Chapter 2
Tackling Diversity and Promoting Inclusivity: A Flipped Classroom Model to Enhance the First Year University Experience

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ABSTRACT

This chapter evaluates a flipped classroom model for teaching culturally and disciplinary diverse student cohorts, and analyzes the benefits and limitations of such a format when compared to traditional techniques. From 2015 to 2017, 388 first year students took part in the case study. Within three iterations of the same course, flipped and traditional tutorials were utilized. Participating students and staff evaluated the tutorial models, providing insight into both learning and teaching experiences. The findings of the study disseminate the benefits afforded by each model and provide insight into the varying attitudes of different demographics within contemporary student cohorts at university.

INTRODUCTION

This paper explores the use of a flipped classroom teaching model within a single first year animation course, Introduction to Computer Generated Imagery (CGI), in a Bachelor of Media Arts degree at the University of South Australia over a three year period from 2015 to 2017. In previous years, the student cohort in this course had been small, between 30 and 40 students in size. In 2015 however, changes in program structures and offerings saw the student cohort increase to 128, with students enrolling in the course from eleven different programs of study. This newfound diversity within the student cohort was intensified by the inclusion of 22 international students. It was decided that to successfully engage a student cohort featuring such a broad range of disciplinary and cultural backgrounds, a review of the course structure and content delivery was required. This review proved to be the catalyst to explore the efficacy of a flipped classroom teaching model.
In the 2015 iteration of the course, two different tutorial methods, referred to in this chapter as ‘standard’ tutorials and ‘flipped classroom’ tutorials, alternated each week, enabling all students to experience both formats (six of each). In the standard tutorials, two hours in length, students were led through specific learning exercises using the 3D animation software package Maya, by the tutor. The tutor covered each task step-by-step, narrating the process and presenting via a projector. Individually, students completed the task during the tutorial time, asking questions and receiving assistance from the tutor when necessary. The students were then expected to take these newly learned skills, and apply them to their assignment work in their own time. Students were also provided with a set of written notes and screen capture images, detailing the task at hand, as a reference for future work. In the flipped classroom sessions, students were provided with a video tutorial two weeks prior to the scheduled class, which they were expected to complete in their own time. The in-class session was then broken down into three parts. For the first 15 minutes, the tutor provided an overview of the exercise within the video and discussed the key topics. For the following 15 minutes, the tutor led a group conversation, allowing students to ask questions about the exercise, collaboratively solve problems, and discuss related topics with their peers and tutor. For the remainder of the session students were able to work individually and in small groups on their project work. During this time the tutor conducted student consultations, enabling the provision of regular staff feedback in the course. The video tutorials, approximately 30 to 45 minutes in length, were provided in a downloadable format from the course website, rather than being streamed on YouTube or Vimeo, to enable students to store and maintain access to them without the need for an Internet connection.

The teaching and learning arrangements in the 2015 iteration of the course were well received by students and were retained, though slightly modified, for 2016 when faced with a similarly diverse student cohort of 122 students, which included twelve international students, and members from thirteen different programs of study. In 2016 standard tutorials were used to introduce the key topics within the course, generally every three weeks, and then flipped classroom tutorials were used to reinforce the topics in alternating weeks. In total in 2016, five standard tutorials were used, and seven flipped classroom tutorials. In 2017 this was further revised, with four standard tutorials and eight flipped classroom tutorials. The 2017 cohort encompassed 138 students, including 21 international students, and members from 19 different programs of study.

Using the 2015, 2016 and 2017 offerings of Introduction to CGI as a case study, this paper analyses the benefits and limitations of a flipped classroom model when compared to traditional techniques in teaching 3D animation to culturally and disciplinary diverse first year students. Within the course both traditional tutorials and flipped classroom tutorials were utilized in the learning experience, with the aim of determining which model provides diverse student cohorts with a better learning experience, and staff with a better teaching experience. Within this aim were several research questions:

- How do different student demographics respond to each tutorial model?
- Can a flipped classroom model improve the international student experience?
- Which of the tutorial models promote greater peer to peer interaction?
- Which of the tutorial models promote greater peer to staff interaction?
- Within which of the tutorial models do students achieve greater knowledge transfer?
- What are the workload implications on course staff, for incorporating each tutorial model into their curriculum?
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