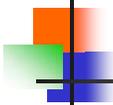


Team-Based Learning

An Exciting & Interactive Alternative to Lecture-Based Teaching

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Objectives

1. Basic educational principles of TBL
 - A. What it is
 - B. Why it works
2. Three phases of TBL
3. Differences between Readiness Assurance Tests & Group Application Exercises

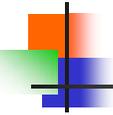
Today's Goal



Expose you to Team-Based Learning by participating in a "course" using Team-Based Learning

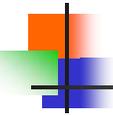
Exam Woes

- Do our exams test recall or application?
- If the latter, do we teach those skills in a lecture-based course?
- As a course director, how often do your instructors complain about how poorly students did on their exam questions?



Small Group Teaching

- Are we reluctant to “give up” lecture time for small group activities?
- What are some common problems with the use of small groups?



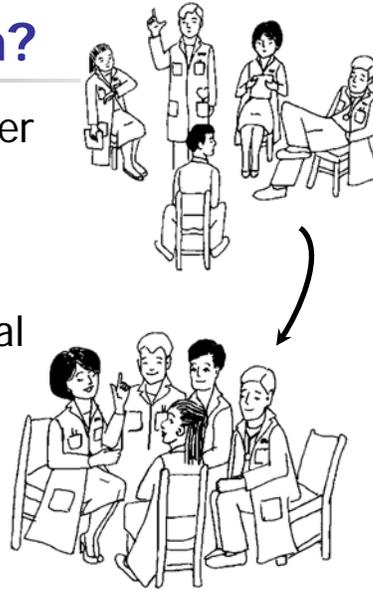
Common Problems with the Use of Small Groups

1. “Gunners” and “Social Loafers”
2. Groups unable to stay focused
3. Discussions fall flat



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 is Team-Based Learning (TBL)?

- a teacher-directed approach that applies concepts through small group problem-solving discussions in a single classroom with a single instructor



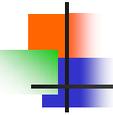
What is Team-Based Learning (TBL)?

- a specific sequence of individual work, group work, and immediate feedback to motivate students to hold each other accountable for being prepared and participating



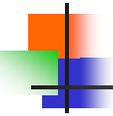
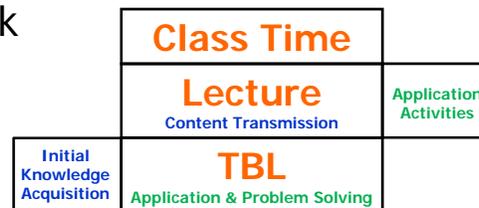
Paradigm Shifts

- Course goal shifts from knowing to applying
- Teacher shifts from “sage on stage” to “guide at side”
- Students shift from passive to active
- Responsibility for learning (knowledge acquisition) shifts from instructor to student



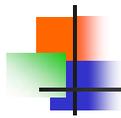
Instructional Focus Shifts

- Some knowledge acquisition outside of the classroom
- Application activities shifted into the classroom
- In-class feedback about decisions and thinking process



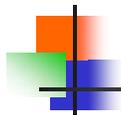
Instructional Principles of Team-Based Learning

