

Team Based Learning (TBL) in Leo

Team-Based Learning (TBL) is an instructional methodology utilized at many medical schools around the world today. It consists of five different learning phases which students participate in either individually or within a pre-determined group of students.

- **Phase 1:** Students study and prepare independently *before* the TBL event takes place. This qualifies TBL as a form of *flipped learning*. Students should be motivated to prepare since they are informed of the IRAT and GRAT components (see phase 2 and phase 3, respectively).
- **Phase 2:** At the beginning of class, students independently complete a short individual readiness assurance test, or IRAT. Most commonly, this takes the form of multiple-choice questions.
- **Phase 3:** Immediately following completion of the IRAT, students work within their pre-determined group to complete a group readiness assurance test, or GRAT. Typically, the GRAT consists of the same multiple-choice questions found on the IRAT. Best practice is to utilize scratch-off style exams for the GRAT, so that students get immediate feedback on their group's answers. Points should decline for each wrong answer.
- **Phase 4:** Student groups work together to solve application exercises. Often, student teams will simultaneously indicate their answer to a question presented to the entire class. Discussion of application exercise questions and answers should follow. Students should be prepared to defend and discuss their answers.
- **Phase 5:** Evaluations! At the end of a TBL exercise, or at the end of a series of TBL activities within a course, you should consider soliciting and providing feedback. You can assign students to evaluate each other, course faculty, or even the activity itself. In the event you are utilizing group facilitators, you might also consider having those facilitators evaluate students as well.

Reference:

Overview - Team-Based Learning Collaborative. (2019, May 20). <http://www.teambasedlearning.org/definition/>

Considerations:

- Best practice is to score students based on, both, their IRAT and GRAT scores. Faculty and/or course directors have discretion as to how each of these scores should be weighted.
- The IRAT and GRAT typically consist of the same questions, and usually include questions that would rank higher on Bloom's Taxonomy (application, analysis, synthesis, evaluation). IRATs are most commonly standard multiple-choice (A-type) questions, while the GRAT usually takes the form of a scratch-off exam where students will eventually arrive at the correct answer (hopefully on their first choice!).

- Consider having students evaluate their peers as a component of TBL and as way to encourage maximal participation and preparation.

TBL and Exams

During the course of a single TBL activity, students will participate in two exams. First, the IRAT will be completed individually and can be assigned to students in Leo just like any other exam or quiz that they may take. Second, students will complete a GRAT. In Leo, GRAT scratch-off style exams have special settings. The guides linked below contain helpful information pertaining to the preparation of GRAT scratch-off style exams.

- [Managing Exams for TBL](#)
- [Edit/Add New Exam Type](#)

Scratch-Off-Exam

[Submit](#)

Cardio GRAT 2A

CLICK TO SELECT YOUR ANSWER

1 The heart contracts twice for every heartbeat. One contraction is the atrial contraction while the other is the ventricular contraction. During ventricular contraction, which two valves of the heart open?

A	<input type="radio"/>	Aortic and tricuspid valves
B	<input type="radio"/>	Pulmonary and aortic valves
C	<input type="radio"/>	Pulmonary and tricuspid valves
D	<input type="radio"/>	Aortic and mitral valves
E	<input type="radio"/>	Pulmonary and mitral valves
	<input type="radio"/>	0

- i** Note: While not applicable to TBL per se, scratch-off style exams can also be used for individually assigned exams or quizzes. This may be helpful when an instructor wishes to be sure students arrive at the correct answer when studying before or after class.

Using Small Groups for TBL

As mentioned above, during phase 3, students are placed into small groups to complete a GRAT. These groups work together to complete the *scratch-off* style assessments. The advantage to these scratch-off assessments is that students get immediate feedback based on their responses. Additionally, students are motivated to answer correctly since they lose points with every incorrect response. Once this assessment is submitted, each group member will receive the same score as the designated team leader (i.e. the group member who opened the assessment first).

Groups: 7 Group Assignment Auto-Assign All Create Empty Groups							Create Empty Groups Auto-Assign All
TBL Groups-1	TBL Groups-2	TBL Groups-3	TBL Groups-4	TBL Groups-5	TBL Groups-6	TBL Groups-7	
9031, user	9050, user	Blessey, Jackie	Agnio, Plasti	Corodin, Jared	Flax, Greg	Alberto, Alphonse	
Bulldock, Cory	Black, Walter	Gold, Franny	Bouffard, Cory	Doe, Jon	Gobb, Roger	Dancer, Corey	
Butters, Whiney	Eggleston, Melissa	Johnson, Sammy	Doodle, Kenny	Fannin, Caleb	Millers, Tracy	Enos, Brain	
Dingalong, Samson	Jones, Timothy	Robrock, Lauren	Dorr, Dun	Frisk, Lindsay	Muddle, Jade	Holly, Samantha	
Griznak, James	Moseley, Jackie	Roggers, Johnson	Gibons, Meredith	Gerber, Sabrina	Roberts, Rachel	Kanski, Gabe	
Landers, Craig	Ruders, Deisha	Samson, Friday	Jarvis, Janette	Kurb, Steve	Rodman, Albert	Mitchel, Tommy	
Plinkon, Abraham	Stone, Lucy	Sphink, Ronnie	Morin, Andrea	Newton, Isaac	Sudson, Stanley	Moose, Kevin	
Poole, Mellisa	Student, QA2	student, lottery1	Newmen, Randal	Spark, Kelly	Waldo, Ralph	Skylar, Brad	
Widdle, Roberto	Sutton, Sally	Trent, Lisa	Weaton, Jenny	Student, Student	Wrex, Eva	Wolfgang, Roger	

- [Creating Small Groups](#)
- [Sharing Small Groups Across Courses/Years](#)

TBL Evaluations

Consider utilizing evaluations in Leo to have students assess each other and complete peer evaluations. Peer evaluations can be de-identified and assigned to students on a group by group basis. Scores from peer evaluations can also be imported into the gradebook, if desired.

- [Evaluation Types](#)
- [Peer Evaluation](#)

Virtual TBL & Other Considerations

Team-based learning can happen virtually! Learn more about TBL in virtual environments in [this blog post](#) and in [this recorded webinar](#).

- When using the virtual scratch-off in Leo, it's important that only one person on each team opens the GRAT assessment. This is important to communicate to your students in advance. In a virtual environment, students can share their screens so that they can collaboratively discuss the questions. In a live (in-person) setting, consider providing digital versions of the questions on a [time-released basis via an event in Leo](#).