Team-Based Learning

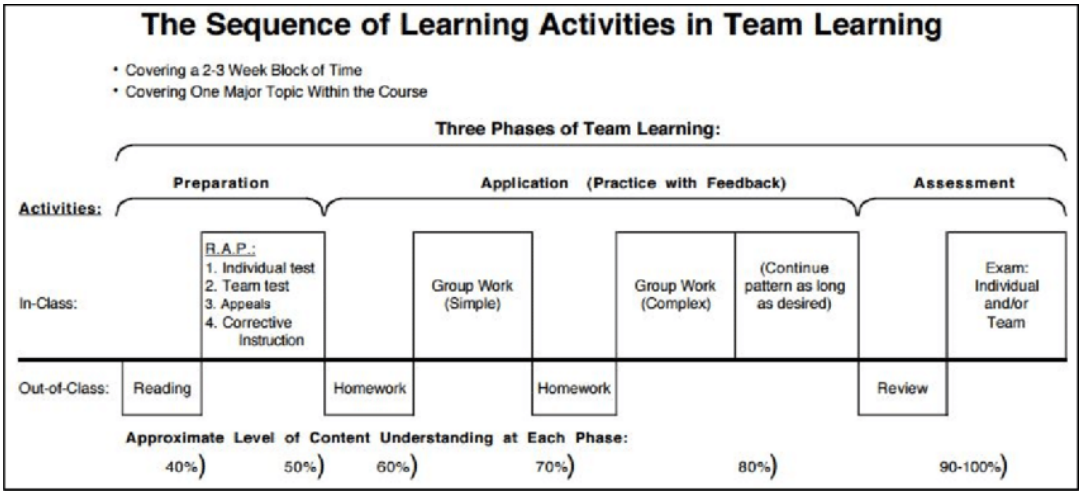

Image source: Michaelsen (2004)

Step 1: create your strategy for group formation
- a. Define student characteristics (diversity of interest, prior knowledge, demographics, class standing, etc.), or just random
- b. Determine size of teams
- c. Define team roles and operations
- d. Decide whether to use a team contract

Step 2: brainstorm readings, video lectures, etc.
- a. Determine consistent elements of a learning cycle (how much homework per week, types of source materials, online quizzes, discussion boards, etc.)
- b. Will you record your own lectures and/or rely on videos that others have produced?

Step 3: Create Readiness Assurances
- a. Student pre-class preparation
- b. Individual readiness assurance test (iRAT)
- c. Team readiness assurance test (tRAT)
- d. Appeals process
- e. Clarifying mini lecture

Step 4: Design Application Activities (4-S design)
- a. The problem presented must be <u>significant</u>
  Application Activities should focus on big ideas or major dilemmas, issues, or driving questions. In choosing a suitable activity, apply the five filters for teaching practices (Wiggins and McTighe, 2005): To what extent does the activity…
  - have potential for engaging students?
  - help students engage with a “big idea” having enduring value beyond the classroom?
  - help students join central conversations in the discipline?
  - support critical thinking and/or rethink previously held conceptions?
  - help students learn key skills they will need after graduation, in areas such as research, collaboration, etc.
- b. Groups make a <u>specific</u> choice and provide a rationale (aka “constrained choice”)

a. Specific decision that requires judgement (evaluation of something, assessment/diagnosis of something, prediction about something, recommendation)
b. Present a situation and offer prompts as a decision or choice arising from the situation (which of the following options is best/worst? What step would you take first/last? Which item will be most/least effective? What will be the most likely outcome/consequence of…? How would you rank these? What score would you give this? Etc. Students must provide a rationale for their choices.

c. All groups get the same problem
d. All groups report out simultaneously
   a. Color voting cards
   b. Single number
   c. Single letter
   d. Single word or phrase
   e. Polling apps/clickers

Step 5: Include reflection and peer feedback (at least Midterm and Final)
Step 6: Determine sequencing of the module

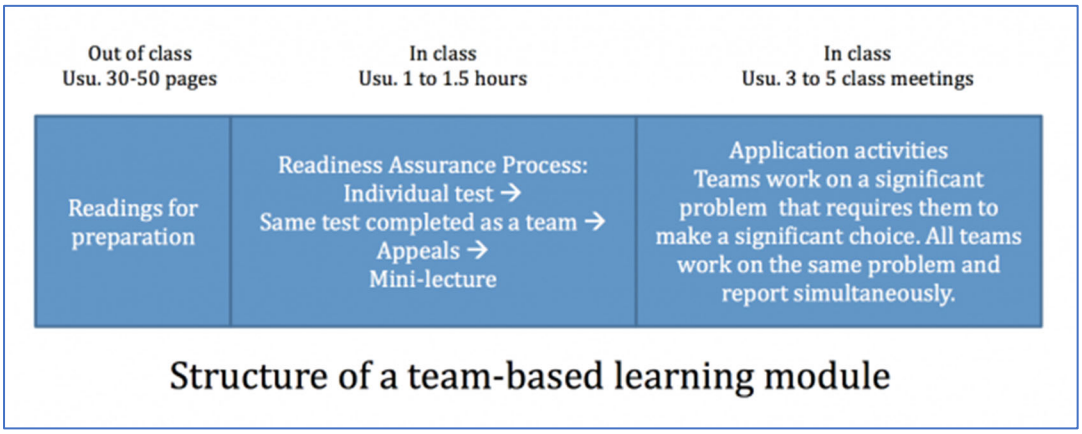


Image source: Brame (2013).

