The Flipped Classroom Approach

Tony Minotti[1*]

[1] Osaka Shoin Women's University, Osaka,Japan

*Corresponding Author: tony.minotti@osaka-shoin.ac.jp

_____

Abstract: *This paper looks at the incorporation of the flipped classroom approach in video conferencing lessons using such applications as ZOOM. The need for the research is grounded in the fact that using video conferencing to teach lessons has one main drawback, that students may encounter technical problems, which causes valuable class time to be wasted trying to solve the issue and reconnect to the conference call. By using the flipped classroom approach, the ramifications of such events can be weakened. The methodology that was used to understand the use of the flipped classroom approach was to compare lessons that used the approach to ones that did not. The findings of the research show that students who used the flipped approach were better prepared for lessons and were less stressed when a technical problem occurred during a video-conferencing lesson. The takeaway from the research is that there is evidence that the flipped classroom approach is beneficial to students' learning; however, the amount of extra work needed to prepare may discourage some teachers.*

Keywords: Flipped classroom, pre-tasks, implementation
_____

1. Introduction

As ever-younger students are becoming technologically savvy, and with educational institutions introducing digital platforms in the classroom to students at a younger age, the concept of mobile learning has become mainstream. Research by authors such as Wells, de Lange, and Fieger (2008) has argued that technological advancements have significantly changed the ways teachers teach and students learn. With these advancements, the concept of the flipped classroom has become popular. In the flipped classroom, as defined by Bergmann and Sams (2012), what was traditionally done in the classroom is now being done at home prior to the lesson. This way, students prepare for the lesson at home as homework and use the actual class time as practice. The idea of flipping a classroom is not new. In the past, teachers would give students pre-tasks or assignments to do at home prior to the start of the class so that more class time could be allocated to discussion, group work, and addressing students' individual needs. Because of this, authors such as Springen (2013) believe that students are taking responsibility for their learning and that the new technologies that are available help students with their needs, whatever or wherever they are. This paper will look at how the flipped classroom works, show examples of how to implement the concept in a lesson, and identify the advantages of using this concept.

2. How It Works

In the past, teachers would give students pre-tasks to take home to prepare for the upcoming lesson. This could include reading ahead in a story, or using specific formulas on a math assignment so that more class time could be allocated to discussion, group work, and/or solving

related problems based on the work given to the students prior to the class. However, with new technology, new forms of communication have been added to the flipped classroom. Teachers are able to create videos or tailor a lesson to the mobile world that we live in. These new techniques help engage students and pique their interest in the learning process. In the spring of 2020, lessons at Osaka Shoin Women's University were put online due the COVID-19 pandemic. At the beginning of the semester, teachers were given the option of using the university's learning management system (LMS) or a video-conferencing application to teach their lessons. The LMS approach consisted of the teachers pre-recording video lectures and uploading them to the university servers. The video-conferencing approach consisted of the teacher teaching in live time via the internet. Students quickly complained about both options.

The problem with the LMS approach was that there was a delay in feedback from the teacher. In a traditional class, students can get immediate help from the teacher when needed. When using a flipped classroom, this is not possible, but there are some solutions to help ease students' concerns. A teacher could create online discussion boards or blog posts, or ask the students to write down any questions or concerns they have about the video lecture that they watched at home. The problem with the video-conferencing approach was that many students had technical issues during the lesson, resulting in the loss of valuable class time. The solution was the implementation of the flipped classroom approach, where students were given pre-recorded assignments before class, and in the first several minutes of the video-conferencing lesson, students were able to ask questions or get clarification about their pre-tasks. Kellogg (2009) believed that including examples in the lectures and creating modules that students could enter data into that would be automatically corrected would help students test their own understanding of the material and lower concerns about student learning. This would give the teachers more time to help their students as opposed to lecturing.

3. Examples of How to Implement It

One example of how to implement a flipped classroom would start by giving students an option between text or video-based instructions. This not only shows the flexibility of the use of this technique but it also shows that this approach can meet the needs of different types of students. The materials can be created in such ways that the students are engaged and interested in learning. At Osaka Shoin Women's University, many courses were project-focused. Students were assigned groups, and each member of the group was given specific tasks to complete prior to the lesson. The video-conferencing lesson activities depended on having each person in the group complete their assigned role prior to the beginning of the class. Pre-tasks consisted of pre-reading, problem-solving, and research. When the groups entered the online classroom, they would then share their results with the whole group. Once online, the teacher was able to put all the members of one group into their own "classroom." This gave the students more time to engage with their learning concepts and talk to their fellow students. It also gave the teacher more time to talk to the groups one-on-one as opposed to lecturing the whole class. This was a by-product of allowing the students the responsibility of preparing and engaging with their peers in the virtual classroom. By using the flipped classroom approach, teachers could create an environment that allowed the students to take responsibility for their work. Also, teachers were able to answer questions that individuals or groups had by "walking around" the virtual classroom. It should be noted that at the end of each project, students were given questionnaires to evaluate the process of their learning. Questions were not specific to the flipped classroom approach, but the feedback was positive.