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



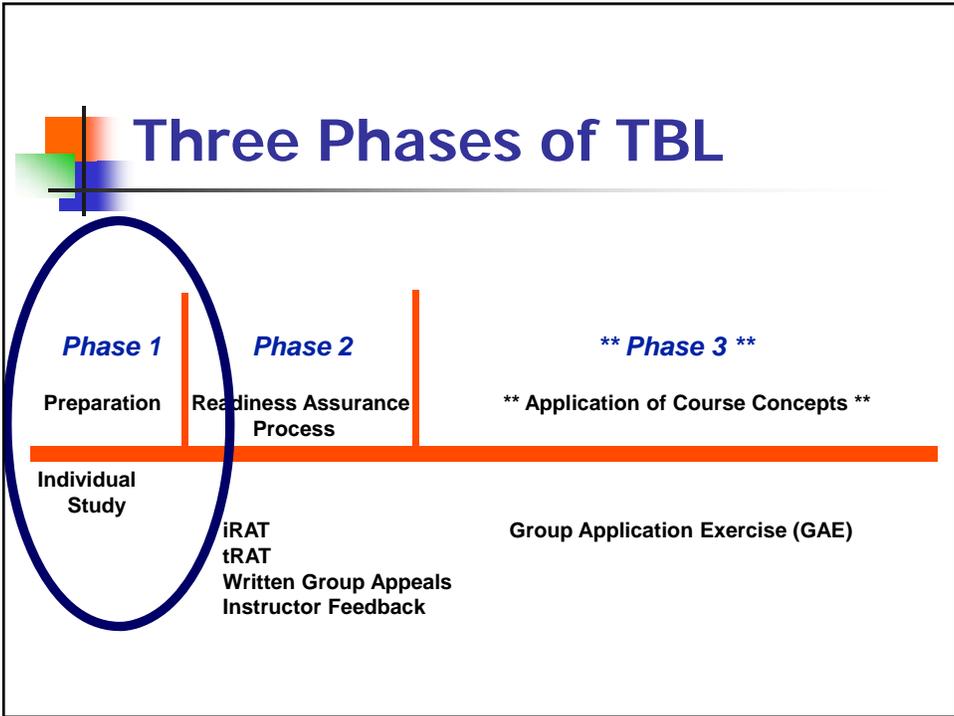
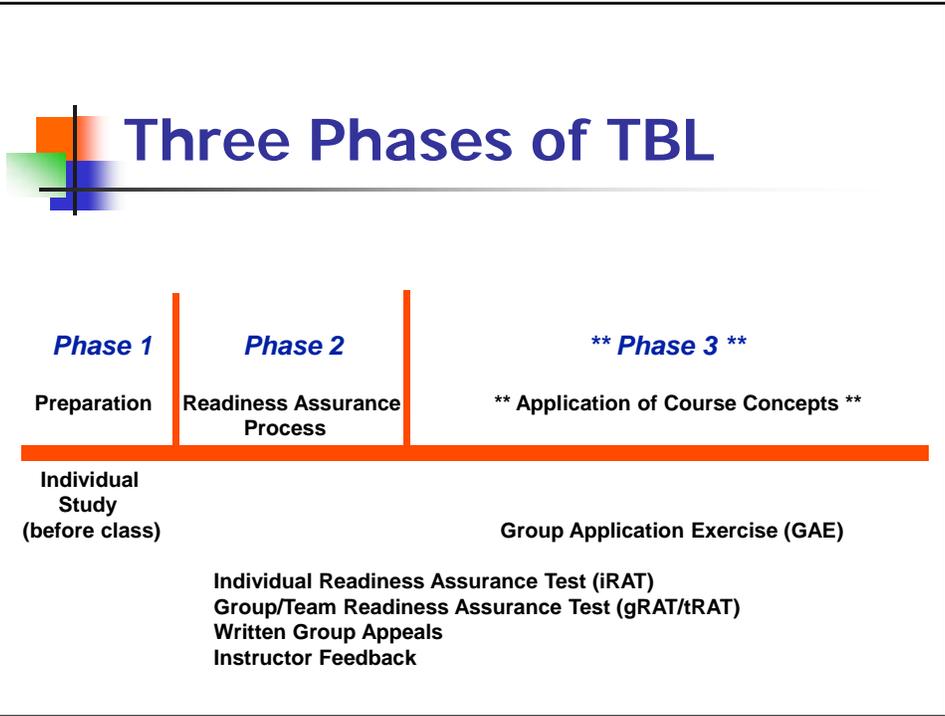
Key Design Principles

- ✓ Permanent teams of 5-7, strategically formed
- ✓ Readiness assurance process to hold students and teams accountable
- ✓ Application activities that promote both learning and team development (4 S's)
- ✓ Frequent and timely performance feedback, including peer evaluation



