FLIPPED CLASSROOM TEACHING IN HIGHER EDUCATION: AN ASSUMPTION OR AN INEVITABLE TOOL

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Abstract

*The conventional face-to-face lectures was effective decades ago in Higher Education. However, its efficacy is being questioned, nowadays, for the Generation Z and Millenials. The latter are technology-savvy and 'always connected.' It is becoming more and more challenging to retain students' attention using traditional lectures as they are 'known' to be multi-tasking. Often, when one would be delivering a lecture, one can notice students getting bored, or diverted by their smartphones. This paper addresses a potential way of increasing students' engagement in class by introducing Flipped classroom in Higher Education, particularly for the BA (Hons) Advertising, Public Relations and Media at the Middlesex University. Flipped classroom was chosen as recent studies (*Steen-Utheim and Foldness, 2018; Gilboy et al, 2015; Pierce and Fox, 2002) had proved beneficial. *A simple model of Action Research methodology (Dan, 1996), that consisted of planning, acting, observing and reflecting, was used. Video lectures were sent to students, for them to watch outside the classroom setting. During the actual face-to-face time, they were given practical exercises so that they had more hands-on experience. An observation of the practical session followed by a reflection on the feedback from the student lead to some critical findings. Most of them enjoyed the flipped classroom as they were able to watch the videos 'several times' and they learnt 'innovatively'. Nevertheless, the major drawback was that there were some students*

who were not watching the video lectures at home. These led to future scope of research in the field.

Keywords

Flipped Classroom, Student's engagement, Higher Education, Teaching and Learning

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1. Introduction

The Generation Z (born 2000s), as highlighted by Tim Elmore, "cannot imagine living without being connected all the time." (Elmore, 2015) The same applies to Millenials (born between 1981 to 2000) as they are described to have the ability of multitasking and utilizing *many technological devices* at the same time. (Gibson et al, 2014). Instead of using writing pads to take notes, nowadays, students can be observed using smartphones or tablets for note taking or taking photos of Powerpoint slides during lectures. The question that is often raised is whether or not traditional face-to-face teaching is still effective in modern days.

In the Academic Strategy 2015-2017 of Middlesex University (Academic Board, 2015), one of the key objectives for developing and supporting learning and teaching, is to "ensure that our physical and virtual learning environments are of high quality and suitable to the needs of a diverse student community." This study was done to assess how to improve the teaching and learning experiences for the media production modules of the BA (Hons) Advertising, PR and Media. A SWOT Analysis (Humphrey, 1964) was conducted to reflect on current teaching methods and overall student satisfaction. This would enable the researcher to identify areas that required improvements.

The main **strengths** of the module's sessions were that:

- they are less theoretical,
  - this module require students to develop technical skills and creativity in spreading communicational messages using different platforms like posters or videos
- there are no exam,
  - students have both formative and summative courseworks. They receive feedbacks on how to progress throughout the academic year and in the end they come up with creative projects. There is also critical reflection documents whereby they think about their learning processes or skills gained over the year. Thus, they do not face the stress of revising for exams or having fear of failing.
- students are given individual attention during lab sessions for any technical support

- o the cohorts of the BA (Hons) Advertising, PR & Media programme do not exceed 20 students so far. The smallest cohort size is 8 students. The lecturer has enough time to move around, verifying work progress of individual students during the lab sessions. This is very appreciated by them as instantly they ask questions.
- field trips to media houses are organised each year so that the students engage with the industry
  - o the department make sure that they have atleast two field trips for students following media production modules. It is a way for them to understand what the trends in the industry are and relate to content carried out in classes.

The **weaknesses** that were noted were:

- some students wished to have shorter sessions rather than 3 hours (Mauritius Student Feedback Survey, 2016).
  - o some students can find 3 hours long especially if they do nothing during lab sessions. The lecturer motivates all of them to participate but there are always one or two students who do as per what they want to.
- students requested to have more practical exercises in the class (Mauritius Student Feedback Survey, 2016).
  - o Exercises are given but the students feel that the more they practice the more they are at ease using the software. The lecturer agrees with this. However, the problem faced is that if too many exercises are given, the 2 hours Labs are not enough to complete the tasks.

