

Progressive Skill Development and Progressive Clinical Experience Responsibility

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The concept of progressive resistive exercise (PRE) is one of the major principles of athletic training. Development of strength and other physical elements during conditioning and orthopedic injury rehabilitation depends on proper application of the PRE principle. A related concept, progressive skill development (PSD) is essential in educating athletic training students. Indeed we might say that the competence (strength) of a new graduate depends on proper application of the progressive skill development principle.

Would any competent professional say to a client or patient, "You need to be stronger, go lift weights?" No; they would set up a specific program, usually written, that included specific exercises, specific days to lift, specific number of sets and repetitions to perform, and specific amounts of weight to be lifted. The AT would then demonstrate how to perform each lift, watch the patient/client practice each of the lifts, correct their performance as necessary, and then send them to the weight room for supervised lifting. As strength develops, the amount of weight would be increased and perhaps more difficult or complex exercises would be added. Clinical skill development must occur similarly.

Internship: Non Specific, Haphazard Skill Development

In the 1980s I was troubled by the process of clinical skill development, which consisted of students working alongside a certified athletic trainer and learning from whatever situations arose, in essence learning by osmosis.¹ Most students were apprentices, whether they were in accredited educational programs or not. Too often curriculum students' clinical experiences were unplanned and not correlated with the academic classes they took. This was, and continues to be, standard practice in most medical and health professions.²

There were advantages and disadvantages of the internship process. The major advantage was that students had great autonomy and over time developed great confidence in their clinical skills and decision making. Supervision of students varied; often students were allowed or assigned to work on their own, with no direct supervision. In many situations, students were essentially assistant athletic trainers.

Two important disadvantages of internships were that student's

clinical skill development depended on the situations they encountered, and they often made decisions with less than optimal foundational knowledge. The disadvantages became apparent when the Board of Certification, Inc., (BOC) began comparing certification test scores between those who qualified via internship and those who qualified via accredited educational programs.

The Education Reform Task Force of 1995-97 concluded that the internship route to certification should be abolished and all candidates should complete an accredited program.³ The task force also established an education council, and charged it with, among other things, developing standards for clinical supervision that emphasized that students are students, not assistant athletic trainers. Implementing these changes, however, has been most frustrating to both academics and clinicians.

The Pendulum Swings

The new guidelines required that students be directly supervised during clinical experiences, i.e., within sight and sound of a clinical instructor.⁴ Unfortunately, this has led to some unhealthy interpretations and practices. Some have interpreted this as meaning the clinical instructor has to "hold the students hands," to hover over the student at all times, and cannot let the student act independently. We have heard some say that a student cannot even go on a break without being accompanied by a clinical instructor.

Some claim that new graduates are more knowledgeable than ever, but weaker in clinical decision making abilities. (However, clinical decision making usually develops quite quickly following a few months on the job.) The solution, many claim, is to relax the supervision rules and return to allowing students to "work" on their own. Whether it is conscious or not, the assumptions underlying this philosophy are 1) students must make autonomous decisions during their clinical education and 2) students cannot make autonomous decisions unless they are independent of supervision. I agree with the first assumption, but reject the second.

There is a middle road between "hovering" supervision and no supervision. Supervision and autonomy are not mutually exclusive. Many educators have allowed the clinical supervision pendulum to swing too far. In an effort to comply with direct supervision, they have inadvertently stifled autonomous decision making by students. Students at many institutions, however, are developing appropriate

clinical decision making skills because they are allowed and encouraged to make autonomous decisions while being directly supervised.

The pendulum must swing back, not to the extent that students work on their own, but that they experience autonomy while being directly supervised.

Greater autonomy, by itself however, will not guarantee a strong, competent clinician with excellent clinical skills and the ability to make wise clinical decisions. There are many aspects of clinical education that must work together. These are enumerated below. It begins with the philosophy of their clinical education.

The Philosophy of Clinical Education

Function follows form, meaning behavior follows, or grows out of, basic beliefs. Philosophers since the beginning of time have taught that you change actions by changing thinking. We must begin by establishing a proper philosophy of clinical education. Following are some philosophical statements, which if operationalized, will enhance students' development of clinical skills, clinical decision making, and clinical actions.

1. **Three Types of AT Instruction.** Athletic training education is typically thought of as didactic (classroom) and clinical education. Clinical education takes place in "clinical education classes" or laboratories, and in the clinic with patients. For far too many students, the bulk of their "clinical education" occurs in the laboratory. This culture must change.

Clinical education, by definition, occurs with patients. So, while important, classes or laboratories where clinical skills are taught, practiced, and tested, are not clinical education. These should be called what they are, clinical skills (techniques) or clinical skill development classes.

Why does it matter? Isn't it just a matter of semantics? Yes and no. It is a matter of semantics, but not "just" semantics. We should be true to semantics (language meaning), and consistent with the larger medical and health care communities. But it is more than this; Calling both clinical skill classes and patient interaction clinical education, can convey the idea that they are the same, and therefore one can substitute for the other. Is part of the problem with those graduates who are initially weak in clinical decision making the result of getting most of their "clinical education" from clinical skills classes rather than from patient interaction?

2. **Clinical Skills and Clinical Decision Making are Not the Same.** Clinical skills are the performance of clinical activities. Clinical decision making is determining, with confidence, which clinical activity to engage in during a specific situation and the interpretation of the results of the clinical activity. Clinical skills can range from performing a simple diagnostic test, such as an ankle drawer test, which is relatively easy to interpret, to a complex activity such as evaluating the ankle of a patient with unknown pathology. Clinical skills are easier to

develop than is clinical decision making. Both must be emphasized.