Resources


- Brame, C. J. (2013). Team-based learning. Vanderbilt University Center for Teaching. Retrieved September 6, 2021 from https://cft.vanderbilt.edu/guides-sub-pages/team-based-learning/.
- LearnTBL: online resource by Jim Sibley, Director of the Centre for Instructional Support at the Faculty of Applied Science at University of British Columbia (UBC) in Vancouver, Canada. https://learntbl.ca/
- Michaelsen, L. K., Knight, A. B., & Fink, L. D. (2004). *Team-based learning: A transformative use of small groups in college teaching*. Sterling, VA: Stylus Pub.
- Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors* (Fourth edition.). San Francisco, California: Jossey-Bass.
- Team-Based Learning Collaborative (non-profit, volunteer supported organization: https://www.teambasedlearning.org/
- University of Texas, Faculty Innovation Center, Overview of TBL, https://vimeo.com/51713733

Checklist for TBL Module Design
from https://learntbl.ca/

- ✓ Backward design has been used
- ✓ Module has coherent organizational structure

Module Learning Outcomes

- ✓ Clear, achievable, well written learning outcomes (LO)
- ✓ LO's focus on concrete action

Preparatory Materials

- ✓ The selected preparatory material is appropriate – topic, length, complexity
- ✓ Students are coached on effective study strategies
- ✓ Reading clearly prepares students for RAT

Readiness Assurance (about readiness, not testing)

- ✓ RAT test length and difficulty is appropriate
- ✓ RAT questions about sampling not total coverage
- ✓ RAT questions focus on important, big picture concepts
- ✓ RAT questions are well constructed and written
- ✓ RAT tests just what learners need to know to begin problem solving
- ✓ RAT clearly prepares students for application activities

Application Activities (Adheres to the 4 S's)

- ✓ Authentic relevant problems or foundational knowledge for next level of study
- ✓ Challenging and requiring critical thinking and analysis
- ✓ Challenging and ill-structured so fine discrimination is required to select "best" answer
- ✓ Can't be answered by reference to the internet/textbooks alone (can't Google it)
- ✓ Can't be solved by an individual - requires whole team effort

1. Significant Question - All teams work on a significant question
2. Same Question - All teams work on the same problem
3. Specific Choice - All teams are required to make a specific choice
4. Simultaneous Report - All teams are required to simultaneous report

Facilitation/Teaching Plan

- ✓ Plan outlines main instructional components of lessons
- ✓ Plan outlines reporting strategy (voting cards, whiteboards, gallery walk, etc.)
- ✓ Plan outlines key instructor actions
- ✓ Plan provides facilitation suggestion to overcome any anticipated difficulties

Select Case Study Resources

National Science Teaching Association https://www.nsta.org/case-studies
Application of active learning techniques to the teaching of science, with a particular emphasis on case studies and problem-based learning.

MERLOT https://www.merlot.org
Curated online learning and support materials and content creation tools (includes case studies).

Digital Curation Centre http://www.dcc.ac.uk/resources/case-studies
Case studies focusing on society, economics, arts and humanities, and other areas of knowledge. Digital curation involves maintaining, preserving, and adding value to digital research data.

University of California http://escholarship.org/
Free case studies published by faculty at all 10 of UC's campuses. Multiple disciplines available, such as architecture, arts and humanities, business, law, medicine and health sciences, and more.

Smithsonian Libraries: Smithsonian Research Online https://repository.si.edu/
Free case studies published by the Smithsonian Institute. Multiple areas of interest, like cultural anthropology, geography, and world cultures. Teaching resources available.

White Rose Research Online http://eprints.whiterose.ac.uk/
Shared, open access repository from the Universities of Leeds, Sheffield, and York. Multiple topics from across the universities. Free access.

Oxford University Research Archive https://ora.ox.ac.uk/
Many, but not all, articles are open source. Multiple disciplines, such as history, economics, neuroscience, and more. Labels which articles are peer reviewed, open access, and linked to a publisher copy.

Harvard Law School Case Study Resources https://casestudies.law.harvard.edu/case-study-resources/
Includes affiliated case resources and tips on case teaching

Harvard https://hbsp.harvard.edu/cases/
Harvard Business case study repository. Includes disciplines like accounting, international business, sales, and more. Free premium educator access.

Stanford Graduate School of Business https://www.gsb.stanford.edu/faculty-research/case-studies/
Case studies written and published by faculty at Stanford GSB.

Sport Management Case Studies Repository http://sportmanagementcasestudies.com/
Information on 1279 resources for using the case study method to teach sport management concepts.