Teaching Culturally and Linguistically Diverse International Students in Open and/or Online Learning Environments: A Research Symposium

Conditions in Which a Flipped Classroom can Successfully be Implemented: A Traditional Literature Review

Cassie Young
Werklund School of Education, Graduate Studies
University of Calgary Calgary, Alberta, Canada
Email: cassandra.westerman@ucalgary.ca

Abstract

We live in a world where one size does not fit all. Educational settings and learning environments continue to change and educators need to adapt to these changes. A flipped classroom is one approach that can help support educators to adapt to these educational changes. The purpose of a flipped classroom is to maximize face-to-face time with teachers and students in class, so that when students are in the classroom, teachers and students spend their time applying higher-level thinking, learning, and application of knowledge. Through an extensive review of the literature, qualitative data was collected from peer-reviewed articles gathering patterns. Twenty-six articles from different countries and educational settings, such as law classrooms to nursing education, as well as language learning, international students' experiences, and inclusive education settings, supported the data collection. The patterns identified, revealed five evidence-based strategies necessary to the success of implementing a flipped classroom. The literature also reveals evidence-based interventions/strategies that do not contribute to the success of implementing a flipped classroom. Practical strategies are shared to support the implementation. More importantly, the strategies suggested will also benefit international student populations for utilizing the flipped-classroom method. Sharing these evidence-based strategies found in the literature will offer insights into the successful implementation of flipped classrooms for all levels of education, and would also benefit international students.

Keywords: flipped classrooms, conditions for a flipped classroom, inverted classrooms, blended learning, online learning.

Introduction

Aim of the Study

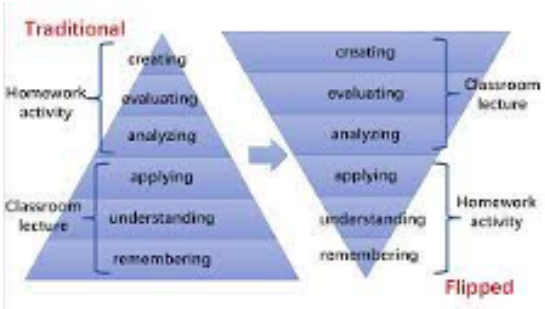
Flipped learning is one of the "growing, technologically integrated" teaching approaches that can be put under the category of blended learning (Rahman, Yunus, & Hashim, 2019). Using the flipped learning approach, studies, such as Rotellar and Cain (2016), Jensen, Kummer and Godoy (2014), Lage, Platt and Treglia (2000), and Eppard and Rochi (2017) suggest that there are positive effects on student learning. These studies share that students are more engaged and make deeper learning connections. Ultimately, flipped learning is another method that can be primarily aimed to improve one's professional practice (Gall et al., 2015). This leads to the research question: What are the conditions in which a flipped classroom can successfully be implemented? Digging deeper into the conditions, can help support other educators looking to use this method.

Conceptual Framework

Bloom's Taxonomy has been suggested as a framework for a flipped classroom. When flipped learning is viewed through this framework, skills are highlighted at the base of the triangle. Based on the pyramid, students will remember, and understand, by being introduced to the material outside the classroom (Rahman, Yunus & Hashim, 2020). By moving up the pyramid, students and teachers work together in class, by applying, analyzing, evaluating, and creating (Rahman, Yunus & Hashim, 2020). In the top levels, it is important to understand that while the teacher and student still collaborate, the goal is to move towards student autonomy, where the students start to master the concepts independently (Eppard & Rochdi, 2017).

Figure 1

Bloom's Taxonomy Traditional Versus Flipped Model



Findings

After reviewing all the literature, it can be concluded that there are five conditions that are valuable in supporting the flipped classroom. Each condition plays an important role to its success.

Figure 2

Conditions Needed to Successfully Implement a Flipped Classroom

Condition 1: Opportunity to Watch Pre-Recorded Videos and Lectures before Class

Watching pre-recorded lectures and videos before class allows students to come to class prepared to work with the material (Burke, 2015). Additionally, these pre- recorded learnings need to include interactive activities that are based on the content, and linked to prior recordings (Burke, 2015; Papadaki, Gariou-Papalexiou & Makrodimos, 2019; Schmidt & Ralph, 2016; Xium Moore, Thompson & French, 2019).

Condition 2: Fostering Spaces for Critical Thinking and Problem-Solving

Teachers need to create peer and group opportunities that help to explore and expand on their learning from the pre-recorded lectures and videos. When this happens, students arrive in the classroom ready to participate in problem solving and critical thinking settings (Barbour & Shuessler, 2019; Chuang, Weng & Chen, 2018 & Papadakis, Gariou-Papalexiou & Makrodimos, 2019).

Condition 3: Adequate Time for Training and Preparations to Facilitate a Flipped Classroom

This model is a major shift in educational settings, so teachers will require time and support to redesign their courses and content (Rahman, Yunus & Hashim, 2020). When educators are well-trained to use technology effectively, this model allows for greater success.

Condition 4: Ability and Access to Technology

The flipped classroom model requires online platforms, in order to implement it effectively. Teachers need to be able to construct these differently, use various multimedia elements, and create lectures and recordings that can be accessed in a variety of formats (Barbour & Schuessler, 2019; Lage, Platt & Treglia, 2000; Papadakis, Gariou-Papalexiou & Makrodimis, 2019: Yildrum, 2017).

Condition 5: Creating Learning Environments that Invite Active Learning Opportunities

Active learning means that the teacher now becomes the facilitator, through the learning activities, to help guide students through the experiences they have created (Barbour & Schuessler, 2019). This allows for more problem-based learning, where the teacher and student interact more (Burke, 2015).

