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What is it?

Basics of implementation

TEAM-BASED LEARNING

Small Group Methods

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graph TD; A[Small Group Methods] --> B[Case-Based Group Discussion]; A --> C[Problem-Based Learning]; A --> D[Team-Based Learning];
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**Case-Based
Group Discussion**

**Problem-Based
Learning**

**Team-Based
Learning**

Many
facilitators

1-2 facilitators

What is TBL?

“A special form of collaborative learning using a specific sequence of individual work, group work and immediate feedback to create a motivational framework in which students increasingly hold each other accountable for coming to class prepared and contributing to discussion.”

Michael Sweet

Objectives for TBL

1. Apply new knowledge
2. Consistent mastery of course material
3. Professional behavior development
4. Avoid passive learning

TBL Movement

Started in Business School setting '80-90' s

↑ # of healthcare schools using method

Several texts + outcomes research

Passive
Learning



Active
Learning

Structure of a Module

1. Objectives and Assignment
2. Individual and Group Readiness Assurance Exercises – IRAT and GRAT
3. Group Application Exercise

TBL Module - Team-Based Learning: An Alternative Active-Education Model

Objectives


By the end of this session, the learner will be able to:

1. Describe the key differences between case-based, problem-based and team-based learning (TBL)
2. Describe the structure and sequence of a typical TBL exercise
3. Describe key steps and pitfalls of implementation of TBL
4. Be conversant in selected outcomes data and additional resources for TBL
5. Design an effective TBL module

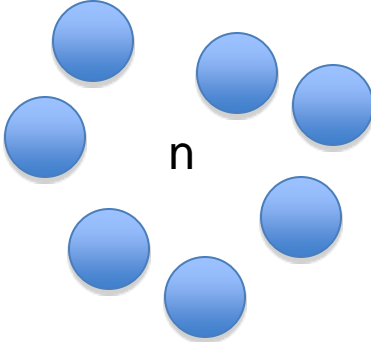
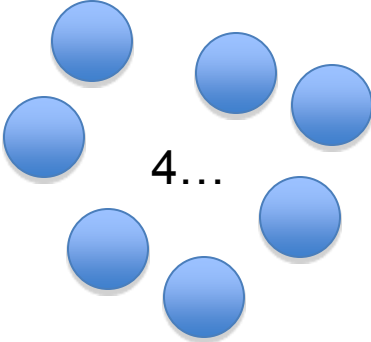
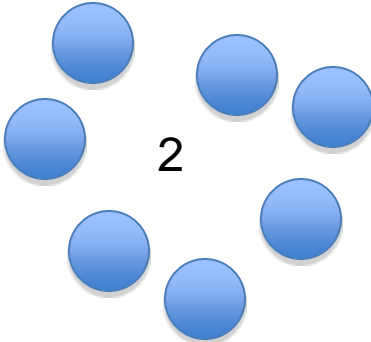
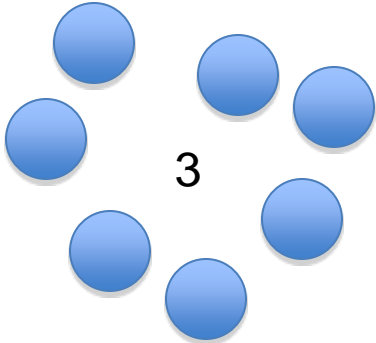
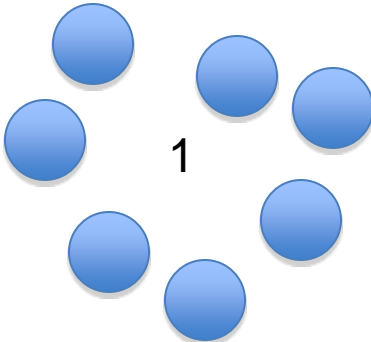
Assignment