Following the SWOT Analysis, the researcher decided to test an innovative teaching method, namely *Flipped Classroom*. Recent studies (Steen-Utheim and Foldness, 2018; Gilboy et al, 2015; Pierce and Fox, 2002) have shown that the flipped classroom is gaining popularity in Higher Education in improving students' engagement and performance.

Therefore, the principal research questions of this study were as follows:

1) assess whether Flipped classroom can be implemented in the BA (Hons) Advertising, Public Relations and Media programme?
2) determine if Flipped classroom would lead to a better level of students' engagement in class?

2. Literature Review

Flipped classroom is recently introduced teaching method in Mauritius and a proper understanding of its benefits and limitations was important prior to the study. Bishop and

Verleger (2013) defined the flipped classroom as "an educational technique that consists of two parts: interactive group learning activities inside the classroom, and direct computer-based individual instruction outside the classroom." This changes the role of the lecturer who will then, facilitate learning activities instead of delivering face-to-face lectures. Foldness (2016) adds that "in a flipped classroom, a type of blended learning approach is used whereby traditional lectures are moved outside the classroom through the use of online videos." The use of online videos correspond to the *computer-based individual instruction*. Webinars could be an alternative way of using online sessions.

Studies have been conducted in higher education to test effectiveness of flipped classroom. A research carried out by Gilboy et al., (2015) demonstrates that almost two-thirds out of 142 students from West Chester University of Pennsylvania "thought that they learned the material more effectively by viewing the online recorded lecture rather than the Face to Face lecture." (Gilboy et al., 2015) The figures from this study is striking as it shows an increasing need to innovate traditional teaching methods that would not only be effective but improve students' engagement in class. Another advantage of using online recorded lecture is the flexibility of reviewing several times the same video. This has proved to be beneficial to *students with learning difficulties* (Altemueller and Lindquist, 2017). Unless recorded, Face-to-Face lectures are not always completely the same.

In addition, Pierce and Fox (2012) conducted an action research to implement a flipped classroom for a module in their renal pharmacotherapy course. They analysed that "students in the flipped class had significantly higher scores than those in the traditional class; in addition, students had positive opinions on the active learning strategies." (Pierce et al, 2012) The impact from this research shows that student's progress can increase with flipped classroom. A question that can be raised here is what is in flipped classroom that is not available with Face-to-Face sessions which increases the students' performance. Furthermore, during the survey *62.0% expressed a desire for more instructors* to use the flipped classroom approach.

The aim of using flipped classroom is to improve student performance and engagement in the sessions. During his study on *The Flipped Classroom,* Heng Nee Mok observed "a very high level of student engagement" for his practical classes. (Mok, 2014) In his paper, he shares about two fundamental criteria for the flipped classroom to function: "(i) students are physically in class for the active learning activities, and (ii) students must come prepared for each session by watching the assigned video lectures." (Mok, 2014) Video lectures can be done so that students can view at their own pace at home but there is the risk

that they might not watch it as well. The ability to learn at their own pace enables different types of learners to assimilate knowledge incrementally. A proper briefing should be done prior to the flipped classroom to enable *self-regulating learning* (Zimmerman, 2002), where they set themselves goals and discipline to perform better.

Besides the various advantages flipped classroom, it has some drawbacks. Philips et al., (2014) highlighted that the implementation of "flipped classroom approach can be time consuming." Steed (2012) suggests starting small by selecting "one lesson from your scheme of work to try out before thinking about delivering an entire topic." Recording videos or podcasts can be a tedious work especially we do not have the technical know-how of producing video lectures. *Digitalising lectures* and *devising appropriate active learning strategies* (Gilboy et al, 2015) that would be used in class requires enough time for thought and implementation.

Moreover, Milman (2012) list down several limitations of flipped classroom as teaching method as follows: "the quality of the video may be very poor compared with a face-to-face setting; student technology issues and conditions under which they might view the video (i.e. in front of TV, distracting surrounding); students may not watch the video before class; instructor and peers are not available to answer questions during video reviewing; and difficulties for second language learners or those with learning disabilities." The researcher had to consider these possible challenges while introducing Flipped classroom to her module.

3. Methodology

3.1 Research design

A systematic research design was planned based on the Honeycomb of Research Methodology (Wilson, 2014). The detailed process (Figure 1) guided the researcher to achieve the research objectives.

