

Team-Based Learning in: "PSYCHOLOGY OF SPORT"

1. Course Situation

- Department: Kinesiology (in College of Health Professions)
- Subject: *Psychology of Sport*
- Level: Upper division (mostly juniors and seniors)
- Usually 2 to 3 sections offered each semester
- Typically 30-40 students per semester
- Time structure: has been taught in both (a) 2X/week – 75 minutes each and (b) 3X/week – 50 minutes each.

2. Learning Goals for the Course

The learning goals for the course are that the students will:

- a. Understand and remember the key concepts and principles of sport psychology, including the history and present status of the field, the theories of motivation and arousal, and various psychological skills interventions.
- b. Know how to use the key concepts and principles of sport psychology to describe, understand, predict, and influence behavior;
- c. Be able to relate the key concepts and principles of sport psychology to those of other subjects, including physiology, biomechanics, psychology, motor learning, and/or pedagogy;
- d. Understand the personal and professional implications of knowing about the psychology of sport;
- e. Care about and want to learn more about the psychology of sport; and
- f. Know how to keep learning about the psychology of sport after the course is over.

3. Sources of New Ideas

- My first introduction to team-based learning was an article by Dr. Harry Meeuwsen (U of Tx El Paso) published in the newsletter of the *North American Society for the Psychology of Sport and Physical Activity*. I found Dr. Meeuwsen's description of team-based learning and his experiences with it very intriguing.
- I followed up by corresponding with Dr. Meeuwsen, thoroughly exploring the University of Oklahoma's TBL website, and reading both Michaelsen, Knight, and Fink's TBL book and Fink's book, *Creating Significant Learning Experiences* (Jossey-Bass, 2003).

4. Previous way of teaching and problems encountered

- I typically used a combination of lecture and discussion, with the occasional 'active learning' activity for variety.

- The challenges that I experienced included: (a) getting students to read (either before or after lectures); (b) keeping students awake and/or engaged during lectures; (c) getting students to discuss and/or apply the course material to real world problems or case studies or even their own lives.

5. Changes Made

- I initially implemented team-based learning in my minimester *psychology of sport* class (January, 2004). That first class, as is typical with a minimester class, met for 3 hours a day for 15 days.
- I subsequently implemented team-based learning in two of my spring classes (*psychology of sport* and *exercise psychology*) and in all of my fall classes (*psychology of sport*, *exercise psychology*, and *concepts of motor learning*) that year.
- I implemented the complete team-based learning strategy in my classes, including the grade weight setting exercise, the individual and team RATs (along with the split-point format and the IFAT), the use of topic-specific and integrative team assignments, and the use of the team maintenance evaluation.

6. Examples of Team Assignments (Examples included in the Appendices)

- Typically, I have two types of assignments:
 - topic-specific assignments (... over the chapter or two that was covered on the RAT), and
 - integrative assignments (... over the material covered on several RATs).
- The topic-specific and integrative assignments are typically done first by individuals (outside of class) and second by teams (in class).
- Many of the assignments ask students to apply what they have learned to one or more case studies (taken from *Case Studies in Sport Psychology* by Rotella et al.). In addition, assignments have focused on movies and/or current events (e.g., drugs in sport).

7. Impact on Student Learning and Performance

- In the strictest sense, I don't have any comparison pre/ post team-based learning of my student's learning and performance. Too much has changed and I no longer give cumulative multiple choice tests as the key evaluator of student learning and performance.
- However, on a whim, one semester, I surprised my classes by giving them all of the RATs that they'd taken during the semester. Their performance was impressive! They averaged 70% on the RATs with no advance warning... no preparation!
- Given the strong emphasis on developing the ability to apply the course material inherent in team-based learning, the key indicator of student learning and performance in my courses is the '**integrative assignment**'. There are three across the course of the semester that are done both as individuals and then, again, as teams. The fourth, and final, integrative assignment is done only as individuals.

- The integrative assignments require students to create a concept map and a narrative related to a case study that they have read. Their challenge is to apply the course material (i.e., the theories, models, etc. of psychology) to the case... identifying sport psychology-related problems, causes, and solutions.
- Due to the high degree of problem solving involved, students, tend not to do very well on the early integrative assignments. However, by the end of the semester, the majority become quite competent in applying the course material to the cases. This leads me to think that my pre-TBL students, even at the end of a semester of lectures, wouldn't have been able to do the assignments.