4. Advantages and Disadvantages of Using the Flipped Classroom Approach

All students have their own personal learning styles: Some students have a kinesthetic style; such students are slow to decide and like to use all their senses to engage in learning. Other students may have an aural style, preferring hearing explanations to reading text. Strayer (2007) concluded that using a flipped classroom helped students to better utilize their own learning style in the learning process. He argued that the students became more aware of their own learning process compared to students in a traditional classroom.

The flipped classroom also changes the dynamic of responsibility. In a traditional classroom, the teacher usually leads and takes responsibility for what occurs in the class. With this new dynamic, the students must take more responsibility, such as by viewing a lecture and preparing for a lesson. Strayer (2007) observed that when flipped lessons were used based on the students' learning style, the students appeared to be more successful than the students in a traditional classroom.

At Osaka Shoin Women's University, the goal of the flipped classroom was to give students more responsibility over their learning. Students were asked to do pre-tasks not only to prepare for the lesson but to ensure that they were a functioning part of their group. If students did not do their pre-assigned task prior to the lesson, the other members of the group would not be able to complete the project on time and would either get a lower grade or fail the project. A disadvantage that was noticed while using the flipped classroom with this approach was that there were students who did the work of others' as well as their own so that their grade would not suffer. The acceptability of this practice is common in Japan based on this culture's collectivistic orientation.

Another advantage of using the flipped classroom is that students have access to materials at all times. Roehl, Reddy, and Shannon (2013) argued that classes do not have to be disrupted even when teachers or students are absent because the class materials are accessible at all times. For this reason, the courses progress as scheduled without any delays. This was true for the students at Osaka Shoin Women's University. All lessons were saved on either the university server or a cloud service, so students were able to access the materials whenever and as often as they liked. The teachers had the option of either uploading a video to the school's LMS or emailing a link to a YouTube video that they had created. Teachers were also able to send information via other social media sites as long as their students were able to access the information whenever they liked. Another disadvantage of the use of the flipped classroom was in the workload of the teacher. The teachers were expected to create, edit, and upload all the materials in their free time. The common complaint from the teachers was that their workload was almost doubled each week without extra pay or extra time off.

5. Conclusion

The flipped classroom approach has increased in popularity with the arrival of the COVID-19 pandemic and has proved to be an effective way to teach students online. The fundamental principles of the approach (to give students pre-tasks prior to the lesson so that the teacher has more time for individual help) have not changed over the years. However, the method of delivery has changed. With the advancement of technologies, educators have multiple ways of creating information and delivering it to their students. A flipped approach can be implemented by having students get into groups and assigning each person in the group a predetermined task prior to the class. Once in the classroom, the group members can collaborate and complete the

assignment as a group. By using the flipped classroom approach, the teacher spends last time lecturing and more time helping the groups, increasing the time teachers and students interact. A great advantage of the flipped approach is that it gives students more responsibility in the learning process. The students must be accountable for their work or the other members of their group will fail.

References

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. Eugene, OR: International Society for Technology in Education.

Kellogg, S. (2009). Developing online materials to facilitate an inverted classroom approach. In *Proceedings – 39th Frontiers in Education Conference*. Piscataway, NJ: IEEE Press. https://doi.org/10.1109/FIE.2009.5350621

Roehl, A., Reddy, S. L., & Shannon, G. J. (2013). The flipped classroom: An opportunity to engage millennial students through active learning (Abstract). *Journal of Family and Consumer Sciences*, *105*(2), 44–49.

Springen, K. (2013). Flipping the classroom: A revolutionary approach to learning presents some pros and cons. Retrieved from https://www.slj.com/?detailStory=flipping-the-classroom-a-revolutionary-approach-to-learning-presents-some-pros-and-cons

Strayer, J. E. (2007). *The effects of the classroom flip on the learning environment: A comparison of learning activity in a traditional classroom and a flip classroom that used an intelligent tutoring system* (Doctoral dissertation, Ohio State University, Columbus, OH). Retrieved from http://search.proquest.com/docview/304834174

Wells, P., de Lange, P. A., & Fieger, P. (2008). *Integrating a virtual learning environment into a second-year accounting course: determinants of overall student perception*. Accounting & Finance, 48(3), 503-518.