Preface

The Flipped Classroom Model is receiving increased attention in educational circles and popular press (Toppo, 2011; Tucker, 2012). The flipped classroom is an instructional approach that educators use to turn the traditional classroom lecture model into a more active learning classroom. In the flipped model, the traditional practice of spending class time for direct instruction and completing content-related activities for homework is “flipped.” For instance, students are assigned short video tutorials with necessary resources and interactive exercises on the content area for homework as preparation for class. In class, the teacher reviews the materials and apprentices them through hands-on activities – the classroom, therefore, becomes a place for active learning, questions, collaboration, discussion, and completing assignments. Students spend more class time working with their peers in a collaborative setting.

The ideas behind flipping the classroom are not brand new. For over a decade, led by the National Center for Academic Transformation (NCAT), dozens of colleges have successfully experimented with similar ideas across math, science, English, and many other disciplines. NCAT’s increasingly impressive body of practice shows that thoughtful course redesigns lead to improved learning (Tucker, 2012). In a traditional teaching practice, a common barrier to the implementation of collaborative learning activities in the classroom is a teacher’s perceived lack of time (Barak & Shakhman, 2008). Typically, the most outgoing and engaged students ask questions in class, while struggling students may act out. The flipped classroom model frees up class time by removing much of the direct instruction so that the teacher is able to supervise collaborative learning experiences, provide individual remediation, and foster metacognitive ability by providing the opportunity for communication among diverse learners (Songhao, et al., 2011).

The flipped classroom model is derived from Piaget’s theories of active learning. Traditional classrooms strictly adhere to a fixed curriculum where students are viewed as “blank slates” onto which information is etched by the teacher, and students primarily work alone (Brooks & Brooks, 1999). In constructivist active learning classrooms, the pursuit of student questions is highly valued, students are viewed as thinkers with emerging theories about the world, and students primarily work in groups. The constructivist approach is based on the understanding that students learn more when they take responsibility for their own learning (Henson, 2004). This model of learning focuses primarily on learning outcomes where students are challenged to have ownership in the learning experience, including design of the curriculum, responsibility for some levels of instruction, and peer review (Weimer, 2002). Further, this approach requires teachers to think about: (a) what students are learning, (b) the process of learning, (c) the environments supporting student learning, and (d) ways in which current learning position the students for future learning.
Active learning supports learner-centered approaches that allow for more interactions. Additionally, the role of instructors shifts from that of transmitting knowledge to the new role of facilitators, guides, or coaches. As a guide, the teacher incorporates mediation, modeling, and coaching as well as providing rich environments and learning experiences for collaborative learning (Sharp, 2006). Active learning also involves situations where students are given opportunities to take a more interactive relationship with the subject matter of a course, encouraging them to generate rather than simply to receive knowledge. Key forms of active learning include discovery learning, problem-based learning, experiential learning, and inquiry-based instruction (Kirschner, Sweller, & Clark, 2006).

The classroom flip is usually motivated by a desire to learn through active participation in the classroom. Piaget says that learning occurs not when a person merely copies an idea, but when a person acts on it (Strayer, 2007, p. 45). It is important to look for clues on how e-learning technologies can become powerful agents for change as well as tools for redesigning learning and instructional systems (Shroff & Vogel, 2009). The concept of flipped classroom is gaining popularity, perhaps due to the ubiquitous presence of technology tools that teachers use to accomplish the flip, such as iTunes, YouTube, iPads, and many Learning Management Systems (LMS). The integration of these learning technologies into classroom instruction, particularly multimedia, provides new opportunities for student learning. Prensky (2001) noted that Digital Natives who graduate from college spend 10,000 hours playing video games, 20,000 hours watching TV, and that “computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives” (p. 1). Today’s students are therefore accustomed to interacting with audio and video on electronic devices, so it is reasonable to argue that they would digest educational content in this manner as well.

The flipped classroom model contains “inexorable logic” (Pink, 2010), but little research has been conducted on the approach in a holistic educational setting. Moreover, most educators agree that there are multitudes of ways to flip a classroom although the underlying premise is that students review content information outside of class. To this end, there is need for focused dialogue and in-depth examination on strategies and instructional design practices appropriate for the flipped classroom model and a deliberate effort to understand this emerging pedagogical approach and its potential to improve student learning. Therefore, Promoting Active Learning through the Flipped Classroom Model examines the benefits, shortcomings, perceptions, and academic results of this teaching method.

This edited volume contains a total of 15 chapters contributed by an array of scholars and practitioners in the field of teacher education and other related education programs. Chapter 1 describes best practices in the use of Flipped Classroom Model to promote active and meaningful learning in higher education. The chapter also reviews the theoretical foundation for supporting the use of Flipped Classroom as well as issues related to its use.

Chapter 2 examines the flipped classroom structure through Blended Learning Theory, Project-Based Learning Theory, and Cognitive Taxonomy Theory. The chapter also provides suggestions on some of the best practices in a flipped classroom model.

Chapter 3 describes the design, development, and implementation of the flipped classroom-teaching model in teaching college algebra. The flipped approach examined in this chapter utilizes multiple teaching strategies to enhance student learning.

Chapter 4 examines different strategies for designing the flipped classroom model for training of future teachers in a university context while chapter 5 explores the concept of the flipped classroom in K-12 education. Ideas for improving high school student engagement and literacy in the flipped classroom are also discussed.
Chapter 6 examines the role of video lectures and active learning in supporting the flipped classroom approach in a higher education STEM course. The benefits and limitations of the approach are also discussed.

Chapter 7 examines the benefits and challenges of the flipped classroom model on the part of the teacher and learner while chapter 8 provides a comparison between the flipped classroom model and traditional method approach in teacher education program. Specifically, Chapter 8 sought to examine if teacher efficacy would increase as a result of a flipped classroom approach.

Chapter 9 examines students’ perceptions about the flipped classroom method and its implementation in an English Language Arts (ELA) classroom, while chapter 10 examines the impact of flipped classroom method in an Applied, Environmental, and Medical Microbiology Lab course.

Chapter 11 examines the use of emerging technology tools to achieve success with the flipped classroom model. The chapter explores how an Advanced Placement United States History course was transformed through the flipped model.

Chapter 12 examines the impact of flipped classroom model in developing projects that meet the principles for Universal Design for Learning (UDL) curriculum while chapter 13 examines the benefits and use of the flipped classroom approach to foster a mathematics-anxious-friendly learning environment.

Chapter 14 examines the impact of using flipped classroom approach on students’ preparations for materials before class. Limitations of the flipped classroom are also discussed. Finally, chapter 15 describes the use of the flipped classroom model to actively engage students in a Constitutional Law course.

In summary, the flipped model is credited with meeting the needs of diverse learners and providing opportunities for individualized instruction. The chapter contributors offer unique perspectives on the flipped classroom method and reveal that the flipped classroom method is a sound pedagogy. Our hope is that each of these scholarly manuscripts will help to expand the understanding of the use of the flipped classroom model to enhance active student learning. Further, the rich content in this book could benefit school administrators, faculty, pre-service and in-service teachers, directors of teaching and learning centers, curriculum and instructional designers, and other researchers or stakeholders interested in pedagogy enhancement and other transformative teaching practices.

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REFERENCES