1. Read “Three Keys”
2. Read “TBL Handout from TBLC”

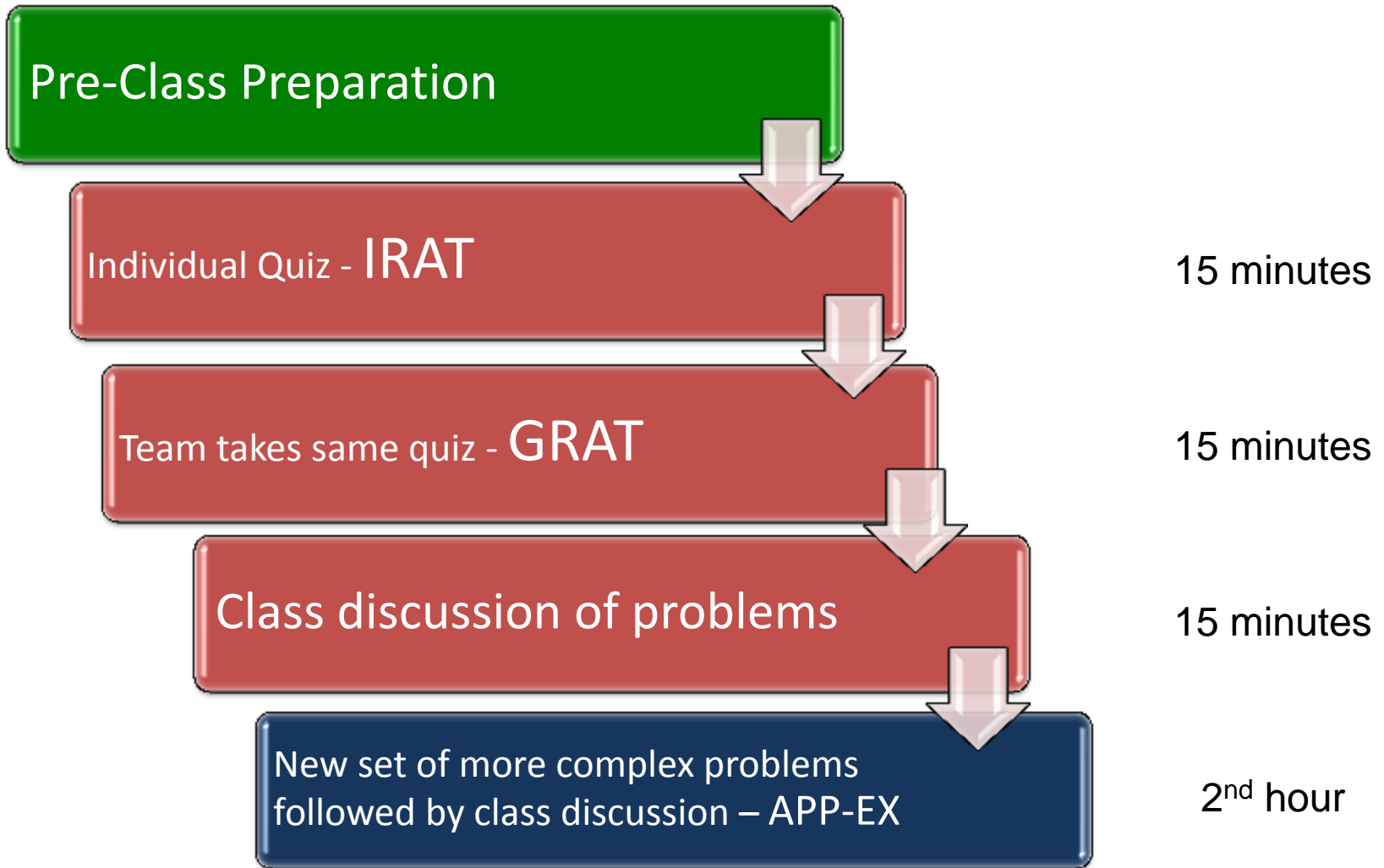
Logistics

1. Seven member teams – diversity
2. Orient students  Attendance issues
Grading issues
3. Props
4. Module preparation
5. Staff training