Discussion

Each condition plays an important role towards the success of implementing a flipped classroom. More importantly, the strategies suggested will also benefit international student populations for utilizing the flipped classroom method. A recommendation would be to use a combination of these strategies, to support the five conditions drawn from the literature.

Practical Strategies Linked to the Conditions for a Flipped Classroom

When creating pre-recorded lectures, the best formats to use include: PowerPoint presentations, voice-over recordings, or already created online platforms, such as Khan Academy (Schmidt & Ralph, 2016) to teach the relevant content prior to students coming to class (Burke, 2015; Kurt, 2017; Schmidt & Ralph, 2016; Xiu, Moore, Thompson & French, 2019). International students shared that they appreciated these videos, as they allowed them to learn at their own pace, and on their own time (Singh, Nagpal, Inglis, & Jacob-John, 2019). When text was the sole format, they did not always understand the content, but the videos helped their comprehension(Wu, Hsieh, & Yang, 2017). Additionally, when these online recordings are interactive, and include activities, such as interactive quizzes or online discussions, students are more engaged (Learning and technology policy framework, 2013).

Aligning content, from the recorded lectures, within class activities will support successful implementation. By being intentional about the learning plans, educators will better establish, and communicate with students, a clear purpose for what they are learning (Intentional Learning Design, n.d). Zainuddin & Attaran (2016) conducted a case study of Malaysian students, and share that 78% of them felt that they understood the subject matter better, from the online lectures. Wu, Hsieh, & Yang's (2017) study mirrors that participants were provided with opportunities to reflect and synthesize the information, to better understand the fundamentals of the course. These authentic videos support foreign-language learning classes more, because they simplify the learning of new ideas (Wu, Hsieh, & Yang, 2017).

Fostering critical thinking skills is an important part of this model, therefore, peer or group activities need to be created. Alberta Education's cross-curricular competencies shares that students should engage in collaborative, formal and informal exchanges with others, so that they participate, engage, and share ideas (Competencies: Student Competencies, n.d.). This was confirmed in the Zainuddin & Attaran (2016) case study, where international students found that they can interact more with their classmates, both inside and outside the classroom. By participating in face-to-face collaborative interactions, international students found that they were more involved in the communication process (Zainuddin & Attaran, 2016), while using English in more authentic ways (Wu, Hsieh, & Yang, 2017).

Utilizing applicable experiments and critical-thinking challenges related to the content will support successful implementation of a flipped classroom. The use of experiments, hands-on experiences related to the topics, embedded discussions and problem-solving activities all help to create the in-class environment vital to flipped classroom's success (Awidi & Paynter, 2019; Barbour & Shuessler, 2019; Kurt, 2017; Lage, Platt & Treglia, 2000; Rahman, Yunus & Hashim, 2020;). Through in class activities and discussions, international students felt that they learned how to think critically, as well as be more collaborative learners (Singh, Nagpal, Inglis, & Jacob-John, 2019).

Students need to be guided during the in-class activities, in order to force them to think critically, to support successful implementation. During in class learning, when international

students found that the role of the teacher was to facilitate their learning, they appreciated the feedback to further improve their learning (Zainuddin & Attaran, 2016).

Technology is an important part of this model. Technological know-how and how it is used will affect the success of implementing a flipped classroom. Technology is accessed by all students of all ages and abilities. Students who attended the University of Malaya were asked, "What technology tools do you use outside the class?" Laptop, then smartphone, ranked the highest (Zainuddin & Attaran, 2016). Therefore, it is important to get extensive training into how to best establish technological routines, and use them effectively, to support this model.

Finally, applying and encouraging active-learning strategies, to see more successful implementation of this model, is suggested. When students are given the opportunity to connect, inquire, reflect, and collaborate, this allows for discussions and cooperative learning activities, which can all be considered under the umbrella of active learning (Intentional Learning Design, n.d.). International students have been categorized as passive learners, due to their low-English abilities; however, active learning opportunities provide them with learning tasks that reflect competencies, like discussion skills, teamwork, and finding information independently (Singh, Nagpal, Inglis, & Jacob-John, 2019).

Strategies that do not Support Successful Implementation of a Flipped Classroom

When teachers are using traditional teaching methods, such as lecturing in class, this will not support the model. During class time, students cannot work independently on worksheet-like tasks, as this does not allow for active-learning opportunities. Teachers and students also need to be motivated for the online and in-class portions of this model. Finally, teachers and students will require technological devices to be able to participate in a flipped classroom. If there is a lack of this software, there will not be successful implementation.

Conclusion

To summarize, this literature review investigated what conditions would be needed, if a flipped classroom were to be implemented in an educational setting. Additionally, it shared research supporting that this model can work for international students. More specifically, it allowed for English-language learners to benefit from more open communication, and helped to create more interpersonal relationships from the flipped instruction. It also drew out similarities, in all the literature reviewed, so that what is needed to implement this instructional model in classrooms could be addressed. By preparing online videos for students to engage in, prior to attending class, teachers can focus on creating critical thinking, problem solving, and active learning opportunities for the students to participate in during their time in class. Furthermore, before teachers create their opportunities, both in and out of class, they need to be given time to properly learn the model, deepen their technological-platform understanding, and be provided

with access to technology. Much of the literature used for this review took place in higher educational settings. Further research is needed to review primary, elementary, middle-school, and secondary educational settings, along with the five conditions aforementioned, to see if it is the best fit for younger populations. Furthermore, the benefits and challenges to student learning that is associated with this approach should also be explored. Ultimately, educational settings continue to evolve, and educators have the duty to keep up with practical solutions in engaging 21st-century learners. By considering these conditions, implementing a flipped classroom could be the solution that supports all learners, in all educational settings.

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