Team Based Learning in Management Accounting: A Comprehensive Guide to Flipping the Classroom

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This article identifies the essential elements and the advantages and disadvantages of Team Based Learning and describes how they have been practically implemented in a managerial accounting course. This article further makes a connection between Team Based Learning and a popular pedagogical concept of Flipping the Classroom.

INTRODUCTION

Flipping the classroom has become a highly used catch phrase in higher education in recent years. A flipped learning as defined by the Flipped Learning Network is "a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter" (Flipped Learning Network, 2014). This technique focuses on giving students hands on experience with the materials they are learning rather than simply having them memorize material. There are many ways to implement a flipped classroom, which may make it overwhelming for faculty to attempt this format. I have implemented a modified flipped classroom by using the Team Based Learning principles set forth by Larry K. Michaelson, Michael Sweet, and Dean X. Parmelee in their edited book Team Based Learning: Small-Group Learning's Next Big Step. Michaelson, Sweet, and Parmelee give very specific guidelines on how to implement Team Based Learning in the classroom. Team based learning uses group work to both expose students to and improve their ability to apply course content (Michaelsen & Sweet, 2008). The team based learning method of using groups not only improves the students' ability to apply course concepts, it makes the student more accountable for their work as well as helps develop their interpersonal and teamwork skills (Michaelsen & Sweet, 2008).Team Based Learning was initially designed and tested in large management classrooms, but has since become widely used in health professions education as well as in professional schools (Michaelsen, Knight, & Fink, 2002). If implemented correctly, Team Based Learning can be effective in classrooms of all sizes and subject matters (Michaelsen et. al, 2002). I have implemented Team Based Learning in my Managerial Cost Accounting courses here at Luther College with class sizes from 16 – 25 students with great success. Not only have I seen students develop interpersonal and teamwork skills, increase their class preparation, and improve their attendance, by following the steps outlined by Michaelson, I have been able to successfully flip my classroom without feeling intimidated or overwhelmed.

ESSENTIAL ELEMENTS

There are four essential elements to Team Based Learning: Groups, Accountability, Feedback, and Assignment Design (Michaelsen & Sweet, 2008). You are not implementing Team Based Learning if you do not consider all four of these elements. One of the most noticeable advantages of Team Based Learning is helping your students to develop interpersonal, communication, and teamwork skills. The importance of these soft skills was highlighted in a 2012 study published in Business Communication Quarterly. Top executives were asked the importance of 10 soft skills. 91% of respondents indicated communication (including listening) as extremely important, 61% indicated interpersonal skills as extremely important, and 70% indicated teamwork skills as either very important or extremely important (Robels, 2012). In order for students to have time to develop these skills, they have to be in the same group for the entire term of the class. It may take some students an entire semester to become comfortable with their group. Each student needs time to figure out their role in the group and how best to contribute. In addition, groups should be as heterogeneous as possible. As Michaelson and Sweet suggest, "The goal here is to equip groups to succeed by populating them with members who will bring different perspectives to the task" (Michaelsen & Sweet, 2008). Forming groups that include students with previous relationships (such as best friends, teammates, international students of the same background, etc.) may cause cliques within the group or cause students to not feel equally as heard in their group and therefore less willing to participate.