Three Phases of Team-Based Learning

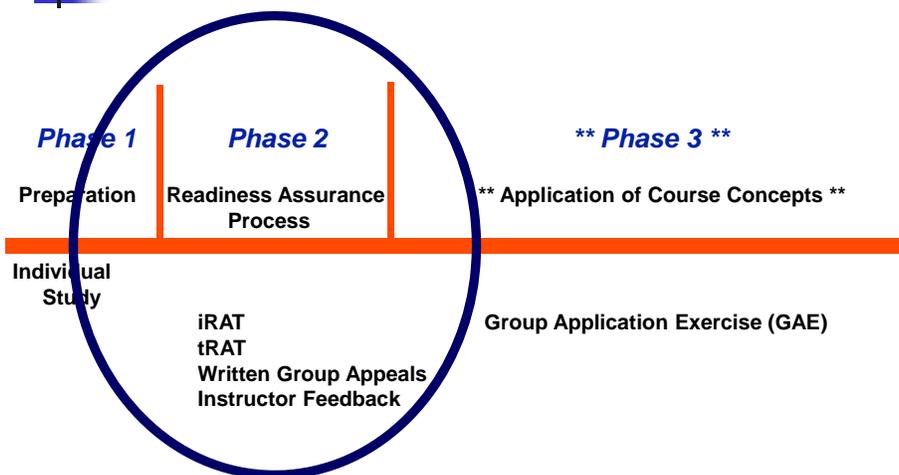
- **Preparation**
 - Learners assimilate knowledge
- **Readiness Assurance**
 - Learners demonstrate readiness to use acquired knowledge
 - Individually
 - Teams
- **Application**
 - Learners solve increasingly complex problems through intra- and inter- team discussions

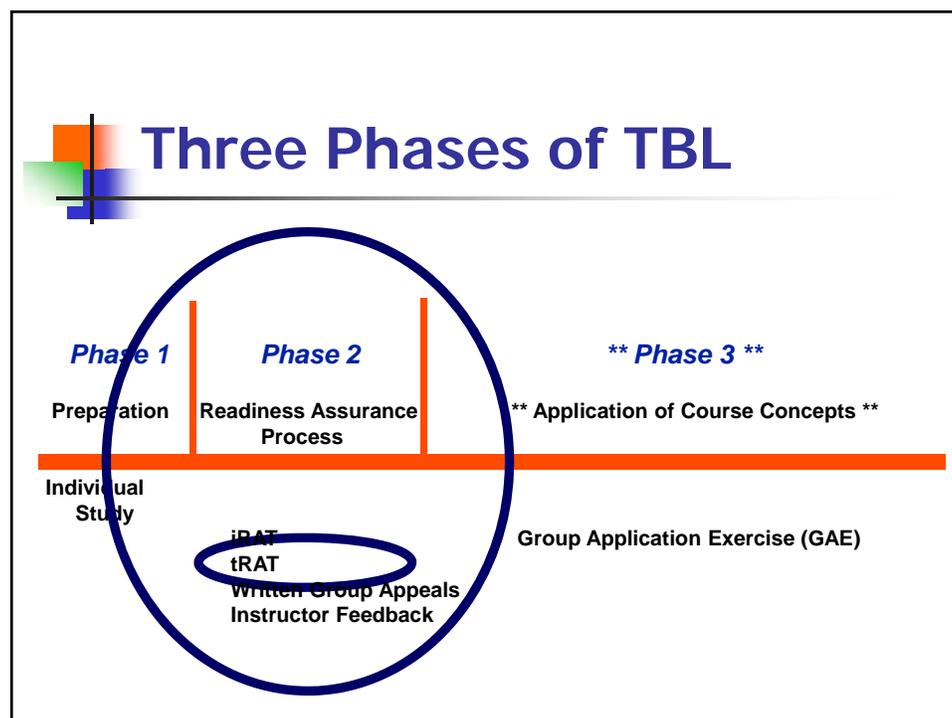
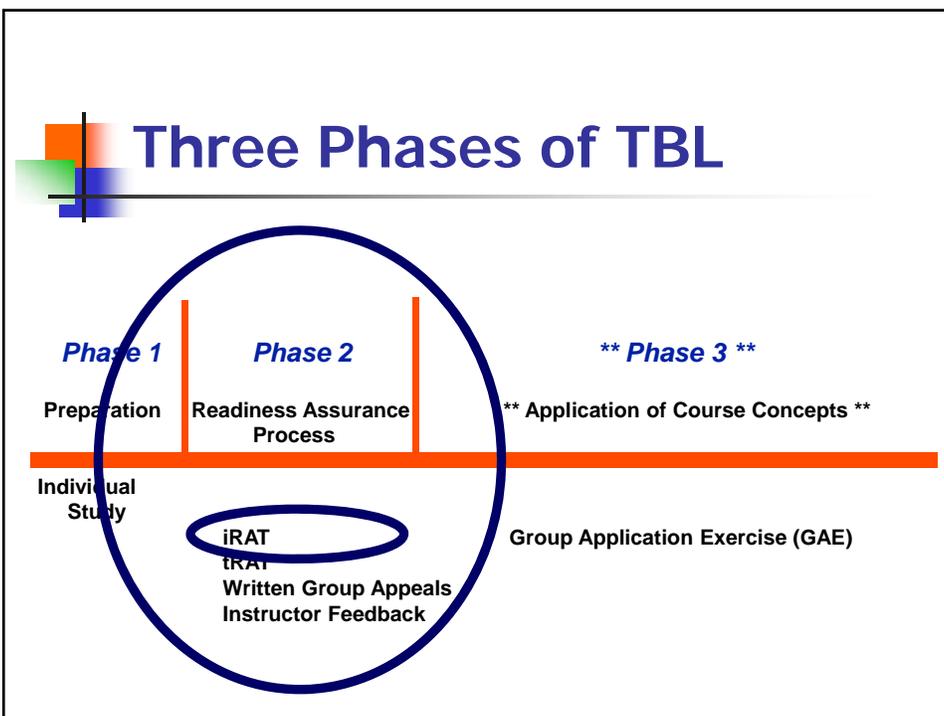


