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PERSPECTIVES IN AT EDUCATION

Should Athletic Training Educators Utilize Grades When Evaluating Student Clinical Performance?

Kent Scriber, EdD, ATC, PT, Courtney Gray, MS, ATC, Rose Millspaugh, MS, ATC

Ithaca College, Ithaca, NY

Objective: To explore and address some of the challenges for assessing, interpreting, and grading athletic training students' clinical performance and to suggest athletic training educators consider using a more universal assessment method for professional consistency.

Background: In years past students learned from teachers or mentors on an individualized basis without receiving a grade for their performance. Grading began primarily from a need to teach and evaluate more students at one time. Over the past two centuries, grading has become a complex process that serves multiple roles including evaluation of learning, skill development, motivation, communication abilities, organizational skills and behaviors.

Description: Currently there are many ways to evaluate and grade students in clinical education courses. When evaluators use inconsistent assessment techniques and a grade is not measuring the same criteria, the validity of a grade becomes questionable. Consequently, feedback from a universal assessment instrument may be more meaningful.

Clinical Advantages: Clinical instructors in athletic training education programs who assess and grade student clinical performance should measure similar criteria. Currently most educators express measurement of these criteria with a single letter grade. Consideration for a more reliable and valid instrument that includes more information should be given.

Conclusion: A universal system of assessing clinical performance would present more accurate and consistent information than a single grade indicates. Athletic training educators are encouraged to consider re-evaluating how they assess clinical performance of students and what a single grade actually communicates to the student and others.

Key Words: grading practices, evaluation of clinical skills, validity of grades, clinical performance assessment models

Dr. Scriber is currently a professor and the Clinical Education Coordinator of the Athletic Training Education Program at Ithaca College. Please address all correspondence to Kent Scriber, EdD, ATC, PT, Ithaca College, Ithaca, NY, 14850.
kscriber@ithaca.edu

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Should Athletic Training Educators Utilize Grades When Evaluating Student Clinical Performance?

Kent Scriber, EdD, ATC, PT, Courtney Gray, MS, ATC and Rose Millspaugh, MS, ATC

Since entering the profession, we have graded athletic training students for various didactic and clinical courses. During the past fall semester, we made a cursory review of average class grades for the didactic and clinical courses we taught over the past several semesters. Typically, our students have averaged between a B to B+ in the didactic courses and an A- to A for the clinical courses. This is particularly interesting since we had mostly the same students in both types of courses. We suspect that this discrepancy would not surprise anyone who deals with grading in clinical education programs, and we doubt that our numbers would have been much different if we looked back 20 years or further.

This grading difference caused us to reflect and wonder what part of our evaluation criteria results in these higher grades. It also caused us to speculate if the grades we assign are meaningful to the students or others who may view them. We believe part of the discrepancy occurs because the grade is based upon different criteria for the clinical courses, which places more emphasis on professional behaviors than student learning. We also feel it may be more difficult to assess and grade clinical skills along with professional traits, thereby causing us to be more lenient.

Regardless of how we choose to grade a student's learning or clinical performance, it is evident that many athletic training educators use different grading criteria. For example, some instructors are much "harsher" in terms of taking off points for late assignments than they are for the demonstration of a clinical proficiency at an "average" level rather than an "excellent" level. Noting this, we question what a grade truly represents. Interestingly, when surveying selected athletic training education programs (ATEPs), we found that 88% (29 of 33) of the programs currently utilize letter grades for their clinical courses as opposed to a pass/fail system.

The purpose of this paper is to briefly review the history of grading and discuss some of the challenges of grading accurately and consistently, particularly for clinical courses. Our second purpose is to suggest that it may be time for ATEPs to consider using a universal assessment/grading system so course grades are more meaningful and valid across the athletic training profession.

