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Is Direct Supervision in Clinical Education for Athletic Training Students Always Necessary to Enhance Student Learning?

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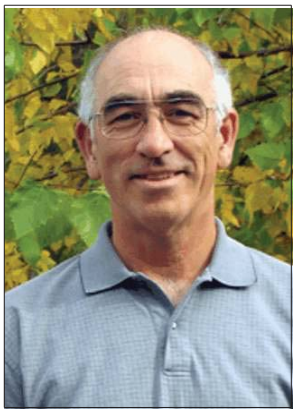
Objective: To present an alternative model of supervision within clinical education experiences.
Background: Several years ago direct supervision was defined more clearly in the accreditation standards for athletic training education programs (ATEPs). Currently, athletic training students may not gain any clinical experience without their clinical supervisors being physically present so that the supervisors may intervene at any point if necessary. Although we do not disagree with the spirit of this requirement, we present information regarding the changing generation of students and the importance of developing strong professionals who will represent our field in the ever-changing allied health care arena.
Clinical Advantages: We believe student learning may take place without direct supervision and that a system of guided autonomy with meaningful and dynamic reflection may better prepare the student for the future. We feel that limited aspects of an athletic training student's clinical experience may not always need direct supervision. If students are performing skills that are not in violation of any professional practice acts, their interest and learning may increase with a guided autonomy model, as opposed to direct supervision. For example, once an athletic training student has mastered skills like taping, stretching, and initiating an emergency action plan, they should be able to effectively and safely perform these aspects without direct supervision. We suggest that students may continue to learn, and benefit from an educational standpoint, while gaining a limited portion of their experiential learning requirement without direct supervision.
Key Words: clinical supervision, experiential learning, guided autonomy

Athletic training is a practice-based profession and through the combined use of competency-based education and supervised clinical experiences, AT is ahead of the allied health education curve. Athletic training education has effectively combined the science and the art of AT in their education programs. These programs have produced successful AT's with a unique blend of personal attributes and abilities.[1] In a recent editorial, Sauers[2] commented that "our [athletic training] model of integrated didactic and clinical education is right and we should take great pride in it."



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Employers Facing Challenges

Through informal observation, commentary, and discussion with peers, it appears that many employers are facing challenges with young professionals entering the job market. These challenges include a belief that students and young professionals are not exhibiting the professionalism and career readiness of past generations. To our knowledge there have been no published surveys of the readiness and level of professionalism of young certified AT's to function in entry-level positions. Many opinions, however, have been developed. For example, Weidner[1] has suggested that researchers conduct surveys on this subject and has noted that "true professionalism and success often comes from the personal attributes that are brought to the job."

Craig[3] defined the attributes of professionalism to include autonomy, responsibility, pursuit of excellence, and collegiality. Ideally, students would enter AT programs with many of these characteristics already a part of their behavior, and then as they moved through the program their ability to apply these characteristics on the job would develop. However, Monaco and Martin[4] recently reported that the new student generation (i.e., the Millennial student) is very different than past generations and may not have these characteristics when they begin an AT education program. They reported that Millennial students are accustomed to hand holding and need assistance in developing independent

thinking and decision-making skills. Therefore, it seems that active engagement is required for these characteristics to be developed.[4]

Direct supervision of all clinical experiences may create too much isolation of our students. Students may not be able to develop their own independent thinking and decision-making skills. As evidenced by Craig,[3] these critical thinking skills and professional behaviors are very important because "without learning professionalism students are at risk of not being prepared to represent and promote athletic training." As clinical educators, we need to be concerned about these observations because we need to teach students to be life-long learners and to build the profession. But in order to do that, we believe AT education needs to restructure supervision guidelines to allow students to develop these critical skills, which seemed to have come naturally to previous generations of athletic trainers. However, the latest interpretation does encourage graded autonomy and independent actions by the athletic training student.[7]