To help facilitate the forming of groups I use an information sheet that I have the students fill out on the first day of class. I am most interested in knowing things like, year in school, hometown, extracurricular activities, excel experience, and dream job. All of my students are accounting majors, but if you were using Team Based Learning in another setting, you most likely would want to know the student's intended major. After collecting this information, I form groups of four to five students each that will remain the same throughout the semester. I try to form these groups with students that are as different as possible. Initially the students are not very happy about the groups, but as the semester goes on the students become more comfortable in their groups and start to form relationships with their group members. Creating heterogeneous groups is really the key to developing your students interpersonal and teamwork skills. I personally have witnessed several quieter and introverted students really take leadership roles and shine in their groups, something they may not have been able to do in the larger classroom. I teach at a college that has the luxury of smaller classrooms (20 – 30 students max) but this technique is applicable to large lecture halls as well where it may provide an even greater opportunity for students to be heard and become leaders. The second essential element of Team Based Learning is accountability. The entire Team Based Learning concept is built on the idea that working in teams makes students more accountable (Sweet & Pelton-Sweet, 2008). Each chapter or unit begins with an Individual Readiness Assessment Test (I-RAT) in class. My I-RATs consist of five multiple-choice questions on the broad concepts of the assigned reading for the chapter. By administering an I-RAT at the beginning of each chapter, the students are held accountable for their reading assignments and are more likely to be prepared for class. Right after the I-RAT is completed, the same test will be completed by the groups. This is called a Team Readiness Assessment Test (T-RAT). In my classroom, the I-RAT is administered on paper while the T-RAT is online using Luther College's classroom management system. With the addition of the T-RAT, the students are not only accountable to the instructor, but now they are accountable to their group members as the T-RAT is a group effort. The T-RAT also provides a platform for students to discuss ideas and teach each other. In addition to the I-RAT and T-RAT, students are held accountable by their groups through peer assessments.

Peer assessments and evaluations are essential to developing your students' teamwork skills. Benefits from peer assessments and evaluations include motivation from peers, acquiring a more thoughtful understanding of the process involved, increased confidence in one's performance, development of critical analysis of work of others, and increased quality in the learning output (Cestone, Levine, & Lane, 2008). Peer assessments can be done for each group assignment or at intervals throughout the semester. I have my students complete a peer assessment midway through the semester and then again at the end of

the semester. There is much debate on what kind of peer assessment is most effective (ranking members in your group, dividing points among group members, etc.) and faculty members will need to choose a format that they are comfortable with, but using an assessment that requires students to give constructive criticism is crucial (Cestone et al, 2008). In order for students to change their behavior, they have to know what the problem behaviors are. After the students have completed their assessments of each other, I compile the scores and comments and add my own comments on the individual as well as on how the group is working together based on my classroom observations. The comments and scores from their peers remain anonymous when they are compiled and returned to each student. In order for some student to really engage in this process the instructor must attach a significant grade value to these peer assessments. In my course, 10% of the students' grade is made up of their peers and my assessment of their group work, which adds another layer of accountability to the Team Based Learning process.

Feedback is the third essential element of Team Based Learning. Feedback should be frequent and immediate when possible (Michaelsen & Sweet, 2008). As instructors, we are not only trying to teach concepts to our students, but we are also trying to give them tools to be successful professionals. Giving frequent feedback really helps students to understand where they are in the course and where they need to be. It can also guide students to make changes in their learning, studying, and participation before it is too late to make a difference. The National Center for Fair and Open Testing reported a study that found the type of feedback, as well as the information provided to students about their assignments, can positively impact student learning (Black & William, 2007). Students in my courses receive feedback (in the form of a grade) after every assignment and test. Here is a place where you can really leverage your technology to make your load as an instructor lighter. I use the online homework module that comes with the textbook for all homework assignments. Not only is the homework graded automatically, but also it provides feedback in the form of grades and explanations to the students immediately. Students are able to see exactly where they went wrong in solving the problems while it is still fresh in their minds. As described earlier, I use my online classroom management system to administer the T-RATs. By using this online system, students are again able to see feedback and their grade immediately while the concepts are still fresh. Since the T-RATs and the I-RATs are the same questions, they also then have feedback on how they did on the I-RAT. In class group activities are all done in excel and submitted for grading through the classroom management system. After all of the groups have submitted their assignment we engage in class discussion and walk through the problem and answer until everyone understands. This is another way to provide immediate feedback to students. Frequent and immediate feedback is the key to content retention and to promote long-term learning.

