsibility of being a clinical instructor.

Regardless of whether or not a clinical instructor has received formal training, much can be learned by listening to student's view of effective clinical instruction. The

information received from the three athletic training education programs and athletic training student participating in this study provides clinical instructors with a base of knowledge, which they can adapt to their own style in order to provide effective clinical instruction.

As a result of this study, certified athletic trainers should be more aware of the roles and responsibilities expected of a clinical instructor. As the changes in athletic training education programs are happening so quickly, many certified athletic trainers are being pressured into serving as a clinical instructor or as an approved clinical instructor. Certified athletic trainers who are armed with the knowledge of what student's want and how they learn from the clinical instructor are in a better position to determine rather or not they are comfortable serving as a clinical instructor.

Implications for the Athletic Training Education Programs

Knowing the students' desires and perceptions, constructing effective and quality clinical instruction at the programmatic level becomes an easier task. The individual in charge of recruiting and/or selecting clinical instructors for the program must keep the themes identified in this study in mind. Selecting clinical instructors mindful of this information rather than on convenience or willingness of the instructor is a positive step towards improving clinical instruction. While it might be more convenient to make all ATC approved clinical instructors this is not the best way to ensure student's success. This would equate to saying all teachers are good, or all athletes are all-Americans. Each individual being considered for serving as a clinical instructor should be evaluated on the guidelines set forth by CAAHEP. These individuals also need to be evaluated based on the aspects identified by students as essential for effective clinical instructors. For

example, considering that athletic training students identified interaction with the clinical instructor as important, it would be counter productive for all involved to select an individual who has a negative or no history of interacting with students.

Once the clinical instructors have been selected, support and guidance should be available to them. Most certified athletic trainers do not have an education background and are not well versed in teaching methods, learning styles and other aspects of what has been defined in the education literature as effective teaching. Providing this support and information to the clinical instructors, they can improve their interaction with the students, which will in turn improve the education of the student. This cyclic process will be reciprocated and will be beneficial to all aspect of an athletic training education program as well as the profession of athletic training. By providing clinical instructors the tools and support they need to improve the students they are working with, improves the quality of entry-level athletic trainers, which improves the image of athletic training, which can only mean more prestige for the profession.

Recommendations for Future Research

As athletic training education continues to evolve, it will be important for athletic training educators to create optimal clinical experiences for their students. Equally important will be the preparation of the clinical instructor to guide the student's experience and evaluate their competence in the field. This study serves as a starting point for further research on clinical instruction. From the results of this study, the following suggestions for further research are provided to enhance the clinical experience of athletic training students.

1) Research should be conducted to determine if these students' perceptions are in line with most athletic training students in athletic training education programs across the country. This goal can be accomplished in a variety of ways. One such way is to stick with the current design but conduct on a larger scale with more sites and students. Another avenue to accomplish this would be to use the students' perceptions gained in this study to develop a quantitative instrument to determine if the students from these three sites represent all athletic training students in athletic training education programs.
2) Studies looking at clinical instructors perceptions of effective clinical instruction, the clinical instructor's role in the student's education, and what clinical instructors need in order to succeed also need to be conducted and added to the knowledge base. The current study provides the students a chance for their voices to be heard and taken into consideration; this same opportunity needs to be afforded to clinical instructors.
3) The information that has emerged from this study, and other studies to come, needs to be organized in a manner that is useful for clinical instructors. Given that clinical instructors are already extremely busy, packaging of this information is important. The information has to be easily accessible and relatively effortless to implement. The approved clinical instructor workshops would be an ideal place to introduce the clinical instructors to this information and provide them with tips or suggestions for improving clinical instruction. Furthermore, once ACIs are implemented into the programs more research needs to be done to ascertain if this ACI program has a positive impact on the students' education and on the clinical instructor and instruction. Future research needs to include a way to determine if clinical instructors are using the suggested practices, if student satisfaction with clinical instruction increases, and if students are developing into

more confident and competent entry-level athletic trainers as a result of the improved clinical instruction. A long-term study could also be conducted to determine if the students gaining this improved clinical instruction become effective clinical instructors down the road.

