

“Getting More Bang for the Buck:

How You Can Use Team-Based Learning to Prepare Your Students for Exam Success”

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Comments from Student Evaluations

- “I really liked the team exercises - I thought it was good to hear everyone’s way of thinking through the questions and answers; and I feel like I got a lot more out of the exam by going over it afterwards; than by just getting a "mystery grade" a few days later. “
- I liked the team learning exercises. It was much better than listening to a PowerPoint talk and we were able to do most of the math/equations by the time we left class.

Comments from Student Evaluations

- “This has probably been the most beneficial learning I have had; it really helps to get together and work things out with your peers.”
- “I really like the team learning approach. It is different which is refreshing and considering the fact that we are in a "group" learning atmosphere anyway; I think this really helps and is conducive to learning.”

Comments from Student Evaluations

- “I didn’t like being required to participate in the team learning exercise. I had planned to use that class time to study for an exam.”

At the conclusion of this session, learners will be able to

- Use the principles and strategies of team learning effectively in order to prepare a large group of students for exam success
- Apply insight gained from individual and small group readiness assessment exercises
- Apply outcomes from an integrated application activity
- Employ team learning exercises in multiple physician assistant didactic training settings

Agenda

1. Intro to Team Learning
2. Hands on Experience
3. Applications
4. Questions and Answers

Three Ways to Use Small Groups

1. Casual Use
2. Cooperative Learning
3. Team-Based Learning

What is Team Based Learning?

- Team based learning is a teacher-directed approach that applies concepts through small-group problem solving discussions in a single classroom with a single instructor.

What distinguishes teams from groups?

- Teams are characterized by:
 - A high level of individual commitment to the group
 - A high level of trust among members

What does it take to become a team?

- Time interacting together
- Sharing of resources (especially intellectual)
- A challenging task that becomes a common goal
- Frequent feedback on individual and group performance

What can properly developed teams do?

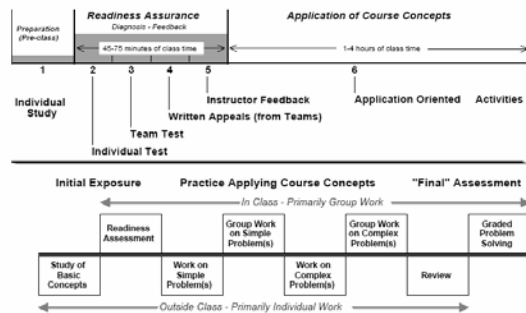
- Inspire a very high level of individual effort
- Challenge each other without fear of giving offense because of a high tolerance for honest communication.
- Work together very effectively.
- Successfully accomplish very complex and challenging tasks.

Instructional Principles of Team Based Learning

- Individual accountability promotes preparation
- Team accountability promotes effective participation
- Goal-driven collaboration promotes learning
- Controversy stimulates discussion
- Peer pressure fosters desire to succeed

Team-Based Learning Instructional Activity Sequence

(Repeated for each major instructional unit, i.e., 5-7 per course)



Sample RAT (1 of 5)

Which of the following is responsible for smooth muscle contractions experienced during an asthma attack?

- Cytokines
- Histamine
- Neutrophils
- T lymphocytes

Sample Group Application

In an asthma attack a number of mechanisms produce inflammation and smooth muscle contraction. You would like to give your patient a medication that will decrease the frequency and severity of attacks. Which of the following would be an important characteristic of such a medication?

- Actively cleaves vasoactive intestinal peptide
- Promotes the release of prostaglandin
- Stabilizes mast cells
- Promotes the activation of B cells

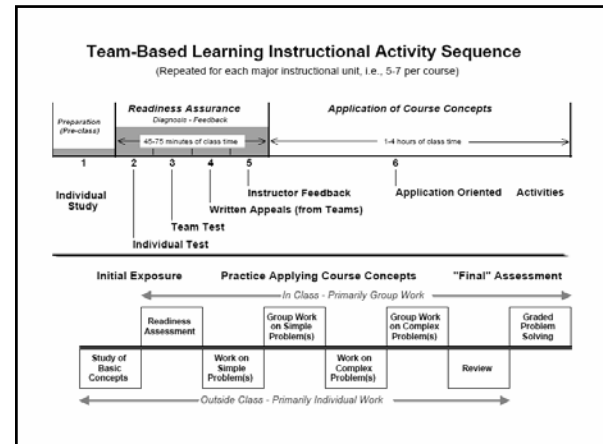
Hands On Experience

Objectives for Unit

- Describe the characteristics of a household toilet plumbing system.
- Describe the function of each of the components of a household toilet.
- List the conditions required for optimum performance of a household toilet.
- Given a malfunctioning household toilet, select the appropriate corrective action to restore proper function.

Hands On Experience

- 1 Divide into groups of 4-6
- 2 Do independent study (phase 1)
- 3 Complete readiness assurance (phase 2)
- 4 Work in teams to solve task
- 5 Share answers simultaneously (phase 3)
- 6 Discuss and defend answers



Four Principles of Team Learning

- 1 Teams must be properly formed
- 2 Students must be made accountable for their individual and group work
- 3 Group assignments must promote both learning and team development
- 4 Students must have frequent and timely performance feedback

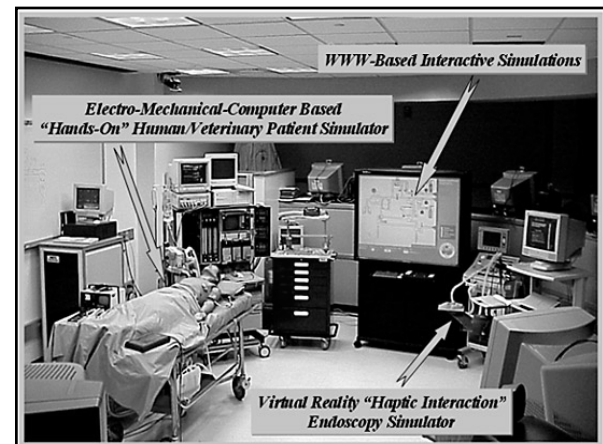
Readiness Assessment Test Scores
(Cumulative scores after 4 RATs)

Team #	Individual Member Scores:			Team Score	Team Gain over BEST Member
	Low	Average	High		
1	142	169	188	204	16
2	126	154	168	201	33
3	135	164	183	210	27
4	149	165	184	197	13
5	149	173	192	213	21
6	107	166	187	207	20
7	135	162	181	213	32
8	140	163	186	203	17
Average	135.4	164.5	183.6	206.0	22.4

12% higher than the BEST team member

Uses in the PA Curriculum

- Teaching sessions
 - Radiology lab exercises
 - Clinical medicine classes
- Hybrid Applications
 - Human Patient Simulation
 - Internet Cases
- Exam preparation
- Exam administration
- Exam review and remediation



Final Activity

- List two possible applications for Team-Based Learning at your institution.

Questions



Useful Web Sites

- The Team Learning Collaborative
 - <http://www.tlcollaborative.org>
- Baylor College of Medicine
 - http://www.bcm.tmc.edu/fac-ed/team_learning/index.html
- Wright State University School of Medicine
 - <http://www.med.wright.edu/aa/facdev/TBL/index.htm>
- University of British Columbia
 - http://ipeer.apsc.ubc.ca/wiki/index.php/Team_Based_Learning
- Epstein Educational Enterprises
 - http://epsteineducation.com/order_custom.php