Peer Evaluations in Problem Based and Team Learning Assignments

Thomas Cappaert, PhD, ATC & Rene’ Revis Shingles, PhD, ATC
Athletic Training Education Program
Central Michigan University
cappa1ta@cmich.edu
shing1rr@cmich.edu
**Course Descriptions.** ATR 382 Athletic Training Assessment II is the second course on clinical evaluation and assessment of injuries and illness. ATR 383 Athletic Training Therapeutics II is the second course on therapeutic exercise and physical agents. Cohorts of 14 students, primarily juniors, who have been admitted to the advanced phase of the Athletic Training Education Program are the enrollee’s for these courses. Students take these two courses concurrently.

Both of these courses engage students through cooperative learning techniques involving group participation in base groups (ATR 383) and case study work using the team-learning concept (ATR 382) assignments. In order to provide consistency across the curriculum, the same peer evaluation tool is used for assessment. In addition to the highlighted peer evaluation, students are assessed with:

- X Exams
- X Quizzes
- X Short papers
- Term/research papers
- X Internship/field experience evaluations
- X Other: Evaluation of clinical proficiencies, group problem solving
Highlighted Assessment Strategy

Assessment Description.
Peer Evaluation. Members of the groups/learning teams assess the other members of the groups individually. The characteristics/behaviors that they will assess include member’s participation, cooperation/collaboration, attendance, preparedness to complete assignments, quality of work contributed to team goals, communication and problem solving skills. This peer evaluation is used as a portion of the final grade for group work in addition to the assessment of final group product quality. This evaluation is performed at the mid-point of the semester and at the conclusion of the semester. The mid point evaluation is used solely as feedback for the student so that they may correct or improve behaviors if the peer evaluation reflects inadequate performance. This then allows the student (with instructor guidance) to work at improving deficient areas.

ATR 382-Intended student learning outcome(s) measured.
– Build collaborative teaching/learning skills
– Improve critical thinking and problem solving
– Improve ability to identify problems and resources needed
– Improve teamwork
– Strengthen communication skills
– Encourage self-directed learning

ATR 383-Intended student learning outcome(s) measured. In many sports medicine clinics athletic trainers work cooperatively in teams to develop, implement, and supervise rehabilitation programs for their patients. Since the majority of our students choose employment in clinics, it is imperative that they learn to function as part of a collaborative team. Thus, not only are the final product (rehabilitation program) important, but also the process by which the program was developed and implemented is equally important. Therefore, by the end of ATR 383 students will be able to work cooperatively (demonstrating the expected behaviors mentioned on page four) to design a rehabilitation program that is accurate, effective, demonstrates functional and measurable goals and objectives for a patient on paper (paper patient assignment).
Peer Evaluation

Name ___________________________________________ Group # ______

This is an opportunity to evaluate the contributions of your teammates to group projects during the semester. Please write the names of your teammates in the spaces below and give them the scores you believe they earned. If you are in a group of five people, you will each have 40 points to distribute. You don’t give yourself points. (If you are in a group of four you will have 30 points to give away; if you are in a group of three you will have 20 points to give away, etc.). If you believe that everyone contributed equally to the group work, then you should give everyone 10 points each. If everyone in the group feels the same way, you will all receive an average of 10 points. Be fair in your assessments, but if someone in your group didn’t contribute adequately, give them fewer points. If someone worked harder than the rest, give him or her more than 10 points.

There are some rules that you must observe in assigning points:
• You cannot give anyone in your group more than 15 points.
• You do not have to assign all of your points.
• Don’t give anyone a grade they don’t deserve.

<table>
<thead>
<tr>
<th>Group Members</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td></td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
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<td>4.</td>
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Please indicate why you gave someone less than 10 points.

Please indicate why you gave someone more than 10 points.

If you were to assign points to yourself, what do you feel you deserve? Why?