Clinical Supervision Revisited

Over the past decade, educational reform has redefined the structure of AT student clinical supervision. Unsupervised clinical experiences are no longer acceptable parts of a student's formal educational program requirements. The Commission on Accreditation of Athletic Training Education (CAATE) uses the term direct supervision to refer to the appropriate level of clinical experience supervision.[5] Direct supervision is currently defined as a physical presence of the clinical instructor allowing for "visual and verbal" contact between the clinical instructor and the student with "the ability for the clinical instructor to intervene on behalf of the patient." [5,6]

There have been numerous articles addressing the need to enhance and possibly restructure clinical educational experiences for our students; [1,8-13] however, we believe that athletic training clinical education experiences do not need to be changed in all situations. It is the concept of direct supervision that needs to be revisited. We agree that the direct supervision standard has allowed for better control of the students' formal education requirements. However, we also believe that because the types of student has changed over the last few years, we need to revisit the CAATE guideline that requires direct supervision of students in all clinical experiences and at all levels of student preparedness.

In order to understand the potential problems that direct supervision during clinical experiences might be causing, we recommend exploring AT's past. Previous guidelines[13] for developing AT education programs stated that (1) direct supervision did not necessarily imply a need for constant personal contact between the clinical instructor and the student and (2) clinical instructors must be readily accessible to students for on-going instruction and guidance on a daily basis. Therefore, athletic training clinical supervision was much like that in medicine, nursing, and physical therapy in that it required some sort of regular (daily) communication between the student and the supervising AT. Unfortunately, there were various interpretations of the previous standard; some which lead to detrimental practices. In particular, many students were placed in unsupervised roles where they were expected to function in the place of an AT by covering unlimited athletic practices and events by themselves, under the premise of clinical education. These "unsupervised" clinical experiences (as defined by the current direct supervision standard) may have resulted in haphazard learning and incorrect decision making, but they also may have given greater confidence and independence to students regarding clinical decision-making skills. However, autonomy by itself rarely works[10] and it may have hindered the students' personal growth, because it lacked appropriate reflection and reinforcement with clinical instructors, which are two hallmarks of effective and dynamic clinical experiences. On the other hand, this autonomy may have been very beneficial to the students' maturation.

Without question, the direct supervision requirement has substantially decreased the misuse of students serving in the place of the certified or licensed AT. As a result of these reforms, some athletic programs have added athletic trainers or graduate assistants to their staffs. There is also little question that many athletic administrators, coaches, and even athletic trainers looked at students serving in this capacity as providing a relatively inexpensive workforce. This practice or expectation (i.e., replacing staff athletic trainers with students) should not be the role of an AT student, nor should it be condoned.[15]

We would be remiss, however, to imply that learning cannot take place when a student is alone, or minimally supervised, during a clinical experience. From the more traditional academic classroom teaching setting, athletic training educators do not directly supervise students as they complete various course requirements. Educators do not have to be present while students are on-line, studying, reading at the library, or completing projects to ensure they are learning. There are effective ways (e.g., exams, discussion, comments on papers, or projects) to provide feedback and reflection and to measure student learning. With this being the case, then why do athletic training educators not allow students to learn on their own at any point of their education in a clinical environment? One common response for the discontinuation of this practice is that it is needed to protect the public from unlicensed practitioners (e.g., athletic training students). However, we performed multiple searches and have yet to identify a single legal case against an athletic training student for causing "harm to the public."

Learning: Experience + Reflection

Learning happens best when clinical experiences and reflection collide, a sentiment and philosophy that is not novel as Dewey[16,17] first formally introduced it in the 1930s. He founded an educational movement based upon the concept of "experience plus reflection equals learning."[16,17] Many disciplines, including nursing, have adopted this model of "experiential learning" by emphasizing the need to combine experience with reflection in order to achieve learning.[16]

This model of experiential learning does not require a clinical

instructor to be present at all times. It does require, however, that a student be afforded the opportunity to dynamically and meaningfully reflect on their learning with a clinical supervisor so he/she is prepared to act in the future. Medical, nursing, and physical therapy students are afforded this type of clinical education environment because of a central belief in Dewey's[17] experiential learning theory. Therefore, the primary purpose of this paper is to propose a model of supervision that includes an option of guided autonomy that would allow a limited amount of "indirect supervision" on certain AT skills (e.g., taping, stretching and first aid) and to explore the possibility that the current direct supervision model may not always be necessary to enhance clinical learning for our AT students.