Figure 1: *Research design*

3.2 Action Research Methodology

"Research is a means to action, either to improve your practice or to take action to deal with a problem or an issue." (Kumar, 2014) Action Research was opted as it is an approach to "improving education by changing it and learning from the consequences of changes." (Kemmis and Mc Taggart, 1992) Ghazala (2008) highlights that Action research is a "cyclical process that never ends but always provides a conclusion with more ideas to bring upon progress and improvement." Moving to flipped classroom at one go can be a drastic change. Therefore, the action research method was used as it *"starts small*, by working through changes which even a single person can try, and works towards extensive changes – even critiques of ideas or institutions which in turn might lead to more general reforms of classroom, school or system-wide policies and practices." (Cohen and al, 2003) A simple action research model (Dan, 1996) was adapted in Figure 2.
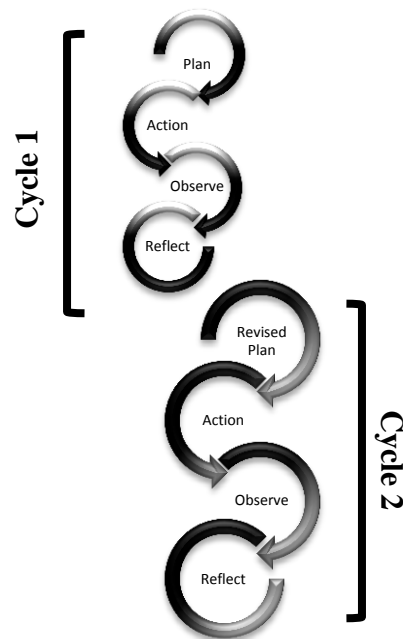

Figure 2: *Simple Action Research*

This research approach was chosen as it consisted of implementing Flipped classroom in a real class setting. In view of the changing demands of the new generation, the researcher explored whether this teaching method can be used for media production modules to replace/blend with her traditional lectures. With the flipped classroom, students can watch the video lectures at their own pace anywhere they want. Then, during the sessions, they can practice more. Krathwohl D. R, highlights that "this type of instruction enables the professor

to be with students when they are engaging in higher levels of Bloom's taxonomy, such as application, analysis, and synthesis." (Krathwohl, 2002).

Introducing flipped classroom to the programme

There are two production modules, in year 1 and an advanced version in year 2, as part of the BA (Hons) Advertising, PR & Media. The modules are divided into three blocks: Digital Image, Video/ Radio Production and Blog designing. The classes are three hours (1 hour lecture and 2 hours labs).

Respondents: It was decided to test the flipped sessions in the second year for the year 2 module. In the first year, the students had all their classes done by the traditional face to face approach. Thus, by flipping a few sessions in the second year, they would be able to compare both teaching methods. The class consisted of four local and four international students, among which there were four male and female.

Having studied the advantages and limitations of the flipped classroom, the researcher decided to implement this teaching method by starting 'small' (Steed, 2012). Rather than flipping all the sessions, one lesson from the Digital Image block and one from the Video production were opted.

The action research would be carried out two academic cycles (Figure 3 and 4) as follows:
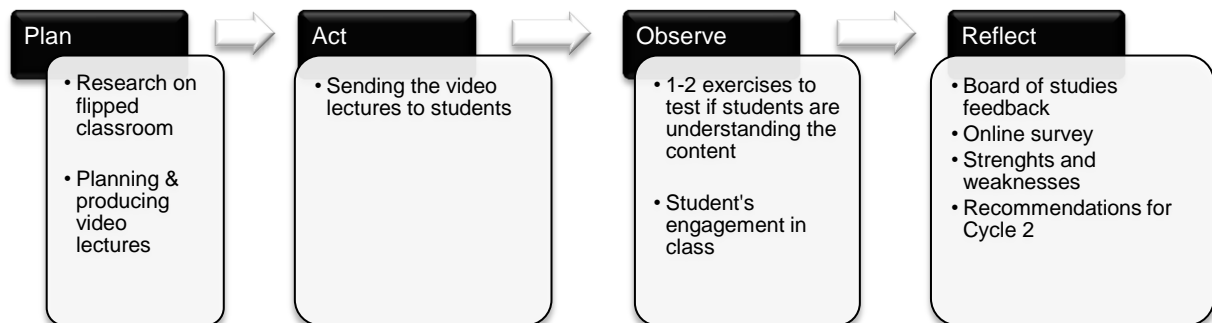
Academic year 2016/17