Should we view a grade of A the same if 90% of the students in the class receive an A compared to an A grade in a class when only 20% of the students receive an A? What does it really tell us? It is ironic that grades often attract the most attention while only providing us with minimal information. If we see that a student received a B or C in a clinical course, we know something is "wrong" but we probably do not know what is wrong. The grade may indicate inadequate mastery of clinical skills, but it is far more likely to be indicative of unprofessional behavior, noncompliance, late assignments, poor attitude, or poor communication skills. Unfortunately and upon self-reflection, a large segment of our grading practices have become a system of "punishment and reward" versus being a useful measure of student learning or clinical performance. According to Kohn[1], some educators argue their purpose is not to sort or motivate students (by grading), but to provide feedback so students can learn more effectively. In addition, Kohn[1(p4)] states "The best evidence we have of whether we are succeeding as educators comes from observing behavior rather than test scores or grades." Perhaps we should take this to heart in our future grading practices. Alfara-LeFevre[2], a nursing educator, presents an argument that clinical courses should be graded pass-fail because in order to promote and evaluate critical thinking, educators must consider performance from many different aspects. We believe this may have merit as a way to evaluate clinical skill performance because we, as potential employers, are typically more interested in an applicant's clinical skills and professional characteristics than their grade point average.

We also feel giving feedback regarding clinical performance is crucial, but it is not necessary to have a grade attached to every aspect of it. Therefore, we cannot realistically expect a single final grade to be completely indicative of a student's performance. More than two decades ago, Draper[3] addressed the importance of a consistent clinical evaluation model in regards to the evaluation of athletic training students during their clinical experiences. A joint committee on standards of evaluation, representing 12 different educational disciplines, defined evaluation as the systematic investigation of the worth or value of some object (ie, a course grade).[4] Those of us trying to improve the efficiency of the educational process need to be consistent or risk the perpetuation of invalid grading practices.[5] Few teachers actually have formal training in grading methods and have limited knowledge about their effectiveness.[6] This fact results in most instructors grading their students similar to the way they were graded. Although there are many purposes of grading, few teachers agree on which is most important. Consequently, teachers often attempt to address all purposes of grading with a single procedure or policy but end up achieving none particularly well.[6]

HISTORY AND PURPOSE OF GRADING

Many early scholars such as Shakespeare, Galileo, Plato, Thomas Jefferson, and Ben Franklin shared something unique about their education. All of these individuals attended schools or had teachers who graded them on a pass/fail system. These early students learned by interacting with other students and teachers throughout the day. As the students finished their education, the most important fact they could share about their experience was the name of their teacher or mentor, not their institution or grade point average (GPA).[7] This mentoring relationship does not seem much different than what many current athletic training educators desire of clinical education experiences. Students often prefer one-on-one learning because they feel it is the most efficient instructional method.[8]

Multiple sources report that Cambridge University tutor William Farish "invented" grades in about 1792.[7,9] During the Industrial Revolution, schools began paying educators based on the number of students they taught instead of a fixed salary. Farish took the model for grading shoe quality and developed grades for his students. Thus, he could process more students in a shorter period and be paid more. This educational system of using a lecture hall or classroom to teach students spread rapidly throughout Europe and America; consequently, the previous system of mentoring students on a more individualized basis was lost. Education reform in athletic training resulted in moving back to a one-on-one relationship for teaching and evaluating clinical skills/proficiencies to the student.[10] However, performance in most clinical courses is still graded with a letter, which represents a multitude of factors.

According to Walvoord and Anderson,[11] grading is a complex process that serves multiple roles including evaluation, motivation, communication, and organization. Frisbie and Waltman[12] state that grades primarily communicate student achievement to the student, their parents, and others. Secondarily, grades provide a motivation for learning, information about a student's strengths and weaknesses, information regarding past performance, and a prediction of future academic success. Grades seem to be a motivating factor for A and B students, yet they may reinforce failure-oriented behaviors in those students with poor grades. Frisbie and Waltman[12] also discuss the importance of each teacher reflecting upon their values to establish a consistent grading scheme. We have always felt that grades should be a reflection of primarily student learning although we know it is seldom the case, particularly in clinical courses.

WHY USE GRADES TO ASSESS CLINICAL PERFORMANCE?