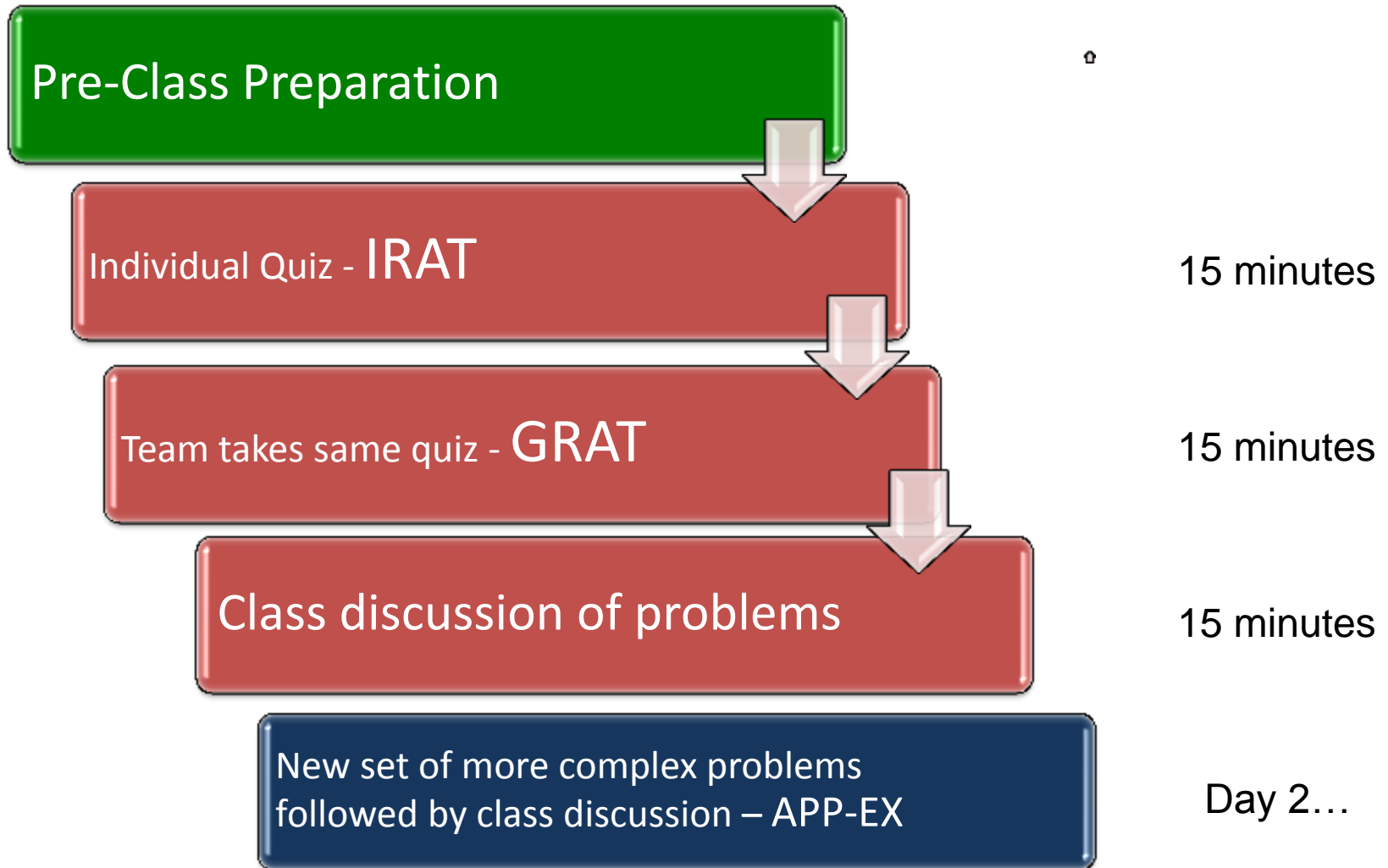
Teams



Road Map of a TBL Session



Road Map of a TBL Session



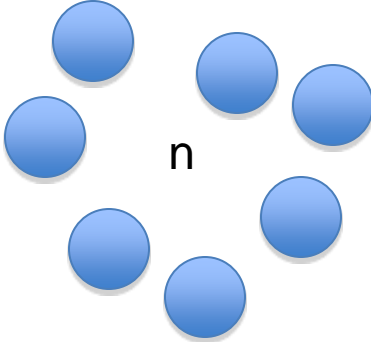
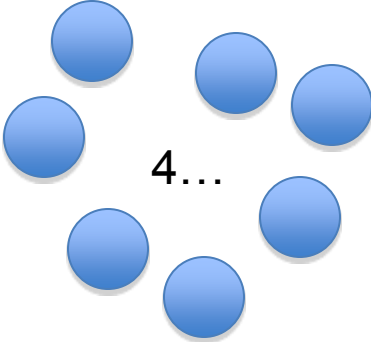
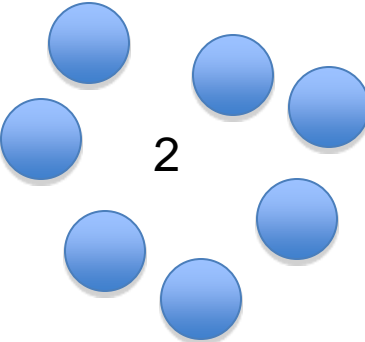
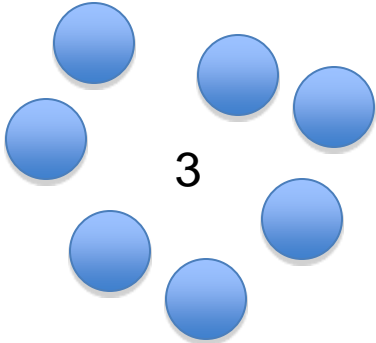
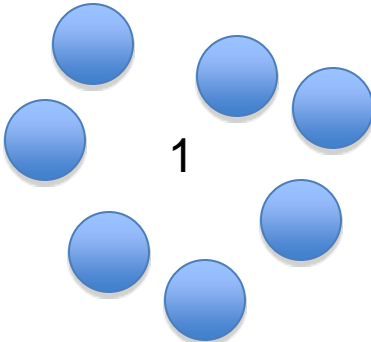
IRAT/GRAT – typically 5-10 MCQ's or T/F