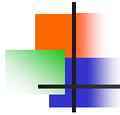
Time to Form Teams...

- **Principle:** Ensure equal distribution of resources to maximize participation of all members
- **Operationalized:**
 - Identify important resources available to individuals and equally distribute those individuals
 - The teacher forms the teams

Three Phases of TBL







Using the “IF-AT” form

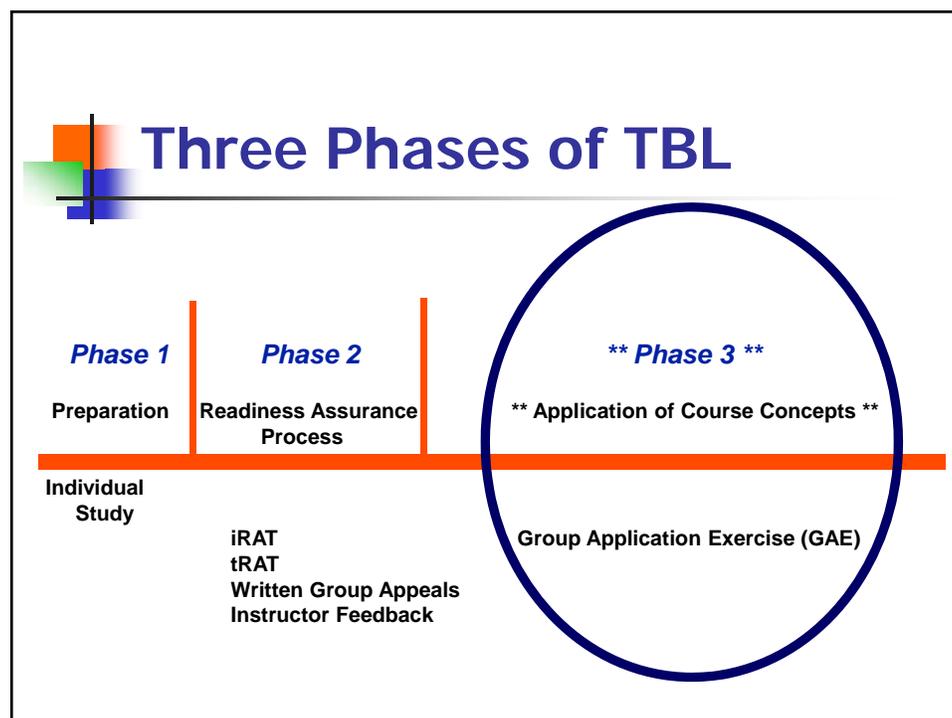
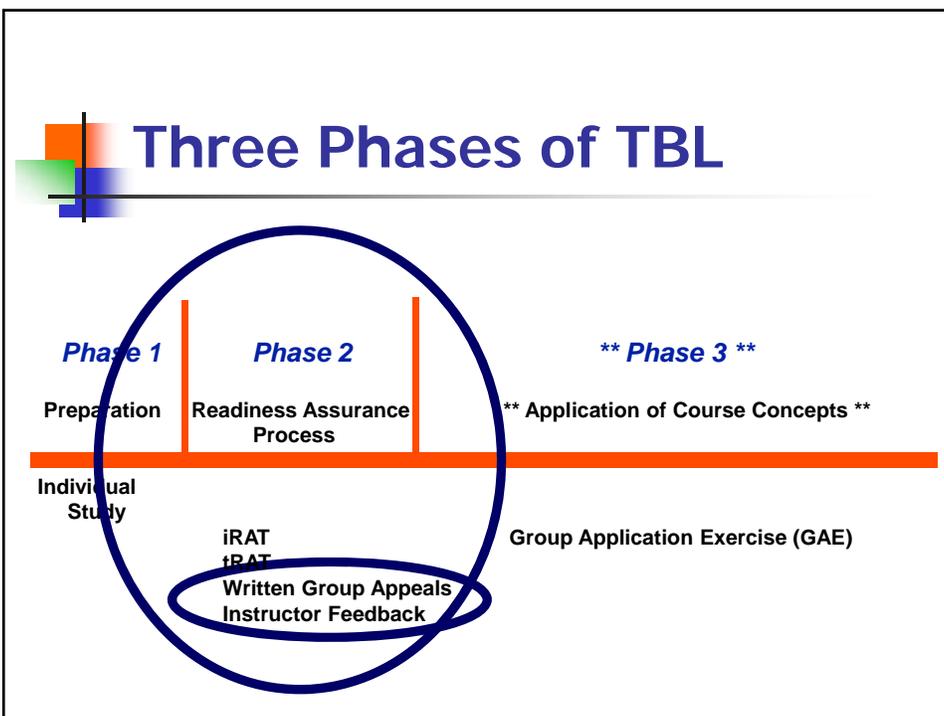
- Decide with your group which is the correct answer and scratch that answer on the form
- A * beneath the answer you scratched indicates the correct answer; move on to the next question
- If no *, keep scratching until you find the answer with the * underneath
- Points will be scored as follows:
 - Correct answer on the first scratch = 3 points
 - Correct answer on the second scratch = 2 points
 - Correct answer on the third scratch = 1 point
