Team-Based Learning—Spicing It Up!

As an instructor, I thrive in a flipped classroom environment. This model of teaching flips common institutional approaches and often centers student-led learning. I have experimented with flipped assessments, providing class time for students to thoroughly review their tests with their peers and gain a deeper understanding of the material. I am also a strong proponent of pre-class assignments, which prepare students for new modules before class, allowing us to explore subjects more deeply in class. While flipped classrooms may appear to create a loss of control or chaos, creating a space focused on peer instruction leads to a fantastic learning environment. One method I have recently worked with to center my students in my pedagogy is team-based learning (TBL).

What is TBL?

TBL is a structured process designed to create a highly effective learning environment. It emphasizes peer instruction and evaluation as tools for learning course theories. What follows is a three-step lesson plan I use to spice up my pedagogy with team-based learning.

Step 1: Multiple-Choice Tests

When introducing new course content, it is important that students come to class prepared and ready to participate. To ensure that assigned readings have been completed, I give my students multiple-choice tests. They are first tested individually, and then again as a team using the same test. The team test allows students to learn collaboratively from their mistakes, gain a deeper understanding of the material, and reflect upon their personal efforts.

If the pre-class material is complex, I recommend administering the multiple-choice tests at the end of the class, after a short lecture, presentation, or demonstration of the topic. If you test the students at the beginning of class, the results are often discouraging. Having tests after students have had time to absorb the challenging material creates an environment of support and learning and a greater chance for success.

Step 2: The Evaluation Process—Class Activities

Next, I give a short lecture, presentation, or demonstration of the topic or theory we are learning. Student teams then solve a relevant real-world problem in the form of an in-class activity by integrating and applying the new course content. When it comes to evaluating the in-class team activities, I find that it is beneficial to all parties if I use the term "remedy" versus the term "feedback." When we hear the term "feedback" or "constructive feedback," I believe many of us, including our students, become guarded and defensive. Even if we say positive things before and afterwards, the learning still feels negative and demoralizing.

For example, a very common challenge with public speaking is nervous speech tics—the "ummms" and "ahhhs." If an individual is struggling in this area, instead of embarrassing her in the evaluation discussion by pointing out what she did wrong, I will demonstrate the power of the pause. I will explain how a pause can help your audience process what you have said and give you time to take a breath and figure out what to say next. We practice doing this in the evaluation discussion. Most students will have remedied this situation by the fourth or fifth in-class activity presentation.

Ultimately, my in-class activity goals are as follows: help students structure their analysis properly utilizing relevant course theory, create opportunities for social bonding so students feel confident communicating, and guide individuals and teams to excel.

Step 3: Peer Evaluation

Students evaluate their team members at specific times throughout the class, usually around the middle and end of the term. These evaluations help ensure the team is functioning properly. Grades may be reevaluated based on peer evaluations if individual efforts are not balanced.

What I Learned

One of my biggest take-aways from delving into team-based learning is that it is easier to adopt than the flipped classroom approach. This is because TBL has a specific structure that reduces the impact of change and softens the "loss of control and potential chaos" that occurs with the flipped classroom approach.

One way to establish this structure while also inviting an opportunity for students to be directly involved is to have the student teams create a team charter. The key element of the team charter is the three-strike policy section–the ramifications of a team member's actions that do not benefit their team. A typical three-strike policy is (1) verbal warning, (2) email warning, and (3) dismissal from the team. If a team has a member "issue," have him

refer to his signed team charter. Usually the "issue" will be resolved once that is done.

Grading

A key element of my TBL process is that many of the steps are assessed. Assigning grades creates a serious environment where students commit to pre-class preparation and maintain their attendance. Attendance is typically 95%+. My grade allocation is:

- Team charter: 1.5%
- Individual multiple-choice test= 4.5% (3 of them during the term)
- Team multiple-choice tests= 1.5% (3 of them during the term)
- In-class activities= 7.5% (5 of them during the term)
- Total= 15.0% of total grade

I use a threshold evaluation rubric for the multiple-choice tests.

Individual test:

9 or 10 out of 10	100%
7 or 8 out of 10	50%
6 or less out of 10	0%

Team test:

9 or 10 out of 10	100%
8 out of 10	50%
7 or less	0%

Students quickly recognize that they must come to class prepared. As such, classroom discussion quickly moves into intermediate and advanced material. The team tests create a fantastic environment for team discussions. Using scratch cards for the team tests provides powerful, instant feedback.

Perspectives on the TBL Process

Student Perspectives

I conducted a brief survey of my students to gauge their reactions to the TBL process. I used the following Likert scale rating system:

N/A – not applicable	0
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

The first survey question I asked was, "My team members have motivated me to work harder in this course." The average response was 4.19/5.00. The second survey question I asked was, "Applying course theory to real-life situations, in particular the five in-class TBL activities, was an effective way to learn." The average response was 4.46/5.00. The third survey question I asked was, "I am confident I can apply the knowledge I have learned in this course in future tasks." The average response was 4.61/5.00.

I also conducted a brief, open-ended survey of my students to gauge their reactions to specific aspects of the TBL process. The first survey question I asked was, "Two times during the term, we had the individual and team multiple-choice test at the beginning of learning a new topic. One time, we had the individual and team multiple choice test at the end of learning a new topic. I based the timing of these tests on the complexity of the material. Do you agree the timing of these tests (beginning versus end of a topic) should be based on the complexity of the material? Why or why not?" Almost all of the student responses resembled these two:

- "I completely agree. The more complex topics take more time for someone like me to understand, so I appreciate the extra thought of giving it at the end versus the beginning."
- "I think the timing works. If the material is more complex, being tested at the end of class gives the students a chance to better understand the material rather than just reading a textbook and not understanding."

The second question I asked was, "The final step of the TBL process is the peer evaluation. As I discussed, it is possible that your peers could value you at a lower or higher level than others within your team and your team-based grade would be adjusted. How did you feel about this?" Almost all of the student responses resembled these two:

- "This is a very fair system. Peer evaluation always motivates group members to work harder since in the back of their mind they know that their performance is directly related to their overall class mark."
- "Peer evaluation is necessary to hold everyone accountable and make sure they are pulling their weight throughout the in-class activities."

Conclusion

Many of us remember loathing team-based activities or work during college. I myself had a negative first experience with team-based work. But my recent experience implementing TBL in my classes has been a positive learning experience for myself and my students. Implementing the TBL process may seem intimidating at first, given the time required to prepare the multiple choice tests, the in-class activities, and creating a peer review process for the students to use. However, the benefits for students who come to class prepared and apply course theory to real-life situations far outweighs the additional upfront efforts.

Going forward, I plan to examine how instructors may be able to make studentss' first exposure to team work a more positive experience using TBL principals. I plan on comparing two groups of students:

One group of students will be asked to work in teams with no education or training on how to conduct themselves with their peers in a team environment.

A second group will be given an opportunity to discover their personality trait (using DISC assessment – Dominance, Steadiness, Influence, and Conscientiousness) and discover strategies for dealing with different personality traits. This group will also be given "team techniques" training.

If you would like to collaborate on this process, please contact me. For those now planning on implementing team-based learning for the first time, enjoy the journey!

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