With the limited amount of information available on effective clinical instruction in athletic training, a knowledge base of effective clinical instruction practices for athletic training students needs to be developed. For students and clinical instructors to benefit, it is important to continue to investigate best practices. The bottom line is there must be more studies and information presented about effective clinical instruction.

Concluding Remarks

It is evident that athletic training education is evolving quickly, and the challenge of clinical education is of particular concern. Therefore, we have a responsibility to the students to learn as much about what influences learning in the clinical setting as possible. Much is being asked of CIs and ACIs, without much support being given to these individuals. At the minimal, these individuals need to be provided with the information and skills to help them with this role, and more importantly, aid them in providing the most efficient and effective clinical education possible for each athletic training student, the future of the athletic training profession.

Hopefully this study will facilitate dialogue between the entities that influence education reform and athletic training educators and lead to what all involved want -- improvement of the education process of and for athletic training students.

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APPENDICES

APPENDIX A

OKLAHOMA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD FOR HUMAN SUBJECTS RESEARCH FORM

APPENDIX A

Oklahoma State University
Institutional Review Board

Protocol Expires: 9/12/02

Date: Thursday, September 13, 2001 IRB Application No ED0218

Proposal Title: ATHLETIC TRAINING STUDENT'S PERCEPTIONS OF EFFECTIVE CLINICAL INSTRUCTION

Principal Investigator(s):

Tona Palmer
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Stillwater, OK 74078

Betty Edgley
110 Colvin Center
Stillwater, OK 74078

Kelly Ward
316 Willard
Stillwater, OK 74078

Reviewed and Processed as: Expedited

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

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

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

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson, Chair
Institutional Review Board

APPENDIX B

INDIVIDUAL INTERVIEW PROTOCOL

Individual Interview Protocol

1) How or why did you decide to major in athletic training?
2) Can you tell me about your typical day as an athletic training student?
3) What activities do you engage in as an ATS during practice, classroom, athletic training room, and free time? Which benefits you the most, least?
4) Discuss the difference of classroom instruction and clinical instruction you receive. Is one easier to learn in than the other? Which? Why?
5) Is there collaboration or competition between the ATS?
6) Tell me about your clinical instruction – what role does the clinical instructor play?
7) Can you tell me about one experience you recall leaning a great deal from? an "ah ha" moment during your clinical experience. What make it such a learning experience?
8) Can you tell me about an experience you felt was not beneficial? Why do you think this was the case?
9) Overall how would you describe your clinical educational experience?
10) If you could design the ideal clinical experience what would it be like?
11) How would you describe effective clinical instruction?
12) Is there one clinical instructor you learn more or better from? Why?
13) If I was a good friend of yours and I was looking for a school were I could receive great athletic training clinical instruction, would you encourage me to apply here? Why or why not?

Added during course of interviews

14) Describe the atmosphere in the athletic training room. Does this affect your learning in any way?

APPENDIX C

FOCUS GROUP INTERVIEW PROTOCOL

Focus Group Interview Protocol

1) Are each of you happy with your decision to major in athletic training?

2) Do you learn better in the classroom or clinical setting? Why?

3) What is your interaction level between yourself as a student and your athletic training classroom instructor?

4) What is your interaction level between yourself as a student and your clinical instructor?

5) Talk about what your feel are the most important responsibilities a clinic instructor or supervisor has.

6) Is there anything you would like to see done differently in your clinical instruction?

7) What is your perception of effective clinical instruction?

8) Is there a rotation or sport you learn more from? Why?

9) How do you feel about the changes being made to the athletic training education program?

10) Anything else you want to add or wish I had asked you about?

VITA

Tona M. Palmer

Candidate for the Degree of
Doctor of Education

Dissertation: ATHLETIC TRAINING STUDENTS' PERCEPTION OF EFFECTIVE CLINICAL INSTRUCTION

Major Field: Applied Educational Studies

Biographical:

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