The fourth essential element of Team Based Learning is assignment design (Michaelsen & Sweet, 2008). One of the major criticisms of group assignments, by both students and instructors alike, is how they promote the "divide and conquer" mentality (Michaelsen et. al, 2002). In traditional group assignments (such as writing a large paper or giving a group presentation) students become stressed about meeting deadlines and therefore to make the project more manageable they divide up the work and each student goes to their respective spaces and completes their portion and then they put it all together and turn it in (Michaelsen et. al, 2002). While this method may accomplish some learning goals, it does not accomplish the goal of developing student's ability to work in teams effectively. To promote this goal, assignments should be short enough to be completed in class and the emphasis should be on making a decision (Michaelson & Sweet, 2008). If the assignments can be completed in class, then the students are not stressed about meeting a deadline and are less likely to "divide and conquer". Requiring students to make a decision promotes team interaction and discussion. Students can exchange ideas and argue their points to each other. A key skill for accountants is to be able to explain accounting concepts to non-accountants. Giving students a non-threatening environment to practice explaining themselves and discuss ideas is very beneficial to them. Some of my brightest students have not had the skills to express themselves and have been unable to convince their team of the correct answer because of it. Designing assignments so students have to make a decision also helps them apply the concepts they learn in the textbook to real-life scenarios. In addition to having to know how to calculate certain ratios, costs,

breakeven points, etc., students need to understand how those calculations would affect certain business decisions.

Each of the four elements mentioned above promote specific behaviors and skills in their own right, but Team Based Learning is most effective when they are used together. Implementing a flipped classroom and Team Based Learning may seem overwhelming, but Michaelson and Sweet provide a sequence to follow which will make the implementation easier (Michaelson & Sweet, 2008). I use the same sequence adapted for Managerial Cost Accounting for each chapter as follows: (1) Preparation, (2) Readiness Assurance Tests with feedback, and (3) In-class application activities with feedback. Before each chapter or unit, I assign a reading from the textbook and an online homework assignment. The students use the reading and the homework assignment to help prepare for the readiness assurance tests. The first class day of each chapter or unit starts with administering the I-RAT. When the students have completed the I-RAT, they get into their groups and complete the online T-RAT. While students are completing the T-RAT I look through the I-RATs I have collected to see if there is a concept that the students need more emphasis on. Students receive immediate feedback once they have completed their T-RAT. After the T-RAT is complete, I usually give a very brief lecture over the more important points from the chapter. Once the lecture is finished, the students get into their groups and complete application activities. Application activities can be anything from textbook problems to cases to simulations. Once all the groups have submitted their application activity online for grading, we have a class discussion about the activity whereby students receive their feedback. Additional class periods repeat the sequence of online homework assignment before class, short lecture, application activity, discussion as needed. I typically spend approximately three 60-minute classes on each chapter. Tests and other small writing assignments are sprinkled in throughout the semester. Following this format has made it easier for me to implement a flipped classroom and also helps students to know what to expect each class day.

IMPLEMENTATION

Students can be very critical of group work assignments. That is why it is crucial to get student buy in at the beginning of the semester. Make sure to explain what Team Based Learning is and why you think it is beneficial to the students. I have found that students are typically more receptive to new methods of delivery if they understand why it is being done. It also sets them up to think about the expected outcomes before the class starts. There are many advantages of Team Based Learning; class attendance has improved, students are more prepared when they come to class, and students are developing teamwork skills. Team Based Learning also requires much less lecture time for the instructor. In exchange for less lecture time in class, instructors do have to spend more time preparing for class. I-RATs will have to be written and T-RATs entered into an online system. In addition, application activities will need to be set up for the groups. One significant disadvantage of using Team Based Learning is that it has the tendency to minimize grade distribution (Michaelsen et. al, 2002). Since many of the assignments are completed in the team setting and all members of the team get the same grade, there tends to be a smaller grade differential within the class. I explain this to my classes on the first day and let them know that the tests will be used to help differentiate their grades.

Following the guidelines of team based learning has really made flipping my Managerial Cost Accounting courses much easier. Based on conversations with my students as well as their course evaluations it is evident that they too have come to appreciate team based learning in a flipped classroom. Every semester students express their fear of group work but by the end of the semester, most students have not only embraced the team based learning environment, but some have thrived in it. By applying the concepts as described above, you too can flip your classroom with ease and create a learning environment where students are learning and communicating and truly using teamwork to solve problems.

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