8. Impact on Student Attitudes

- I attempted to assess the impact of team-based learning on student attitudes in several ways.
 - I have administered the Classroom Engagement Survey and the Value of Teams survey several times over the course of the last year or so (with team-based learning). Typically, the classroom engagement survey has been administered in conjunction with an integrative assignment.
 - Second, I have administered a set of open-ended questions (i.e., as suggested in Fink's 'significant learning' book).
- The feedback from the questionnaires is consistent with the data from previous assessments of classroom engagement in courses using team-based learning.
 - Previous data suggests that team-based learning classes average 4.0 on classroom engagement (while lecture classes' average 3.6). Over the course of several semesters, my scores for classroom engagement have averaged 4.0 (i.e., 4.2 for the Learner Participation subscale and 3.8 for Learner Enjoyment subscale).
 - Scores for the Value of Teams Survey (given at the end of the semester for several semesters) have averaged 4.4 (for the Working with Peers subscale) and 4.8 (for the Value of Group Work subscale).

The following are a few **student comments** from the open-ended questions administered at the end of the course (last semester). The questions are in italics.

What key ideas or information have you learned about the subject matter of this course?

I learned how to apply certain theories to an individual in ways that can be used in helping them.

What have you learned about how to use or apply the content of the course?

I learned that there can be many reasons why an individual acts the way they do.

I learned how to apply some of the motivational theories to my own life... to help me stay motivated to do exercise.

What parts of your knowledge, thinking, or actions have you been able to integrate within or external to this learning experience?

I actually gained a better understanding of why I had acted certain ways in certain situations.

I learned a lot about anxiety and ways to manage it which can help me for the rest of my life.

I have a logical, detailed thought process and this helped me in the integrative assignments.

What have you learned about the human dimension of this subject?

I learned that I learn better from others because it is easier to understand something that comes from someone who relates to me.

I learned that group work can be an effective way of learning. Until now, in all my other classes where group work was done, it was a failure.

Have any of your interests, feelings, or values changed as a result of this learning experience?

I enjoy working in groups more.

I am more interested in pursuing golf competitively after school.

What have you learned about how to learn?

I learned that I need to read the chapters and then highlight the main ideas.

I learned that learning in a group is an effective way to learn.

I learned that it is more important to understand than to memorize (at least if the test format allows open notes).

It has also been my experience that there are some students that really like team-based learning and that there are others that do not. Some do not like team-based learning is because it requires them to do more of the work themselves (... attempting to understand the course material for the RATs and team assignments) and they do not always enjoy (or want to take the time necessary for) doing so.

9. Impact on the Teacher

- My student evaluations have stayed fairly constant. I tend to average somewhere between 3.8 and 4.3 on a 5 point scale. I typically receive better student evaluations in the smaller, more condensed time frames, like minimester classes.
- I think that I am still in the process of 'working out the bugs' in my implementation of team-based learning (... how much and when to do mini-lectures... developing good team assignments... determining how to evaluate my more creative assignments...) and that my evaluations will stabilize and improve once more of those issues are worked out.
- Moreover, as a result of implementing team-based learning, my whole experience in the classroom has changed. I am now as much of a learner as my students are. I'm learning much more about how they experience the course material and about how to help them understand it (and use it) in a deeper, more sophisticated fashion. I love walking around during the team RATs and the team integrative assignments and listening to their discussions... providing a question or clarifying a misunderstanding here and there.
- Team-based learning has changed how I view both the course material and my role as a teacher.
- Interestingly, one of my biggest challenges with regard to team-based learning has been learning to write good multiple choice questions for the RATs. Even before implementing team-based learning, I wasn't very good at writing multiple choice questions. In truth, I often pulled my tests from the various testbank questions

available to me. I, very quickly, realized that those sorts of questions don't work for the RATs. Testbank questions are generally not well written and they tend to focus on the details (not the big picture issues). More importantly, they don't assess higher level thinking. I found Haladyna's books (Haladyna, 1994¹ and Haladyna, 1997²) on writing multiple choice questions invaluable in my quest to write good RAT questions.

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¹ Haladyna, Thomas M. *Developing and Validating Multiple-Choice Test Items*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1994.

² Haladyna, Thomas M. *Writing Test Items to Evaluate Higher Order Thinking*. Needham Heights, MA: Allyn & Bacon, 1997.

