

TEAM-BASED LEARNING

1. What is Team-Based Learning?

Team-Based Learning is an evidence based collaborative learning teaching strategy designed around units of instruction, known as “modules,” that are taught in a three-step cycle: preparation, in-class readiness assurance testing, and application-focused exercise. Students are organized strategically into diverse teams of 5-7 students that work together throughout the class. A class typically includes one module.

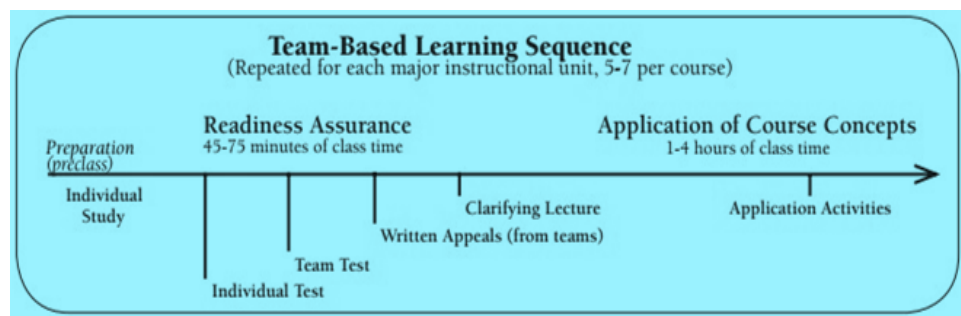


2. Why Team-Based Learning?

- Generates **ideas**.
- Improve **independent** thinking.
- Assist passive learners to become **active** participants.
- Develop **problem solving** skills in students.
- Recognizes **gaps** in one's knowledge.
- Proper **grading system** and constant **monitoring** can make it effective.

3. How to implement Team-Based Learning

Students begin each unit of the course taking a short test over their understanding of the assigned pre-readings. They then take that exact same test



again as a team, getting immediate feedback on their team answers through the use of an Immediate Feedback Assessment (IF-AT) answer sheet. This immediate feedback reveals how well they thought and talked about the material and who among them may have the best grasp of it at the moment. Once the team test is completed, they can then write “appeals” to reclaim credit for incorrect answers when they feel they can cite evidence from the reading to make a case for their answer. After this readiness-testing experience, the teacher reviews the team scores to see which material is still unclear to the class and lectures briefly on that material. Students then complete one or more higher-level application exercises in which they apply what they learned during the readiness tests to complex problems or case studies. This process repeats for each unit of the course, with students filling out peer evaluations for members of their team a few times over the course of the term.

| No. | The four practical elements in TBL | Description |
|-----|---|---|
| 1. | Strategically formed, permanent teams | The instructor organizes permanent teams of five to seven students in the first week or two of the term |
| 2. | Readiness assurance | The four step process: <ol style="list-style-type: none"> 1. Pre-reading by students outside of class. This includes podcasts and other forms of media. 2. Individual readiness assurance test (iRAT). This is a short, basic, multiple-choice test about the preparation materials. 3. Team readiness assurance test (tRAT). Once students turn in their individual tests, they then take the exact same test again, and must come to consensus on their team answers. Importantly, teams must get immediate feedback on their performance, currently best achieved using scratch-off forms in the immediate feedback assessment technique (IF-AT). 4. Appeals. When teams feel they can make a case for their answers marked as incorrect, they can use their course materials to generate written appeals, which must consist of (a) a clear argumentative statement and (b) evidence cited from the preparation materials. |
| 3. | Application activities that promote both critical thinking and team development | Teams then apply the knowledge they have acquired to carefully designed 4-S application activities : <ol style="list-style-type: none"> 1) Address a Significant problem, 2) Make a Specific choice among clear alternatives, 3) Work on the Same problem as other teams, 4) Simultaneously report their decisions. |
| 4. | Peer evaluation | Providing students with <u>both formative and summative feedback</u> from their teammates about their contributions to the team and its success. |

| ROLES | | |
|--|--|--|
| Teachers | Student | Team |
| <ul style="list-style-type: none"> • The teacher is a guide to facilitate learning. • To provide expert opinion and model expert thinking. | <ul style="list-style-type: none"> • A focus on relevant problems accompanied by group interaction promotes learning. • Learning requires reflection. • Work independently as well as collaboratively- be engaged and not free loading/skiving. | <ul style="list-style-type: none"> • Learning in team involves discussion and peer teaching. • Cooperation and collaboration. • Providing constructive peer feedback and review when and where necessary. |

4. Instructional Materials

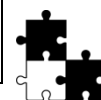
- Pre-reading materials
- Case-studies
- Learning resources
- Application problems

5. Assessment

- iRAT
- tRAT
- Multi-Choices Questions (MCQ)
- Application questions
- Feedback form
- Peer review
- Self-assessment
- Rubrics

6. References

- Michaelsen, L., & Sweet, M. (2002). Team-Based Learning. Learning Sciences Handbook, 41-51.
- Brame, C. (n.d.). Team-based learning. Retrieved August 23, 2017, from Vanderbilt University Center for Teaching: <https://cft.vanderbilt.edu/guides-sub-pages/team-based-learning/>
- https://www.slideshare.net/fcot_fcot/group-presentation-48605106



**LEARNING
SCIENCES
LAB**

OFFICE OF EDUCATION

Materials prepared by:
Clement Lim Jun Hiung
Nachamma Sockalingam