A Great Irony

One of the great ironies we find is that during informal conversation and reflection, almost to a person, graduates from the authors' programs, many of our athletic training colleagues, and other clinical faculty members have told us they feel they learned and continue to learn most effectively in two major ways. (1) they learned a great deal while gaining clinical experience directly with a clinical instructor or mentor, and (2) when they were essentially unsupervised and on their own. Many of our athletic training colleagues and faculty members truly appreciated their autonomous educational experiences; whereas, many recent graduates wondered why they did not receive an autonomous experience while in their undergraduate program.

In the past, autonomy may have prepared AT's for the reality of a job, because competency was demonstrated and knowledge and skills could be effectively synthesized and applied to real world settings. In contrast, recent graduates have reported they did not take the opportunity to synthesize their learning during their directed clinical experiences because there was always a supervisor to fall back on. This is not surprising, as it goes against the educational philosophy that students learn through autonomy.

Respected educator and author Palmer[18(p6)] stated that "students learn in diverse and wondrous ways, including ways that bypass the teacher in the classroom and ways that require neither a classroom nor a teacher." This also gives credence to a thought from French scientist, turned philosopher, Serres[19(p22)] who stated "the goal of teaching is for teaching to cease to exist." And Martin,[13] an AT educator, expressed a similar idea when she stated there is a need for clinical educators to provide an environment where the student receives the emphasis; not the educator.

If AT educators believe that learning can take place without a teacher, why is gaining a portion of one's clinical experience without direct supervision such a bad thing? Knight[8] has encouraged educators to "act in the best interest of the student." Educators should ask themselves "Are we acting in the best interest of the student by requiring direct supervision for all clinical experience requirements?"

Currently all students in AT education programs (ATEPs) are required to gain experience in numerous areas (i.e., upper extremity sports, lower extremity sports, equipment intensive sports, and general medical settings) and ATEPs must document levels of competency and proficiency for each of their students as they progress through their curriculums.[5] So why should students be limited to performing certain tasks under direct supervision, when they have demonstrated competence of these clinical skills and proficiencies?

It seems that once a student is deemed proficient with a skill, he/she should be able to perform it unsupervised as long as it is not something regulated or restricted to a credentialed professional (e.g., professional practice act). For example, we would suggest that "unsupervised" students can wrap, tape, and assist with basic warm-up, flexibility and strength exercises, as well as adequately evaluate most problems well enough to effectively perform the appropriate first aid and initiate an emergency action plan if necessary. These actions do not require one to be a credentialed professional to perform. In fact, coaches, personal trainers, parents, and even other athletes often perform these responsibilities. Obviously, students should not be expected (or allowed) to provide treatments, direct therapeutic exercise programs, or make return-to-play decisions unless they are directly supervised by a credentialed health care professional because this practice is potentially detrimental..

Change is Necessary

Change is necessary because AT is facing a unique allied health care environment and a unique group of students and young professionals. We believe that even though the current CAATE[5] requirement for constant and direct supervision in clinical experiences was intended to enhance and maximize student learning, it may actually be creating barriers to learning. We theorize that direct supervision may create a learning barrier by preventing students from developing certain crucial clinical reasoning skills they will need to be competent and skilled professionals.

Millennial students like to work in 'safe' environments;[4] however, AT educators may not be allowing students ownership of a portion of their own learning where they can establish their own boundaries or their own safety zone of professional practice.

Circle of Safety vs. Learned Helplessness

Burst,[20] a nursing educator, provided a model which incorporates a concept referred to as the "circle of safety." In it, the structure for clinical education is intended to remove major learning obstacles. It also facilitates learning in accordance to the student's own individual pattern of learning.

Burst[20] suggested that if clinical instructors are too overbearing with their direct supervision (i.e., instructors make students stay within the instructors personal "circle of safety" or knowledge/ experience base), they may create an environment that reflects only the instructors viewpoints and experiences, thus inhibiting the student's ability to grasp concepts and reflect on their own. We refer to this as a "learned helplessness," where the student does not challenge the clinical instructor with his/her own views based on his/her previous knowledge, experiences, reflection, and

inquisitiveness.

