Chapter 13
Flipped Classroom: Advanced Issues and Applications

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ABSTRACT

This chapter indicates the advanced issues of flipped classroom and the important perspectives on flipped classroom in the digital age. Flipped classroom is a learning environment where students learn new content on their own by watching video lectures or other online sources and assigned problems are completed in class with teachers offering personalized guidance instead of lectures. Flipped classroom allows students to learn on their own time and at their own pace and allows students to have more time for collaborating with other students which can be a great learning experience for the students and as a way for them to build their teamwork abilities. The chapter argues that utilizing flipped classroom has the potential to improve educational performance and facilitate the modern learning environments.

INTRODUCTION

Flipping the classroom has transformed teachers’ teaching practice. Teachers no longer stand in front of their students and talk at them for 30 to 60 minutes at a time. This radical change has allowed teachers to take on a different role with their students. Flipped or inverted learning is a type of blended learning that involves the use of educational technology to switch or flip what is traditionally done in the classroom with what is done as homework (Pulley, 2014). In a flipped classroom, the conventional roles of classroom and homework are reversed: students study on their own using digital teaching materials prior to class and apply their learning in classroom activities (Umezawa et al., 2016).

Through flipped classroom, students gain many benefits from the flipped classroom where they can watch lectures at home that pass important concepts along to the students (Bagby, 2014). Flipped classroom pedagogy is applicable for the course enrollments of various sizes (Trogden, 2015) and makes use of electronic resources to provide concept and theory outside of class time, in order to free the time spent in class for concept application and experiential learning (Coyle, Newman, & Connor, 2016). In class,
the instructor allows students to peer review their work in groups while the instructor engages them to validate their work (Ireri & Omwenga, 2016).

Because all the direct instruction of flipped classroom is recorded and delivered via online videos, students with special needs can watch the videos as many times as they need to learn the educational materials (Youngkin, 2014). No more frantically trying to copy down notes with the hope that they will understand them later. Instead, students can pause their teacher, rewind their teacher, and make sure they actually learn the important concepts. Giving students the ability to pause helps them with time management. In addition, flipping allows teachers to organize technology to increase the effective interaction with students.

This chapter is based on a literature review of flipped classroom. The extensive literature of flipped classroom provides a contribution to practitioners and researchers by indicating the advanced issues and applications of flipped classroom in order to maximize the educational impact of flipped classroom in the digital age.

Background

The call for reform in education, based on the recognition of an increased role of technology, as well as the rapid advancement of technology types, requires major changes to the traditional methods of teaching (Newman, Deyoe, Connor, & Lamendola, 2015). Traditional classrooms designed for lecture inhibit student mobility and flexibility, which complicates the implementation of flipped classroom models (Carpenter, Sweet, Blythe, Winter, & Bunnell, 2015). New teaching pedagogies (e.g., flipped classroom) have embraced the use of collaborative learning where students engage in group-based activities during class time and they embark on the asynchronous video lectures after the classroom (Maina, Wagacha, & Oboko, 2016). The asynchronous approach frees up in-class time for student-centered synchronous learning activities (O’Flaherty & Phillips, 2015).

With the advent of new technologies and the move for faculty to implement these into their teaching practice, a new model for course design and delivery has developed called the flipped classroom model (Larcara, 2015). Flipped classroom model is an approach to instruction where direct instruction and lecture is viewed at home and class time is used for collaboration and project-based learning (Dickenson, 2015). Flipped classroom is grounded in a consideration and respect for individual and diverse learning needs (Ray & Powell, 2015) and reverses the roles of traditional lecture and assignment in order to maximize student learning (Faulkner & Green, 2015). Flipped classroom promotes students’ creativity concerning fluency, flexibility, and novelty (Al-Zahrani, 2015).

THEORY AND APPLICATIONS OF FLIPPED CLASSROOM

This section explains the advanced issues of flipped classroom; the Kirkpatrick’s four-level training evaluation model and flipped classroom; and the important perspectives on flipped classroom in the digital age.
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