

Using Team-Based Learning to Engage Students

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Need for Innovation

Student engagement and learning is continuing to be a topic of discussion for higher education. As learners become more diverse, instructors need to find new ways of engaging them in the classroom. This is especially difficult when class sizes limit the amount of personal interaction the instructor can have with each student. Several teaching methods can be used to increase student participation and learning, including small group activities. In support of these efforts, recent research suggests that the ability to work effectively in a team is a critical skill that employers are seeking in new employees (Robinson, Garton, & Vaughn, 2007). Team-based learning (TBL) is a special type of small group facilitation, which differs from cooperative learning or group activities. The strategy integrates a case study and applied learning approach throughout the entire semester, with student teams remaining intact for all of the small group discussions and assignments. The instructional strategy originated in the 1970's to keep students engaged as class sizes increased. TBL has a history of successful integration in business courses and throughout nursing and medical school programs (Clark, Nguyen, Bray, & Levine, 2008; Nieder, Parmelee, Stolfi, & Hudes, 2004). However, many fields of study, including agricultural education, have been slow to adopt this approach.

How it Works

To implement TBL into a course, you must restructure the format of the class. The instructor should break the course content down into larger units, about six units per semester, each unit spanning about two weeks. It is important to carefully put the teams together, as they stay in place throughout the entire semester. Generally, each team should have five to seven members (Michaelsen, Knight, & Fink, 2004).

Michaelsen (2008) suggests seven key teaching activities to successfully incorporate TBL into your classroom. The activities are divided into three areas; beginning of the course, during the course, and at end of the course. At the beginning of the course, the instructor needs to 1) form the teams, 2) get students comfortable with one another, and 3) set up the grading system. Within the grading system, there should be components for grading individually, as a team, and peer evaluation. Students are actively involved in setting the grading weights for the course.

During the course, the instructor needs to 1) provide application exercises for the teams, which replicate real world situations and 2) ensure that feedback is being given for individuals and teams. By providing frequent and immediate feedback, students will know what areas they need to work on. Students complete the assigned reading prior to class. When students arrive, they take an individual readiness assurance test. The goal of the test is to assess students understanding of the reading material. When all members of a team complete the individual test, they immediately engage in the same test as a team. Students discuss answers within their small teams, without the use of their notes or readings. Both tests are graded immediately. As part of the team test, students are provided with an opportunity to receive partial credit for answers if they did not choose the correct one on the

first try. Students can provide a written appeal for answers they feel should be correct, based on the text and readings. After completion of the readiness assurance tests, the instructor provides instruction in the areas where students do not feel comfortable.

Finally, at the end of the course, the instructor should 1) provide an application activity that integrates as much of the course content as possible and 2) have students complete peer evaluations of their team members. By having a final application activity, students are able to how all of the course content connects.

Results to date

To date, the team-based learning strategy has been implemented in two courses. One course is an upper level undergraduate course in self-leadership and the second course is a graduate level leadership theory class. Each course has fully implemented the three phases of TBL. Course material has been broken down into larger units and at the beginning of each unit, students complete the individual readiness assurance test and the group readiness assurance test. Class time is devoted to team planning time for projects and assignments.

A mid-semester review found positive results from students. Some comments include students recognizing that they can play off one another's strengths and that everyone on a team gets to voice their ideas and then come to a consensus as a team to solve a problem. Students have also commented about the cooperation that is encouraged, instead of competition within a team.

Future Plans/Advice to Others

Future plans include continuing developing team-based learning material for the undergraduate and graduate courses in leadership. The instructors have noticed a positive reaction to the use of TBL in the course, but plan to fully evaluate the effectiveness at the conclusion of the semester.

Individuals interested in utilizing TBL should first make sure that the learning goals of the class align with the intended use of team-based learning. It is very important to make sure that you don't use TBL just to incorporate group work into your class. Students should understand why team-based learning is being used in the class and they should be made fully aware of the approach during the first meeting.

Costs/Resources Needed

A limiting factor in utilizing the team-based learning approach is the amount of time it takes to plan for the unit readiness assurance tests and application exercises. There are costs associated, such as the use of the team readiness assurance answer sheets. For 500 forms, the cost is around \$100. An instructor could implement the approach without using the pre-keyed answer sheets; however this saves time when grading the tests.

References

- Clark, M.C., Nguyen, H.T., Bray, C., & Levine, R.E. (2008). Team-based learning in an undergraduate nursing course. *Journal of Nursing Education, 47*(3), 111-117.
- Michaelsen, L.K. (2008, January). *Team-based learning: A transformative use of small groups*. Presentation for Virginia Tech's Center for Excellence in Undergraduate Teaching winter workshop, Blacksburg, VA.
- 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 Publishing.
- Nieder, G.L., Parmelee, D.X., Stolfi, A., & Hudes, P.D. (2005). Team-based learning in a medical gross anatomy and embryology course. *Clinical Anatomy, 18*, 56-63.
- Robinson, J. S., Garton, B. L., & Vaughn, P. R. (2007). Becoming employable: A look at graduates' and supervisors' perceptions of the skills needed for employability. *NACTA Journal, 51*(2), 19-26.