Plan	Act	Observe	Reflect
• Research on flipped classroom • Planning & producing video lectures	• Sending the video lectures to students	• 1-2 exercises to test if students are understanding the content • Student's engagement in class	• Board of studies feedback • Online survey • Strenghts and weaknesses • Recommendations for Cycle 2

Figure 3: First Cycle of Flipping

Planning:

Two videos were recorded on CamStudio and some technical difficulties were faced while exporting the files. YouTube would automatically compress videos and the quality was not good. The lecturer had to share the original video with the students through their flash drives.

Acting:

Video lectures were uploaded on MyUnihub, the Moodle platform of Middlesex University where students get access to handouts, assignments and resources.

3.3 Data collection:

An observation was done while the students were engaging with the exercises in class. After flipping the first session, as Milman (2012) had identified, the students did not watch the video lecture prior to attending class. They viewed the video during class and then attended to the exercise. A debrief was done by the lecturer in the end to emphasise the need of watching the video prior to class next time so that they have more time practicing.

During the second flipped session, students had watched the video prior to class and some of them started the exercise at home. During the class session, there was an increase in the participation of students. The lecturer observed that the students attended the exercises attentively and praised them for this. They were given support during class and instant feedback on their performance was provided.

In addition, the effectiveness of flipped classroom applied to the module was evaluated by a **reflection** on the feedback from students (Figure 3). Feedback was received through the Board of Studies and an anonymous online survey.

At Middlesex University Mauritius, emphasis is laid on proper quality assurance and quality enhancement with a focus on teaching. Student voice leaders, elected by students, provide verbal feedback on their learning experience and other issues like access to resources during board of studies. They also receive advice on their own performance by lecturers. The board of studies are carried our twice a year (normally in November and April). For the purpose of this study, the November board of study's notes was taken into consideration.

The online survey was carried out on Survey Monkey in January 2017. The eight students were asked to fill in the questionnaire. Less than 10 questions were asked to have maximum response from students.

4. Findings & Outcomes

A reflective and narrative analysis was done on the feedback received from Board of study and the online survey. This analysis would highlight recommendations for the revised plan of the second cycle (Figure 4) of the Action research.

Feedback noted from the board of study:

During the Board of studies of November 2016, the student voice leader mentioned that they found the first flipped session helpful as they are able to practice more in class.

They expressed interest of having more innovative teaching methods like this. This motivated the researcher to conduct the second flipped classroom.

The main findings of online survey:

Out of the eight students, seven responded to the online survey. The students enjoyed the flipped sessions and they believe that there should be more interactive methods of teaching like this. Five of them found that the ability to watch the video several time was very good. This relates to Abeysekera and Dawson's study (2015) when they highlighted that "learners can pause, rewind, fast forward or skip any parts of a lecture video in an attempt to better manage their working memory." In addition, four students concluded that the ability to attend the lecture outside the classroom and have more time to dedicated to practice were very important.

The critics were mostly on the quality of the audio for the video lectures. A student recommended adding subtitles while another one emphasized on focusing on the audio quality. Moreover, the students suggested that they would like more practice on the flipped sessions in class under the tutor's guidance.

Reflection of the feedback received:

By conducting this study the researcher concluded that, indeed, academics have to update their teaching practices to meet with the 'demands' of this new generation. Pierce and Fox (2012) correctly noted from their action research that students are expressing the "desire for more instructors to use the flipped classroom model."

Moreover, the researcher like the idea that in class, she was more as a facilitator rather than lecturer. She was able to respond to the questions of each student and provide them better technical support as there was more time for it. Furthermore, the initial aim was to find a suitable strategy where students would learn innovatively. This was successfully achieved and the amazing thing was that students also enjoyed the idea of being able to watch the video lectures several times.

However, there were some drawbacks from the application of flipped classroom to the module as Milman (2012) highlighted. Firstly, there were some students who did not watch the video before class and they had to do it in class to be able to practice the activities. Even, if the lecturer tried to change the strategy by briefing the students to attend the flipped lectures at home, some of them did not.