* The instructor reserves the right to overrule an evaluation if it appears an unfair rating has occurred.
Use of Assessment Strategy

ATR 382

- Individual assignments are given to cover essential concepts and principles (textbook or supplemental readings)
- A short assessment of this assignment is given to individuals
- Same assessment is given to the groups
- Students discuss their answers and may appeal incorrect answers
- Unclear points are clarified by instructor
- Groups apply this knowledge using a case study that engages students in applying basic knowledge and concepts that were introduced in the individual assignments (e.g. use knowledge of ankle injuries to assess a potential injury when basic information is given)
- Performance during this process is then assessed periodically by peers based upon established learning objectives

ATR 383

Base Groups. I place students in base groups of three or four. Groups can be homogeneous or heterogeneous depending upon your purpose. Base groups meet at the beginning of each class session. Members are expected to share their contribution to the paper patient assignment, ask for clarification, and read and edit other group member contributions. Other expected behaviors in the group include: active participating, encouraging, summarizing, and synthesizing. The base group serves as an anchor for collaboration on the paper patient assignment. Base group participation is worth 9% of the final grade.

Paper Patient Assignment. This is a semester long project beginning with a literature review on the injury, followed by a comprehensive rehabilitation program to address the injury, and culminating in an oral presentation (to disseminate what has been learned about the particular injury). Each base group is presented with a real case (paper patient), which includes an injury evaluation, physician diagnosis and rehabilitation prescription. The chosen cases are sufficiently challenging to allow in-depth examination and decision-making. The purpose of this assignment is to have students begin thinking about setting goals, planning programs, and documenting those goals using a S.O.A.P. note format. Specifically, this assignment concentrates on the "A" and "P". Further, this is also to help reinforce and integrate what was learned in ATR 381: Athletic Training Therapeutics I. Therefore, students will 1) develop a problem list, 2) set long and 3) short term goals for the patient, 4) plan the total rehabilitation program, 5) give the rationale for the exercises and treatment you select 6) clearly state the criteria for progressing from one phase/stage of the rehabilitation program to the next, 7) give the criteria for return to activity, and 8) indicate the psychological and cultural considerations for this patient. The literature review is written in the form of an annotated bibliography. Each student in the base group reviews three different scholarly articles that relate to the case. Thus, collectively, the students have reviewed nine to twelve articles depending upon the size of the group. Students are expected to synthesize the findings of relevant literature and apply the knowledge to the case (paper patient). Based on the literature review, students will develop a comprehensive rehabilitation program for their paper patient as indicated above. The oral presentation allows the base group “resident experts” the opportunity to share their knowledge with the class.
Course: ATR 382 and ATR 383, Athletic Training Assessment II and Athletic Training Therapeutics II

Step 1: Identify student-learning outcomes. These courses encourage cooperative/active learning and a main complaint of this teaching style is inequities in work performed among group members. This assessment technique provides accountability as well as provides student feedback relative to outcomes expected when performing group work/projects.

Step 2. Determine what students should be able to demonstrate. We wish to encourage simultaneous development of content mastery as well as improved collaborative teaching/learning skills, critical thinking and problem solving, ability to identify problems and resources needed, teamwork, communication skills and self-directed learning.

Step 3. Develop assignments/products that will use assessment technique. Group projects that encourage the attainment of the learning objectives and culminate in a product are the most effective when using this assessment technique. Examples include quizzes, position/analysis papers, question sets associated with a case study and reaction papers.

Step 4. Communicate to students the learning objectives that are to be assessed. This step will ensure that students are evaluating the objectives and not global characteristics of the group members (e.g. appearance, general likeability). The fact that this assessment will impact the group grade to a degree also will encourage honest, reflective assessment by the student. It has been our experience that when this step is done well, students take the assessment seriously and provide valuable feedback to their peers.

Step 5. Perform assessment and communicate feedback to students.

Additional resources related to team learning and peer assessment:


Barrows, HS. Problem based learning in medicine and beyond: a brief overview. New Dir. Teach. Learn. 68:3-12, 1996.


**WWW Resources**

National Center for Case Study Teaching In Science  
http://ublib.buffalo.edu/libraries/projects/cases/case.html

University of Delaware PBL Clearinghouse  
https://www.mis4.udel.edu/Pbl/

Problem Based Learning Initiative  
http://www.pbli.org/resources/cases.htm

Case Studies in Human Anatomy and Physiology  
http://faculty.niagara.edu/bcliff/hapcstop.html

The Journal of Clinical Problem-Based Learning  
http://www.jclinpbl.org/high/index.htm