During a job search, is a letter of recommendation more important than a student's GPA? This question has always led to interesting discussions in our senior seminar course and among our faculty. Our students have also discussed if and how their GPA may influence their preparation for graduate study, an entry-level athletic training position, or some other pursuit. As one may imagine, the opinions about what grades really indicate vary substantially each semester. We have often advised our undergraduate students that prospective employers are usually more interested in their professional characteristics and clinical skills (as stated in a letter of recommendation) than their GPA (as indicated by their transcript). It is likely that most athletic training educators can remember a time when they recommended a student with a lower GPA more enthusiastically than another student with a higher GPA. When our faculty discuss grading, they present a relatively wide range of mechanisms for evaluating and grading student work. Generally, they also discuss the validity of a grade. The bottom line is that a grade often reflects something different to each individual in the process. Grades are intended to communicate to students, graduate schools, parents, or future employers the potential for future performance or success.[13] If the grade is not valid, it is unlikely that it will accurately convey these purposes.

Anyone who has taught recently has likely heard questions such as "Will this information be on the exam?"; "Will we be graded on this material or assignment?"; or "What can I do to improve my grade or get extra credit?" It appears obvious to us that students who ask these questions often seem more concerned about their grade than their learning.[14] While it is important to clarify for students how they will be graded and what the course objectives are, how often have students asked you to help them be a more efficient learner, develop their skills, or be a better writer? Grades have somehow evolved into the most important aspect of our educational programs even though they may reflect different things to different people. It seems we have created a system for evaluating every aspect of "learning" and turned it into a single letter or number that is most likely invalid. How do we change or impact a grading system that has perpetuated for a long time into something more useful?

Grades have been identified as the single greatest stressor in a college student's life.[11,15] If we know grading causes the most stress in a student's life and so much "structure" decreases learning,[12] why do we grade? To address the issue that medical school is inherently stressful, many schools have moved toward a pass/fail system in recent years.[15] For some insight on this issue, we refer to an important finding reported by a one medical school. While using pass/fail grading for the first 2 years of medical school, students demonstrated improved psychological well-being and satisfaction.[15] These positive outcomes occurred without any reduction in course performance, test scores, success in residency placement, or level of attendance.

GRADING CLINICAL COURSES

Grading clinical classes can be particularly challenging. There is little question that current clinical course outlines at our institution typically place a higher premium on several factors other than student learning. For example, our courses place a heavy weight on grades for attendance, participation, accumulation of clinical hours, skill demonstration, and clinical instructor (CI) evaluations of the student's clinical skills and professional characteristics. The grades for our CI evaluations rely more on professional traits (interest, attitude, response to constructive criticism, timeliness or tardiness, dependability, etc.) than learning (see Appendix A). Singham[16(p52)] presents an interesting perspective by stating, "The implicit message of the modern course syllabus is that a student will not do anything unless bribed by grades or forced by threats." An important consideration is if we want to "force" students to learn by giving or taking away a grade for virtually everything they do or do not do. Singham[16] also indicates there is a wealth of literature that shows controlling environments consistently reduce people's interest in whatever they are doing. Guskey[6] states that giving zeros and low grades more often causes students to withdraw from learning.

London[17(p117)] asks, "What is the relationship between behavior and grades?" and feels educators need to design an approach to grading that supports rather than discourages student learning. One suggested solution is to give one grade for academics and another grade for class behavior(s). Others concur and recommend reporting behavioral aspects separately from academic grades.[6]

As we reviewed our clinical course grading schemes, we realized that much of our grade is affected by behavioral measures as opposed to learning objectives. As a result, we agree that we should give a minimum of two grades for each clinical course.

Currently, we base grades for our "clinical" courses on several primary criteria. The student must demonstrate all required clinical competencies/proficiencies for each level, complete several relevant readings, obtain a set number of clinical experience hours, complete reflective narratives for these clinical experiences, and be evaluated by their clinical instructors. When we break down these criteria, we see that very little of the student's final grade is actually based on what the student may have learned or demonstrated clinically. The most substantial grade reductions listed in our syllabi are for not completing assignments on time and/or performing in an unprofessional manner (eg, absent or tardy, poor attitude or behavior, inappropriately dressed). Students understand that if they receive a B or C in a clinical course, it means some component of their performance was substandard. However, how does one know whether the lower grade is due to attendance, attitude, professionalism, or skill competency?