APPENDIX

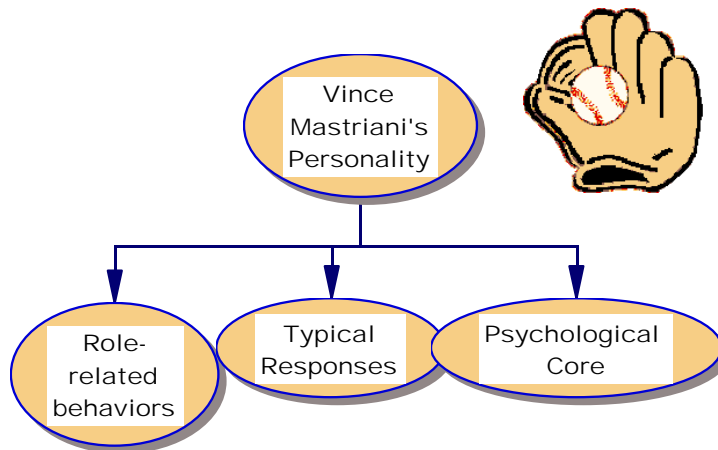
Examples of Team Assignments and Products of the Teams' Work

I have included detailed instructions for four assignments that I use in my *Psychology of Sport* course, including three topic-specific assignments and an integrative assignment. I have also included some illustrative output (e.g., concept maps and 'Minute Paper' comments) from the Integrative Assignment.

ASSIGNMENT #1: Topic-specific Assignment (Chapter 2... takes place during a single class period)

Students are asked to prepare for this assignment outside of class and then to complete it with their teammates during class.

Read the 'Too Good to Be True' case (p. 131) in your case study book. Complete the following concept map... organizing the information you learned about Vince Mastriani.



ASSIGNMENT #2: Topic-specific Assignment (Chapter 3... takes place during a single class period)

- Pretend that you're a football coach. You have several athletes you're considering recruiting.
- Evaluate their characteristics and decide which one you'd prefer to sign.

Athlete A, Physical: 6' 3", 180 lbs; Bench press 275; 40 yard dash: 4.7; Vertical leap: 23"
Trait Anxiety: 20/35, Eysenck Personality Inventory (high on extraversion), TAT (high on Maf)

Achievements: transfer student from Sacramento Junior College--- passed for 411 yards one game; played football and volley ball in H.S (Modesto, CA); chess club

Planned major: business, SAT scores: 470 M, 480 V

Athlete B, Physical: 6' 4", 190 lbs; Bench press 270; 40 yard dash: 4.8; Vertical leap: 22"
Trait Anxiety: 10/35, Eysenck Personality Inventory (high on extraversion), TA Test (high on Ms)

Achievements: transfer student from Fresno Junior College--- passed for 411 yards one game; played football and ran track in H.S (Fresno, CA); Habitat for Humanity

Planned major: biology, SAT scores: 460 M, 470 V

ASSIGNMENT #3: Topic-specific Assignment (Chapter 4...takes place during a class period) *Students read a case from their case study book. The quotes are from the case. They are asked to discuss each of the questions with their teammates, to make a choice, and to hold up a card indicating their choices when I call time. They then discuss/ compare/ defend their choices. Along those lines, I ask them questions like... "why need achievement theory?" and "why not attribution theory?".*

"The ball hit the last pinecone in the tree and fell in the water and ruined my round." Which theory?

- A. Need achievement theory
- B. Achievement goal theory
- C. Attribution theory
- D. Competence motivation theory

"Donald's emphasis on finishing first was a problem even in the beginning." Which theory?

- A. Need achievement theory
- B. Achievement goal theory
- C. Attribution theory
- D. Competence motivation theory

"Donald felt that he had to prove himself [and not fail] as a walk-on." Which theory?

- A. Need achievement theory
- B. Achievement goal theory
- C. Attribution theory
- D. Competence motivation theory

"His father told Donald not to worry so much."

- A. Inverted U hypothesis
- B. Zone of optimal functioning theory
- C. Catastrophe Theory
- D. Directionality Theory

ASSIGNMENT #4: Integrative Assignment (Chapters 1-4... takes place during several class periods)

INTEGRATIVE ASSIGNMENT #1

The purpose of the assignment is to provide you with the opportunity to integrate and apply what you have learned so far about the 'tools for optimizing performance' (i.e., the theories, models, concepts, strategies, etc. of the psychology of sport). The assignment will be graded using the rubric below. There will be four parts to the assignment.

1. Integrative Individual Assignment
2. Integrative Team Assignment
3. Peer-evaluation
4. Self-evaluation (the *Team Self-evaluation* and the individual *One Minute Paper*).