Secondly, the students expressed concern that the compressed version of the video and the audio was not very good. This relates to the second research objective. To be able to

apply flipped classroom to the programme, appropriate production systems such as sound proof room and proper software for video recording was necessary.

5. Limitations, Future Research And Conclusion

The insights retrieved from the first cycle would be used to plan the second cycle. This cycle has been proposed to reflect on the feedback received and then improve the teaching practice **Academic year 2017/18:**

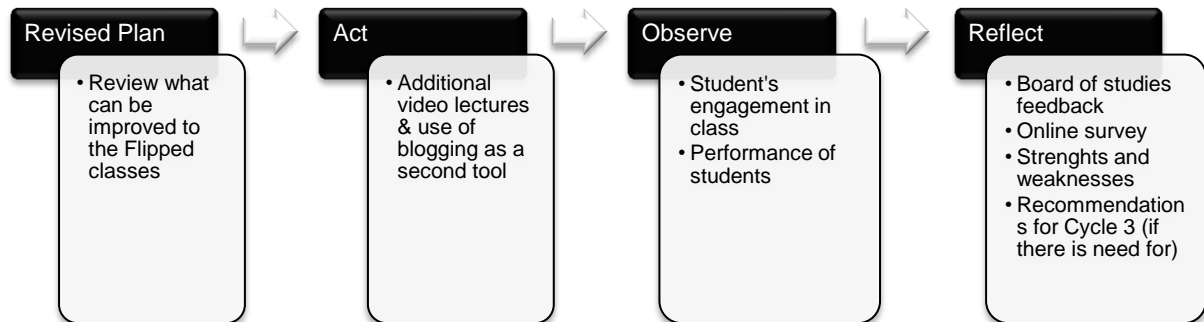| Revised Plan	Act	Observe	Reflect
• Review what can be improved to the Flipped classes	• Additional video lectures & use of blogging as a second tool	• Student's engagement in class • Performance of students	• Board of studies feedback • Online survey • Strenghts and weaknesses • Recommendations for Cycle 3 (if there is need for)

Figure 4: Proposed Second Cycle for Flipped Classes

In the light of the above, it can be concluded that flipped classroom can be used as a teaching method for the production modules of the BA (Hons) Advertising, Public Relations and Media programme. However, there are some areas that can be reviewed for the second phase (Figure 4) of the action research.

Blended mode of teaching:

Rather than flipping all the sessions, a blended mode of face-to-face and online teaching is proposed. During the online survey, some students expressed their preference for face-to-face learning. 10% of the module can be flipped as a start and this percentage can be gradually increased, depending on the feedback from students.

Overcoming issue of students not watching video lectures:

A proper introductory session to the flipped classroom should be given to the students in the beginning of the academic year.

Moreover, some simple online activities can be added after the flipped sessions. During the face-to-face sessions, the importance of completing the activities will be highlighted prior to the week of conducting the flipped session. In this way, the tutor can monitor who is watching the video lectures or not. Arnold-Garza (2014) suggested the use of "interactive technologies like online tutorials or quizzes… these additional components are

employed to reinforce the concepts discussed in the video lecture, other times to ensure that students are actually viewing the lectures before class." In addition, some more intensive research is required to understand how this issue has been tackled by other academics.

In this era, where Augmented and Virtual Reality or Internet of Things are generating interest, there is no doubt that flipped classroom is going to be an inevitable teaching tool to correspond the needs of the *technology-savvy* generation. However, there is still need for further research before its full implementation. Firstly, the actual role of the lecturer needs to be redefined as face-to-face lectures will not be conducted. Would they remain as facilitators in classes? Secondly, the issue of students not watching the online lecture materials prior to class needs to be tackled properly. Would strategies like self-regulated learning work parallel with flipped classroom? Recent studies are being done to test Flipped classroom's impact on MBA programme courses (Scafuto et al, 2017). A possible research area would be to test the implementation of flipped classroom in other postgraduate courses such as Advertising, Media, Computer Science and so on.

Assuming that things will remain the same as years before in terms of delivering lectures and waiting for the introduction of flipped classroom to think about it would be a mistake. Academics should give a thought of how to make their teaching practices more innovative as technology alters, so that they do not end up being replaced by it.

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