MOVING TOWARD A SOLUTION WITH EXAMPLES OF CLINICAL ASSESSMENT OF STUDENTS

According to English, Wurth, Ponsler, and Milam[18] most physical therapy education programs have moved toward a uniform method of evaluating student clinical performance. The American Physical Therapy Association (APTA) has developed a physical therapist clinical performance instrument, which consists of 18 performance criteria categorized into three sections: (1) professional practice (safety, professional behavior, communication, clinical reasoning, etc), (2) patient management (evaluation, plan of care, interventions, documentation, etc), and (3) practice management (budget, supervision, and professional development).[19] To utilize this instrument, each clinical instructor must complete web-based training to assure consistent evaluations. A model of this nature utilized in athletic training education programs could be useful in creating a more consistent evaluation of students regardless of the institution's location.

Typically, ATEPs are required to document evaluations of various student characteristics and performance. We currently evaluate our students with a form that addresses both personal and professional characteristics (Appendix A). The CI completes this form at least two times during a student's assigned time with them, and the ratings become a portion of the student's final clinical course grade. Once the course instructor gathers this information on a student's behavioral characteristics, we combine it with their clinical skill performance and other assignments. These evaluations are then lumped into a single letter grade that is supposedly an accurate measure of their total performance.

We are frustrated because we assess so much and give only one grade. Because we give students a lot of feedback throughout their clinical assignments, we suggest that if students must be graded, they should receive at least two separate grades for all clinical coursework—one for clinical comprehension and performance and one for professional attributes and behaviors. In addition, we should give students (and others evaluating their transcripts) more feedback about multiple aspects of their clinical performance. If the feedback is adequate, perhaps a pass/fail grade would be as appropriate as the current letter grade.

Rubrics that list criteria for a piece of work and articulate gradations of quality can be valuable assessment tools.[20] They can be used to clarify the expectations of the students and focus instruction and student learning. However, we must ask that if rubrics are utilized, do they need to result in a letter grade or just determine pass/fail for a certain clinical proficiency or professional behavior? For evaluating most of the required clinical performance skills, we utilize various types of scoring rubrics (Figure 1). Our rubrics contain feedback on student performance and are scored in a Likert-type manner from 1 (poor performance) to 5 (excellent). Ultimately, we convert these scores to a letter grade for transcript purposes.

It appears ironic to us that the most important part of the process is the initial feedback yet students and others see only a grade. We have found that once students know what grade they have received, they seem much less concerned about hearing or

Figure 1. Basic Assessment Rubric (Score of at least 4 needed to pass)

5	Took appropriate injury Hx, determined MOI, observed for deformity/asymmetry, palpated appropriate structure, performed all major special tests (ROM, MMT, ligament laxity tests, CIRC and NEURO tests). Determined extent of injury adequately to move onto the next clinical decision making task. Did not need instructor intervention and demonstrated effective clinical reasoning skills.
4	Took appropriate injury Hx, determined MOI, observed for deformity/asymmetry, palpated appropriate structure, performed most major special tests (ROM, MMT, ligament laxity tests, CIRC and NEURO tests). Determined extent of injury adequately to move onto next clinical decision making task. Caused no potential harm to patient, but needed minimal instructor intervention, and demonstrated effective Clinical Reasoning skills.
3	Took most of the appropriate steps for determining extent of injury. However, needed instructor assistance for taking appropriate injury Hx, determining MOI, observing for deformity/asymmetry, palpating appropriate structures, or performing most major special tests (ROM, MMT, ligament laxity tests, CIRC and NEURO tests). Could not determine extent of injury adequately to move onto next clinical decision making task, and Clinical Reasoning skills were ineffective.

reading any feedback. This finding has been reported in the literature as well. Mulder[21] concluded that when both feedback and grades are given simultaneously, students showed more interest in the grade than the feedback. Black and William[22] found that comments accompanied by grades often lead to reduced learning when compared to comments alone. Since virtually all ATEPs likely use some type of evaluative structure like this, it does not seem to be much of a stretch to suggest formulating an instrument that all ATEPs could use for collecting some of this important baseline information. Perhaps some sort of an educational task force should attempt to formulate a plan that would move our educational system(s) in this direction.