 - Correct answer on the fourth scratch = 0 points

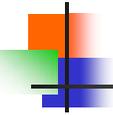
Calculate average individual score $\times 3$
Post with team score



IRAT & GRAT Scores

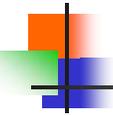
Team	iRAT	tRAT
1		
2		
3		
4		
5		
6		
7		
8		
9		
Average		





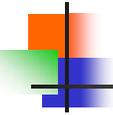
Application Exercise: Medical Education

You and your colleagues must design and implement a new interdisciplinary course in **"Pathophysiology and Disease"** to replace lecture components of Pathology and Physiology, and a large segment of Pharmacology. Most lecture time will be eliminated to promote more active and interactive learning. It is to be a year-long course and should include clinical problems to encourage the students to exercise clinical reasoning.

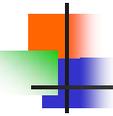
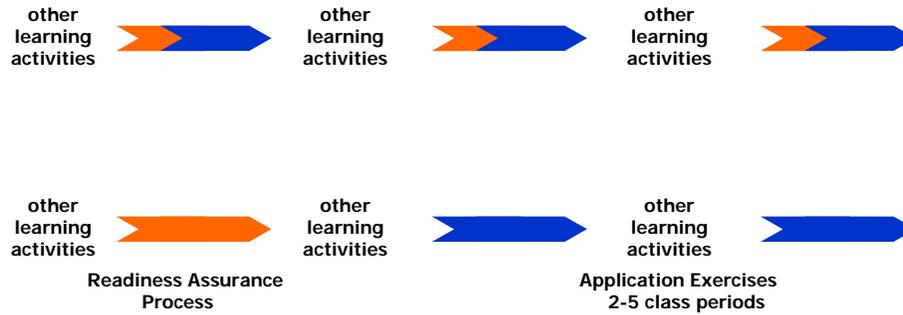