3. **Integrated Skill Development** Clinical skills require background knowledge, practice on uninjured people, and application to patients. In other words, skill development requires didactic knowledge, which generally comes from lecture classes, practice in a clinical skills class, and then application during clinical experience.⁵ These educational activities should be integrated, that is, occurring in temporal proximity. Clinical skills classes should be organized so that students are practicing skills related to the knowledge they are studying in their didactic classes. And once they become minimally proficient with the skills they should seek, or be directed to opportunities to apply those skills to patients during their clinical experiences. Too often, students complete these three aspects of their education in isolation. It seems that many students complete a clinical internship independent of classes. Students' proficiency will be greatly enhanced if these three educational experiences are integrated.

4. **Progressive Skill Development.** Clinical skill development and clinical decision making occur by design. Complex skills are developed only after a proper foundation of knowledge and basic and moderate skills are established. A weak person who wants to lift 100 lbs. cannot do so by beginning to lift 100 lbs. He/she must begin by lifting 10 lbs. and then progress incrementally up to 100 lbs. Curriculums must be designed so that students begin by developing basic skills and making simple decisions and progress incrementally to very complex skills and decisions.

5. **Autonomy Can, and Must, Occur During Direct Supervision.** Many in the profession believe that autonomy can only occur in the absence of supervision, that direct supervision prevents students from acting autonomously. It is true that in the absence of supervision, students are forced to rely on their own resources, to make independent decisions, and to innovate when necessary. This behavior can also take place in the presence of supervision, if clinical instructors and students plan for it, discuss it, and make it a part of the students' clinical experience.⁶

Clinical supervision ranges from "hovering" over a student to make sure he or she does everything correctly to, standing back quietly observing the situation, and then answering questions and suggesting alternatives after the student has independently handled a situation.

There are many great clinical instructors who have mastered the art of evaluating injuries through the hands of a student. They stand back physically, but are fully invested mentally, in the evaluation process. They watch the evaluation carefully, noting the patient's response to the intervention of the student. They may suggest at times that the student perform this or that

test in addition to what the student has already done. Allowing such autonomy does not compromise patient care, if the student has been properly prepared for the situation, and if the instructor is attentive in spite of being silent.

Intervention by the clinical instructor during either skill performance or clinical decision making should be great with beginning students and progressively decrease with time until it is minimal with advanced students. Autonomy is a matter of attitude--not proximity.

6. **Appropriate Assignment of Students to Clinical Instructors.** Too often students are assigned to a clinical instructor with too little regard for the students skill development needs. Clinical instructors are often assigned students with little previous experience one rotation, and students with advanced skills the next. This is okay if the clinical instructor has different responsibilities during the year, but not if the clinical instructor's duties are fairly homogeneous. Failing to take into consideration the students previous experience can create confusion in the clinical instructors mind concerning what to expect from the student, how to integrate the student with the daily activities of the clinical instructor, and the amount of autonomy to allow the student. Too often this results in an internship experience where skill development is haphazard.

There must be a differentiation between the clinical responsibilities of a first semester student and a last semester student. These must be planned in advance of the assignment and some thought must go into what types of students are assigned to specific clinical instructors at various times of the year. For example, a clinical instructor whose assignment is football will have different responsibilities during the competitive season than during the off-season.

7. **Clinical Instructors are Clinicians First.** Students and academics must realize that clinical instructors' first priority is patient care. They are interested in helping students learn, but not at the expense of their "day-time job." Clinical instructors should not be expected to develop lesson plans or to determine each day what the students' educational needs are. They are a resource, not a curriculum director (See next point)
8. **Student Ownership.** Students must take responsibility for their skill development, with guidance from faculty. The clinical curriculum should be organized so that students become proficient in the psychomotor competencies in a sequential manner. Students should have monthly, weekly, and even daily clinical education goals. They should suggest the agenda for instruction by demonstrating clinical skills to their clinical instructor. They should approach their clinical instructor with the attitude of "Will you help me perform the Lachman test?" rather than "What are you going to teach me today?" As stated previously, the clinical instructors role is to

assist students, not direct their clinical education.

9. **Daily Interaction and Feedback.** "The **daily** supervision of students by the ACI must include **multiple opportunities** for evaluation and feedback between the student and approved clinical instructor."⁴ This daily feedback should concern skills, clinical decision making, and the foundational behaviors of professional practice.⁷
10. **Teaching Moments.** Organizing clinical experiences so that students develop skills and decision making in a sequential and progressive manner should not negate the power of teaching moments. Even though a specific situation may be beyond the level of the student, when a great teaching moment arises, seize it. Because of a lack of background, some students may not get as much from the experience as they would later in their educational career as the specific situation may not occur again. Teaching moments should not be passed up. Such experiences often remain with the student for a lifetime.

Closing Thoughts

Clinical education must be more than working alongside a clinical instructor.⁸ Helping students develop strong clinical skills and becoming confident clinical decision makers requires careful planning so that skill development is by design rather than haphazard. The phrase *progressive skill development* conveys this philosophy. The three elements of education (diadactic, skills classes, and clinical experience) should be temporally integrated. Students should be assigned to clinical instructors to facilitate this integration. Clinical instructors should be encouraged to have daily, or multiple times daily, interaction with students concerning the specific skills the student is working on, and to allow student autonomy to commensurate with the student's progress.

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