Application Exercise – options

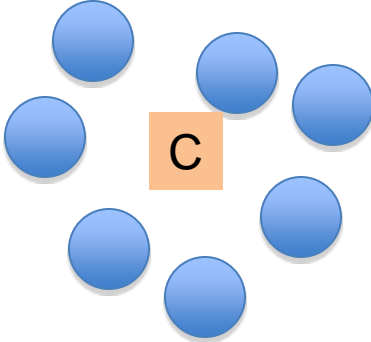
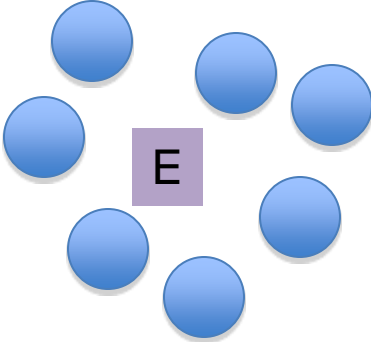
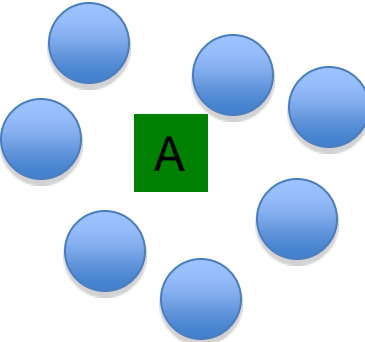
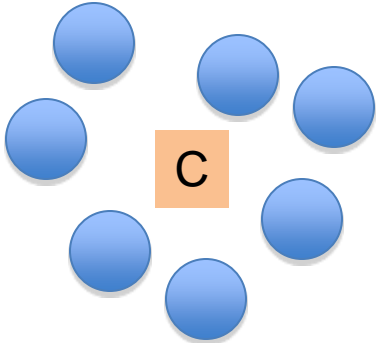
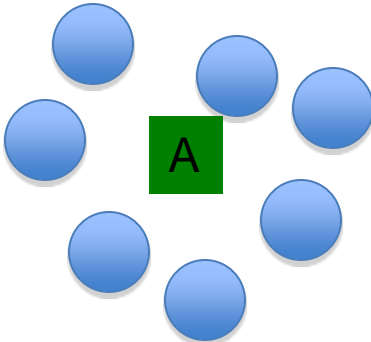
More complex problems with MCQ's