Establishing one's own safety zones is essential in creating competent AT professionals, as it allows them to act on their own knowledge and competency and seek help when clinical situations pull them outside of those safety zones. If it is our mission as educators to continue to find ways to facilitate clinical reasoning skills and promote the development of strong and competent entry-level professionals, we must create a shift of students' locus of control to themselves (internal) where they can structure their learning from the "bottom up" and face real-world problems with their own clinical reasoning skills.[10,16]

Ironically, many students have external loci of control and tend to lack self-confidence, yet clinical instructors and educators still expect them to be active learners with a high level of self-confidence. Clinical instructors and educators often complain that students do not take initiative about their learning and criticize them for being too passive or afraid to "be wrong." But if AT educators are to provide a solution for these situations, they must first address several questions. Can AT survive as a profession if it teaches students "learned helplessness?" Can students learn effectively only with the clinical instructor always present? Why is it AT clinical instructors and educators currently do not recommend (allow) students learn on their own at any point of their education in a clinical setting environment?

Modified Direct Supervision

We are not proposing a return to previous unsupervised model of clinical education;[14] however, we are proposing a model of modified direct supervision where *guided autonomy* exists. Nor are we proponents of replacing ATs with students by having the students gain a significant amount of their clinical experience unsupervised. However, we do feel it is reasonable to let competent and responsible students gain a limited amount of clinical experience (and education) on their own as applied problem-based learning experiences.

Why shouldn't there be at least a portion of the students' clinical experiences where they may gain, without direct supervision, those learning experiences that the lay public may perform? This amount should certainly be limited. Perhaps no more than 20% of their total clinical experience could be used as a "capstone experience." However, we must assure that students are not overworked in this capstone experience and assigned a clinical instructor who engages with the student.

Knight[10] explored this concept of modified direct supervision. He believed that autonomy can, and must, occur during direct supervision. But this does not go far enough; greater autonomy by itself will not guarantee a competent clinician with solid clinical skills and the ability to make correct clinical decisions. Knight[10] supports the assumption that students must make autonomous decisions during their clinical education, but did not address the assumption that students cannot make autonomous decision unless they are independent of supervision. He did, however, state that the pendulum of clinical supervision had swung too far, and some control needed to be lessened.

Many disciplines agree that learning occurs best when it is a *shared responsibility* between the instructor and the student, and the learning includes meaningful and dynamic reflection. Therefore, autonomy is good for learning but it is a special kind of autonomy (guided autonomy) that should govern learning in an AT education program.

As we explored models of learning and reflected on our own experiences and the experiences of our students and colleagues, we want to emphasize that we agree with Knight. Autonomy is not only about the student being alone (independent of supervision) but it is a matter of attitude. He[10] notes that there are "great clinical instructors who have mastered the art of evaluating an injury through the hands of a student." Therefore, the clinical instructor is invested mentally while allowing the student to do all the action and decision-making. We believe in this model and encourage all clinical instructors to become better at this technique.

We also believe guided autonomy can occur when the clinical supervisor is not physically present with the student at all times, but provides regular and meaningful reflection about the student's experiences. Fowler,[17] a nursing educator, indicated that when there is no reflection, there is only surface learning but when there is critical reflection, there is deep learning. Therefore, student self-reflection (e.g., journals or blogging) and dynamic reflective interactions between the student and clinical instructor should be a requirement of this autonomous assignment. These two types of reflection are interconnected, but each serves a valuable purpose.

By encouraging self-reflection and student/clinical instructor reflection, we are emphasizing the notion that autonomy in AT clinical education is not about proximity, but about attitude.[10] Fowler[17] also noted that "experience is not just a simple matter of exposure to an event; there is an element of the experience needing to become internalized and positioned in relation to existing knowledge and experiences." The element of internalization will come from only both types of reflection and is done best in journals, in the classroom with other students, or in meetings with their clinical instructors.