Grading Rubric			
Integrating and applying course material			
Rating: 28 This rating is equivalent to an A. There was a very well thought-out selection of course material used to address the case; and the course material was always used correctly and in depth.	Rating: 24 This rating is equivalent to a B. There was a rather well thought-out selection of course material used to address the case; and the course material was mostly used correctly and in depth.	Rating: 20 This rating is equivalent to a C. There was some course material used to address the case. However, it was often used either incorrectly or superficially.	Rating: 16 This rating is equivalent to a D. There was very little course material used to address the case.

Use of concept mapping...			
Rating: 12 This rating is equivalent to an A. Map is extraordinarily carefully drawn and labeled.	Rating: 10.5 This rating is equivalent to a B. Map is very carefully drawn and labeled.	Rating: 9 This rating is equivalent to a C. Map is carefully drawn and labeled.	Rating: 7.5 This rating is equivalent to a D. Map is poorly drawn and/ or poorly labeled.
Putting maps into words...			
Rating: 10 This rating is equivalent to an A. Narrative is consistent with formatting instructions and especially well written.	Rating: 8.5 This rating is equivalent to a B. Narrative is mostly consistent with formatting instructions and rather well written.	Rating: 7 This rating is equivalent to a C. Narrative is mostly consistent with formatting instructions and written about as well as most.	Rating: 5.5 This rating is equivalent to a D. Narrative is inconsistent with formatting instructions and/ or poorly written.

INDIVIDUAL INTEGRATIVE ASSIGNMENT

This integrative assignment will focus on the case study, The Big Break (p. 53 in your case study book).

- Art has a serious problem. He is not performing optimally.
- Using what you've learned this semester (with respect to Chapters 1-4), identify the causes of and potential solutions for his problem.
- Create a concept map illustrating your thoughts about Art's problem, its causes, and potential solutions. You can either draw and label your map by hand or use mapping software (e.g., Inspiration™) to create it. Organize your map so that the 'problem (Art is not performing optimally) is in the middle, the causes are on the left, and the solutions are on the right.
- In addition, write a one-page (typed, 1 inch margins) narrative to accompany your map. Your narrative should 'put your map and the thinking behind it' into words.
- Bring 2 copies of your map and narrative to class. If you do not bring your IIA to class, you will not be allowed to participate in the ITA (and will not receive the ITA points).

INTEGRATIVE TEAM ASSIGNMENT

Using your Integrative Individual Assignments, bring your ideas about The Big Break together as a team and discuss them. Go around the group and be sure that everyone has a chance to present and defend his or her ideas.

- As a team, identify: (a) the causes of Art's problem; and (b) potential solutions for his problem.
- Create a Team Concept Map illustrating your thoughts about the causes, and potential solutions for Art's problem. When you have finalized your map, draw and label it using the chart paper and markers.
- Also, write a one-page narrative to accompany your map. Your narrative should 'put your map and the thinking behind it' into words.
- During the next class, concept maps and accompanying narratives will be posted anonymously around the classroom. Included among the maps will be one or more

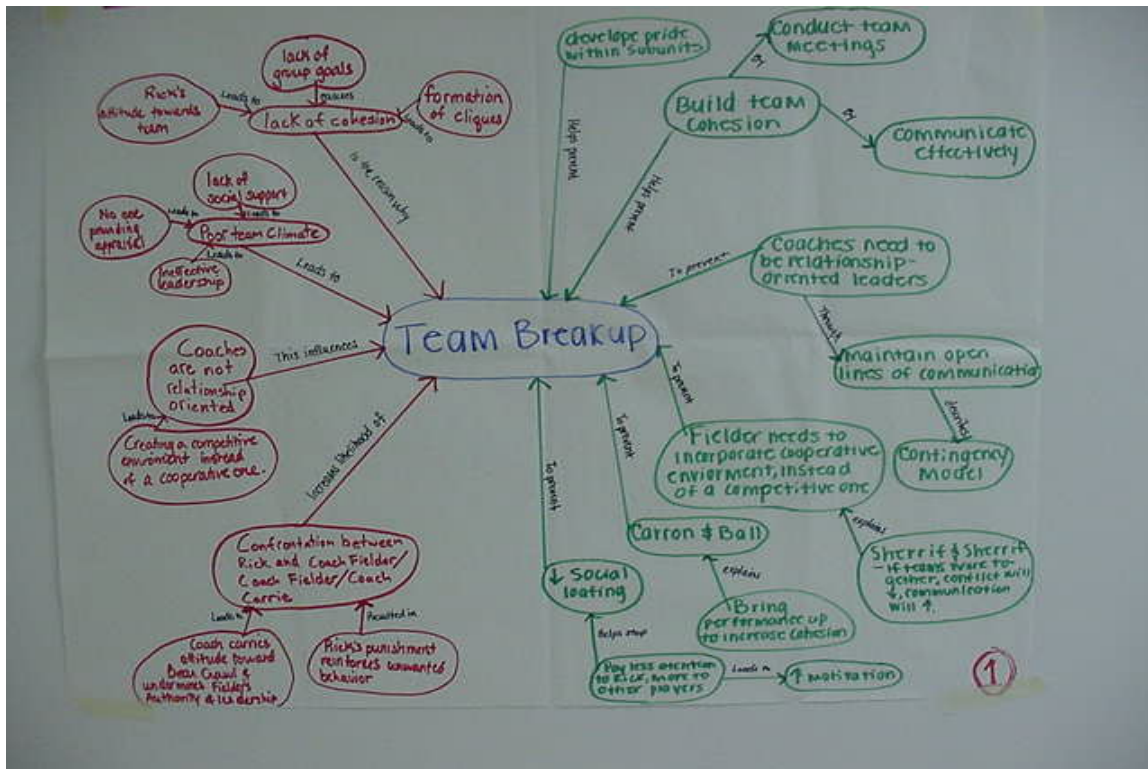
'instructor-created' maps. Team members will individually evaluate the posted maps and identify 'kudos' and kvetches' related to the other team's maps.