RECOMMENDATIONS AND CONCLUSIONS

We suggest it is time to explore the possibility of all ATEPs using a similar assessment tool for student clinical performance. First, it should be determined if grades are actually useful or essential. An initial consideration would be for all athletic training educators to clarify the purpose for evaluating a student's clinical performance. Is it to calculate a grade or to determine clinical and professional competence? As educators, we need to establish a common purpose or goal for our evaluations (eg, sorting or ranking students, extrinsic motivation, measure of learning, behavioral considerations).

Changing any aspect of the current grading system that is so ingrained in our educational system is a daunting, perhaps impossible, task. Regardless of our opinions on how we grade or what criteria we use, it seems most professionals (professors, clinical instructors, etc.) can identify the "good" students or entry-level professionals. Perhaps it is time to work together to establish better consistency in measuring traits we would like to see in our young professionals. We believe that many, if not most, clinical educators already utilize many similar evaluation tools. Assuming this is the case, we may not be far off from developing a universal tool all ATEPs could use.

The Education Council (now the Executive Committee on Education) established the Educational Competencies and Clinical Proficiencies that are required to be taught to each student.[10] Would it not be possible to establish an assessment instrument of them? The APTA has successfully developed an instrument for evaluating student clinical performance that is being utilized universally for physical therapy education programs.[18] If athletic training education programs moved in this direction, it would likely result in more consistent student clinical evaluations. More emphasis would be on written or verbal feedback than on grades, and students (or faculty) would not have to be concerned about how the feedback is turned into a letter grade.

When we read a letter of recommendation that speaks specifically to professional performance, characteristics, or traits, we usually understand what it means. When we see a grade of A in a clinical course, we are essentially guessing what that means, especially when a high percentage of all students receive the same grade. If we are unsure of whether our students are ready to demonstrate what they know, there is an easy way to find out—we can ask or observe them and give them feedback. Students seem to respond better to feedback and find it more useful than receiving a single grade. We believe appropriate feedback is far more important than a grade for enhancing student learning and encourage moving away from the use of a single grade for "measuring" all aspects of a student's clinical performance.

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APPENDIX A. Athletic Training Student Evaluation Form

Athletic Training Student _____ Semester/Year _____

Primary Clinical Experience _____ Clinical Instructor/Supervisor _____

Please use the following numbering system for the evaluation of the above named ATS

NB = no basis 1 = unacceptable 2 = needs improvement 3 = acceptable 4 = good 5 =excellent

Personal Characteristics	**NB**	**1**	**2**	**3**	**4**	**5**
Communication skills						
Composure & demeanor						
Dependability & punctuality						
Initiative/Involvement						
Maturity & self confidence						
Work ethic & enthusiasm						
Professional appearance						
Organizational skills						
Rapport with athletes						
Rapport with coaches						
Rapport with ATs & other ATS						

Comments (Use space on back side, if needed):

Clinical Skills & Performance	**NB**	**1**	**2**	**3**	**4**	**5**
Practice preparation & routine duties						
1st aid procedures						
Taping & wrapping						
Injury assessment						
Modality choice & operation						
Rehabilitation techniques						
Record keeping & adheres to P & P						
Productive use of down time (Clin. Ed.)						
Receptive to constructive feedback						

Comments (Use space on back side, if needed):

Suggested Final Grade for Clinical Experience: ___A ___B ___C ___D ___F ___Incomplete
Comments on Grade Given (Use space on back side, if needed):

At this time I can:

___ recommend this student w/out reservation ___ recommend w/reservation ___ cannot recommend this student

…To continue in the clinical portion of the Athletic Training major

If "recommend with reservation", or "cannot recommend", provide reason(s) here:

Instructor/Supervisor & Date **Athletic Training Student & Date**