Teachable Moments and Chaos Theory

Another important piece of guided autonomy is taking advantage of teachable moments.[10] Although it may be desirable to present clinical learning in an organized manner, it is important to remember that there may be a learning paradox, because the learning that happens while a student is gaining clinical experience is not always sequential. For example, an athlete may suffer a concussion on the day a clinical instructor is supposed to be teaching the student knee injury assessment. We think it is likely that the student may remember (learn) more about the head injury than the knee that day because it is directly experienced. Some of what AT clinicians (and students) deal with occurs in a chaotic, disorganized manner, so we encourage not attempting to present all clinical teaching in an organized and rigidly supervised manner. It is typical for medical and nursing students in internships and residencies to learn from the opportunities that "walk in the door" and not from a menu of "to do" lists. Because medical and nursing

schools have been successful with "chaotic" or "experiential" learning, AT education may benefit from using the notion of entropy, or chaos, as AT further refines education programs.

Chaos theory[21] notes that entropy eventually becomes ordered if given time and space. Applying the chaos theory[21] to AT education may actually help us approach systematic change within our current system of direct supervision. Reigeluth[22] described several key features of chaos theory and how it may apply to systematic change within education systems. For example, he speaks of co-evolution or the process where a system changes in response to changes in its environment, and its environment changes in response to its changes.[22] As our Millennial students evolve, AT education programs will need to co-evolve and adapt the environment of direct supervision in response to the changes with students.

Reigeluth[22] also noted that feedback from the environment is essential for a system to co-evolve with its environment. He indicates that feedback often it takes "the form of perturbances (or disturbances) that cause disequilibrium in a system."[22] According to chaos theory, it is the disequilibrium that makes a system ripe for transformation, which will occur through a process where new structures emerge to replace old ones.[22] Therefore, maybe chaos theory can be loosely applied to AT clinical education, where the students' learning would be an open system allowing teachable moments, guided autonomy via unsupervised experiences, and non-sequential learning.

Although this idea of greater autonomy may seem contradictory to recent reports[4] on millennial learning, we believe that other models of learning are also applicable and that educators are still exploring the framework of millennial learning. For example, Frand[23] and Oblinger[24] note that millennials prefer the trial and error approach to solving problems and consider actions and results more important than facts. By allowing students to actively engage in an open system of clinical experiences or teachable moments and by allowing students to perform clinical tasks with autonomy followed by meaningful reflection, AT educators may be able to enhance learning.

The framework of an open system with guided autonomy by a clinical supervisor allows for enhanced learning when an experience or teachable moment is not passed up and this moment is reflected on in a meaningful way.

Lengthen the Leash

As students progress through ATEPs highly sequential and well-organized curriculums, they are expected to develop new skills, refine old skills, and develop the ability to synthesize and apply the vast array of knowledge and skills that have been presented to them. We believe this will be accomplished if we look back at an older model of clinical supervision and modify it, as opposed to eliminating it.

Remember, Palmer[18] believes that "students learn…in ways that require neither a classroom nor a teacher." And Knight[8] has encouraged educators to "act in the best interest of the student." CAATE's latest interpretation of supervision encourages clinical educators to use graded autonomy. As students demonstrate proficiency in certain skills they should be granted supervised autonomy, so independent actions and critical thinking abilities are still encouraged.[7]

We believe that AT education can lengthen the leash of supervision and move to a guided autonomy model where the clinical supervisor may not actually be present during all clinical experiences. However, the clinical instructor would still need to be available to discuss and meaningfully reflect on events with their students. This would help the students gain valuable insight concerning the responsibility of being "in charge," and expand their own "circle of safety."[20] It will also move them toward making decisions on their own without someone "looking over their shoulder." This model might also make them better problem solvers. As Dewey[16] noted, "preparation means helping the learner experience all that he or she is ready to take."

Let's take this approach with our AT education programs and implement a concept of guided autonomy with flexibility that would allow individual ATEPs to creatively develop, and be responsible for, their own clinical supervision models. In the end, AT education might create a generation of athletic trainers that is not only one of the most qualified generations of allied health care providers, but also one that could teach the generation of AT's yet to come.

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