- Kudos refer to praiseworthy aspects of the other team's maps and kvetches refer to problematic aspects of the other team's maps. For example, kudos might relate to exemplary application or integration of course material and kvetches might relate to inaccuracies, inappropriate integration, superficiality (... akin to name dropping), errors of omission (failing to include things that should have been included), and/or errors of commission (including things that shouldn't have been included).
- After the team members have had a chance to evaluate the maps, teams will meet and share their kudos and kvetches. The teams will then decide upon one 'best' kudo and kvetch for the posted maps. They will write their best kudo and kvetch (along with a brief rationale) neatly on a Post-it.
- At the end of class, teams will post their kudos and kvetches on the maps in question. Kudos and kvetches will be worth a possible 3 bonus points each for the teams posting them. The instructor will evaluate the merit of the posted kudos and kvetches before bonus points are awarded. Bonus points will only be awarded for kudos and kvetches based on substantive, scientifically-defensible (rather than opinion-based) issues. Therefore, substantial thought should go into determining the 'best' kudo and kvetch.
- Upon completion of the peer-evaluation activities, teams will evaluate their own concept maps (incorporating the kudos and kvetches as appropriate) and individuals will evaluate their own learning. Each team member should write for at least one minute on the following question... what did I learn from this assignment? A sheet of paper for the One Minute paper will be provided.

Illustrative Output from the Integrative Assignment

A. Two Concept Maps:





B. Illustrative “Minute Papers”: Comments from the Integrative Assignment

This assignment was a good way to reinforce what I read in the chapter. It was good to actually apply the theory (need-achievement) in a real life situation. I learned that different people see things in different ways. Even in our team there were different approaches on the same story.

I learned how to make a concept map and how it is a good way to organize my thoughts. Discussing my ideas with my team opened my eyes to things that I had missed.

Learning with a team is much more beneficial to me. I get to hear other people’s thoughts and that increases my understanding.

Team assignments take a bit more effort than individual assignments. Not only do I have to evaluate my ideas, but also I have to analyze other people’s ideas and compare them to my own.

I learned that the attribution theory can be applied in many situations. I also learned from the story that there are both external and internal reasons for changes in performance.

I learned that you need effective leadership in order to maintain cohesion between team members. When team members get out of line, firm guidelines need to be put in place to create some sort of punishment for unruly or immature behavior.

I learned that many of the models actually do explain a lot. In the beginning, I had trouble relating the models to actual behaviors or events, but this case study helped me understand

that the models really do help. The language is a little confusing at first, but I'm starting to understand it.

I know a lot more about imagery than what I used to. Concept map projects have become easier for me to do now that I have practiced them. I learned more about the things someone can do to help themselves out when they become stressed out, not only in general, but in sports.

I learned from this assignment that organization is a key point for getting kudos. We should have had a rough draft for the chart, instead of throwing it all down on the paper right away.

From this assignment I learned to use more terminology and theories from the text to give a better explanation of the causes and solutions. I also learned that all athletes need to set their own goals. For this specific case study, I think that PST training was important because it would help Katherine evaluate her needs and the skills she would need to improve them.

I learned that it is important to work as a team on this assignment. We all needed to work together and collaborate on our ideas in order to do well on the poster. We all stayed calm, agreed, cooperated and didn't argue with one another when discussing.