Other kinds of team outputs

Teams

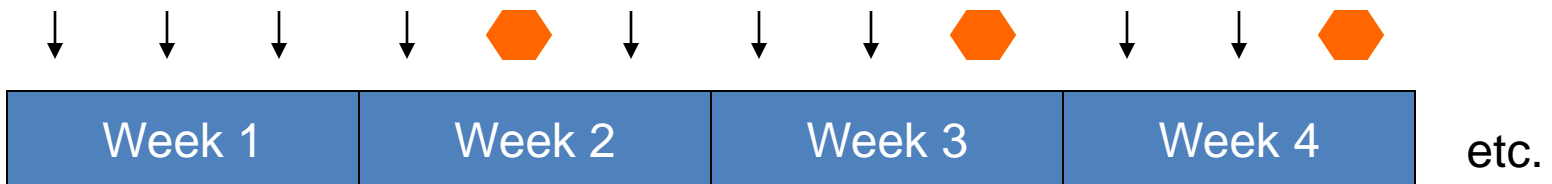
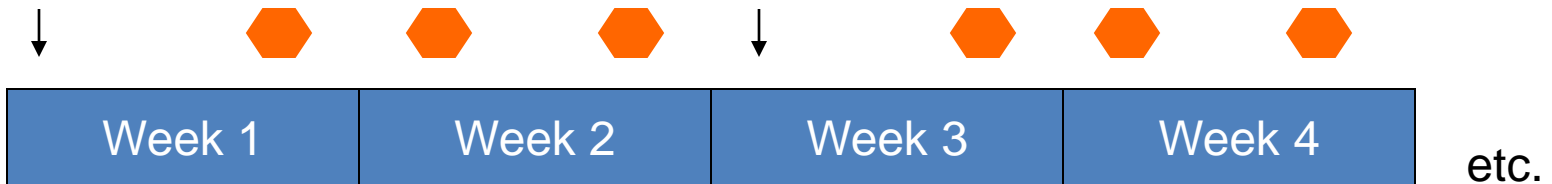
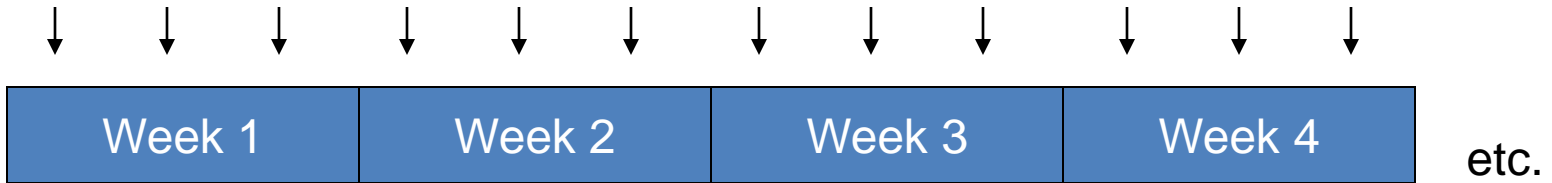


Teams



How does TBL change course structure?

Lecture-based course



Group Appeals Process

Purpose:

1. Clarify uncertainty of understanding
2. Give credit for missed questions due to:
 - ambiguity of materials
 - disagreement between reading materials and the correct answer
 - Bad question

Group Appeal

- Submitted by deadline
- Concise, well-articulated
- Options for references
 1. 2 supporting outside references
 2. From course materials

How do you want the score to be divided between the team and the individual?

	Team	Individual
A.	50%	50%
B.	60%	40%
C.	70%	30%
D.	80%	20%

Grading and Assessment

- TBL session is required and part of final grade
- Students choose value of individual and team contributions to score
- Formative assessment
- Peer review option

Average individual score ~ 80% correct

Team score ~ 95-100% correct

Key Points

TBL is a method designed to:

- Promote student-centered learning and accountability
- Active team collaboration
- Application of materials and concepts to novel and interesting situations

Implementing TBL

- Goals and objectives
- Lead time
- Reviews

Implementing TBL

- Goals and objectives
 - Is TBL the right choice
 - Developing the best sessions
- Lead time
- Reviews

Implementing TBL

- Goals and objectives
- **Lead time**
- Reviews

Lead Time

- objectives
 - Compare and contrast the historical findings, physical exam findings, laboratory findings, radiological findings and differentiating diagnostic work up for pulmonary versus cardiac causes of cyanosis in a newborn using the following diseases as a guide:
 - Pneumonia
 - Upper airway obstruction
 - Tetralogy of Fallot
 - Transposition of the great arteries

Lead Time

8

- resources

- *Clinical Pediatric Emergency Medicine.* “Evaluation and management of the cyanotic neonate.” Steinhorn RH. 2008 September; 9(3): 169-175.
- *UpToDate.* “Etiology and evaluation of cyanosis in children.”