4 S's Create Linked and Mutually Reinforcing Assignments

- Significant problem
- Same problem
- Specific choice
 - Multiple Choice Questions
 - Open-ended Question → Gallery Walk
- Simultaneous report



“Typical” TBL Modules



Why TBL Works

- Teams focus on making decisions
 - Avoids “divide and conquer” approach
- Team problem-solving improves
 - Teams switch from voting/compromise to real problem-solving as they get to know and trust each other
 - Focus changes from “who is right” to “what is right”

Why TBL Works

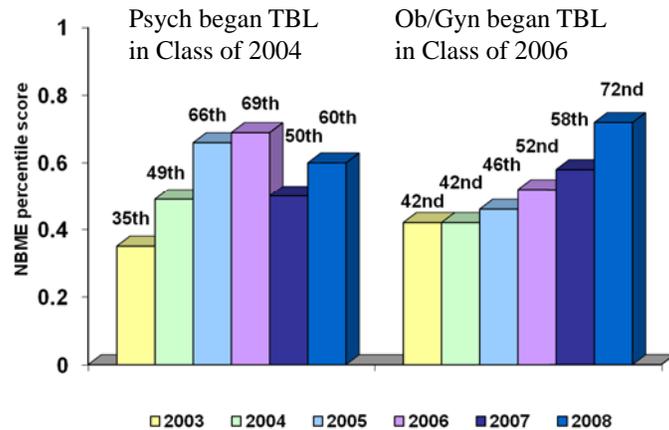
- The worst teams outperform the best individuals
 - powerful message about team effectiveness
- Works in large class settings
 - Routinely used in large classes, up to 400, but more typically 120-150, with a single facilitator
 - Possible in difficult classroom spaces
 - Give students something compelling enough to work on & they will ignore room limitations

Why TBL Works

- Activities progress through Bloom's levels
- Attention focuses on harder concepts



UTMB (Ruth Levine) Comparison of Psychiatry & Ob/Gyn NBME Performance



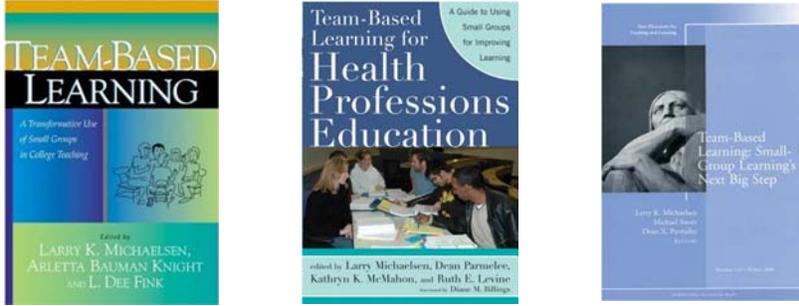
UT Austin (Michael Sweet) TBL Used in Many Disciplines

- TBL teachers report high levels of student attendance, preparation, participation and critical thinking
- TBL students report being more motivated and enjoying class more, even when the subject is not in their major



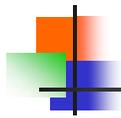
Larry Michaelsen, PhD

<http://www.tblcollaborative.org>



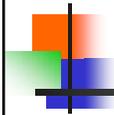
- **Fundamentals**
- **Innovations**
- **Research & Scholarship**
 - ✓ **Workshops**
 - ✓ **Oral Presentations**
 - ✓ **Posters**

March 1-3, St. Petersburg, FL
<http://www.tblcollaborative.org>



Acknowledgements

- For getting me started ...
 - Boyd Richards, PhD
 - Robert J. Philpot, PhD
 - Larry Michaelsen, PhD
- Team-Based Learning Collaborative (TBLC)
- At UF
 - All of my UF teaching colleagues!
 - Cyndi Garvan, PhD; Parker Small, MD



Questions?