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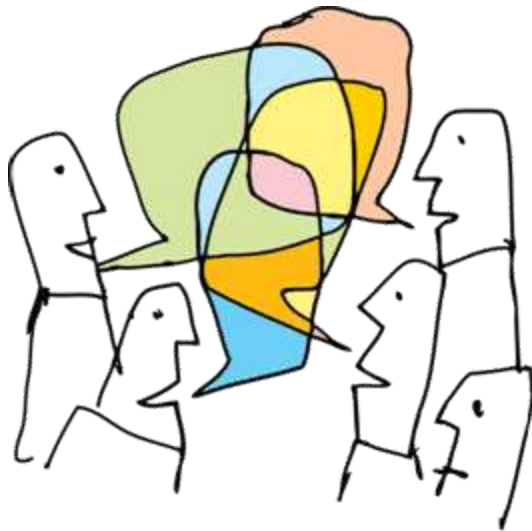
Lead Time - Question

- Writing questions can be one of the trickiest components to TBL development.
- What are some of the common mistakes instructors make when initially developing the questions for their session?

Lead Time

- Questions
 - IRAT
 - GRAT
 - Application Exercise

~~Google~~



Implementing TBL

- Goals and objectives
- Lead time
- **Reviews**

Implementing TBL

- Goals and objectives
- Lead time
- Reviews
 - Content expert(s)
 - Previous students
 - Field testing

TBL: Does It Really Work?

- Student/Faculty Perceptions
- Academic Achievement
- Learner Engagement
- Critical Thinking
- Long-Term Retention

TBL: Does It Really Work?

- Student/Faculty Perceptions
 - *TBL in Medical Education: Initial Experiences at Ten Institutions*
 - *The Social Fabric of a Team-Based MBA Program: Network Effects on Student Satisfaction*
- Academic Achievement
- Learner Engagement
- Critical Thinking
- Long-Term Retention

TBL: Does It Really Work?

- Student/Faculty Perceptions
- Academic Achievement
 - *Active Learning in a Year 2 Pathology Curriculum*
 - *Adaptation of Team Learning to an Introductory Graduate Pharmacology Course*
 - *Team-Based Learning in a Medical Gross Anatomy and Embryology Course*
- Learner Engagement
- Critical Thinking
- Long-Term Retention

TBL: Does It Really Work?

- Student/Faculty Perceptions
- Academic Achievement
- Learner Engagement
 - *A Comparison of In-Class Learner Engagement Across Lecture, Problem-Based Learning and Team Learning Using the STROBE Classroom Observation Tool*
 - *The Effect of Team-Based Learning in Medical Ethics Education*
- Critical Thinking
- Long-Term Retention

TBL: Does It Really Work?

- Student/Faculty Perceptions
- Academic Achievement
- Learner Engagement
- Critical Thinking
 - *A Realistic Test of Individual Versus Group Consensus Decision Making* – Journal of Applied Psychology
 - *Team Based Learning Enhances Long-Term Retention and Critical Thinking in an Undergraduate Microbial Physiology Course*
- Long-Term Retention

TBL: Does It Really Work?

- Student/Faculty Perceptions
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 - *Team Based Learning Enhances Long-Term Retention and Critical Thinking in an Undergraduate Microbial Physiology Course*
 - *Improved Knowledge Retention in a Pre-Clinical Pediatrics Course with the Addition of TBL*

Future Aims

- Faculty development
- Interprofessional sessions
- Graduate level

GRAT

1. Most students, before they start learning with Team-Based Learning, will have had “group” learning experiences in which:

- a. They felt their groups members contributed equally
- b. The instructor could easily tell which group was most productive
- c. The instructor could spot a weaker student and help him/her out
- d. Individuals often carried the “load” so the group could do well

2. In TBL, the primary course objective shifts to:

- a. Transmission of teacher-specified knowledge
- b. Learning how to use and apply course concepts
- c. Understanding course concepts
- d. Learning about teams and team development

3. The Group Readiness Assurance Test (GRAT) is important because it:

- a. Lets the instructor know what team is dysfunctional
- b. Lets a team know its “weakest link”
- c. Encourages the team leader to “step forward”
- d. Requires members of each team to work together

4. Why is simultaneous team reporting important?

- a. Gives a sense of “team spirit” to students who aren’t prepared
- b. Stimulates within-a-team and among teams discussion
- c. Doesn’t reward “smarter” teams
- d. Doesn’t highlight “slower” teams

5. Most instructors who start using Team-Based Learning, will likely encounter which behaviors?

- a. Student resistance to the more active role in the classroom
- b. Discomfort with instructors shift from “sage on the stage” to “guide on the side”
- c. Some uneasiness with not covering “all” the content
- d. All of the above