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“Exploring the Effectiveness of the Flipped Classroom as a Teaching Strategy for Improving Student Learning”

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ABSTRACT

This research is driven by a lack of student engagement, with content and peers, specifically in a third year business management module. Linked to this, the purpose of this article is to present the findings from research conducted into the value of adopting a 'flipped classroom' teaching approach, in higher education, with the intention of enhancing student engagement which Strydom, Metz and Kuh (2010) have identified as an attributing factor to student success. The research follows an interpretivist approach in an attempt to understand student behaviour and determine whether the 'flipped classroom' approach improves student engagement, leading to better information retention and recall. Findings reveal that the students, from the sample population, found the elements of the flipped classroom both entertaining and engaging and revealed that their understanding of content was deepened and their ability to retain and apply information was heightened through the various elements of the flipped classroom.

1 INTRODUCTION

The following article has been compiled in an attempt to explore the effectiveness of the 'flipped classroom' as a teaching strategy for improving student learning. This has been done with a focus on determining the way in which this engagement, and subsequent collaboration, assists in student learning; information retention and recall. This is in an attempt to address the low levels of success and declining throughput rates in South African, higher education, which Strydom, Mentz and Kuh (2010) have attributed to student disengagement with content.

Although there is no single model it is accepted that a 'flipped class' is any class which uses pre-recorded lectures followed by in-class collaboration, practical application and discussion (Diaz, McDaniel, Bonamici, Getman and O'Neill, 2013). It may also include reading of textbooks and other sources and completing online quizzes prior to class (Aronson, Afrstrom and Tam, 2013). In short, it can be described as 'interactive engagement'; where an environment is created through which students are able to personalise learning to their own, distinct requirements. In a time where educators are required to reach students with varying needs, personalising the learning experience can be seen as a possible solution (Bergman and Sams, 2012:6). What cannot be ignored, however, as part of this changing teaching strategy, is that a paradigm shift, a fundamental adjustment in core beliefs (dictionary.com, 2015), is required by educator and student alike for this teaching strategy to be applied effectively. This shift was addressed as a foundation for the research, but not as an additional component.

2 RESEARCH PROBLEM, QUESTIONS AND OBJECTIVES

The key reason for choosing this research topic is due to the observation of a lack of students engaging in class, as also witnessed by Strydom et al. (2010), and even less so, taking responsibility for engaging with peers and content outside of class. This is of concern because Parsons and Taylor (2011) state that students who are not engaged with content are known to be restless and disruptive which has a negative effect on the other students in class. They argue that by engaging students an increase in achievement and positive

behaviour can be witnessed. Kidwell (2010) adds that student engagement results in higher level thinking and the ability of students to apply and demonstrate knowledge more easily.

In the past, much of the quantitative research on student engagement has focussed on student attendance, test and assignment results, absenteeism and throughput rates (Taylor and Parsons, 2011). Related to the problem described, the following questions apply directly to using the flipped classroom approach to enhance student engagement:

1. In what way will flipping the classroom encourage students to engage in the learning process?
2. What aspects of the flipped classroom should be adapted to encourage student engagement?
3. What is the best way to adopt a flipped classroom model that will encourage active student engagement and a positive attitude towards the collaborative teaching strategy?

The key objective of acquiring student input on the above questions is to gain insight into the potential rewards of adopting a flipped classroom methodology. Student's responses to these questions will provide guidance on what student's view as effective tools for engagement and in which areas of their studies they would like to be more engaged. The last question addresses the fact that students may be resistant to a new methodology which will require them to do research at home or to adopt a conversation style of study in class when they are not used to this. In fact Diaz McDaniel, Bonamici, Getman and O'Neill (2013) suggest that students may approach the flipped classroom teaching strategy with an element of resistance due to feelings of losing, what they could perceive as, teaching time as well as the expectations placed on them to work outside of class.

3 LITERATURE REVIEW

Student engagement has been identified as the key problem area to be addressed through this research. Millennial students and a shift from educator- to student-centred classrooms are the two of the factors driving this.
What makes a millennial student unique is that they expect to be engaged and active in the learning process (Northern Illinois University [s.a.]); they require immediate feedback, recognition and an opportunity to learn through collaboration. Further to this, they want to know exactly what information is going to be assessed and often challenge educators about their grades and the relevance of certain content and assessments (Seppanen and Gualtieri, 2012).

These characteristics and demands of the millennial student are driving new methods of communication and education (Seppanen and Gualtieri, 2012); with educators searching for ways to involve and engage students and provide the feedback these students demand. Educators are expected to entertain and engage students by being accessible and approachable and provide students with examples of how content relates to real life (Seppanen and Gualtieri, 2012).

According to Gupta (2014) class engagement assists in student's staying focused on content for longer periods of times. The author advises that educators allow students to take a more active role in their own learning. McCollough (2014) identifies this as a student-centered approach to learning and states that the skills learned in this environment result in students developing lifelong learning skills. According to Blumberg (2014) student-centered learning results in increased levels of student engagement and information retention through a classroom that fosters learning; accommodates a myriad of learning styles and encourages students to be self-directed students.

Within the context of the above key definitions related to this research include:

Flipped Classrooms:
A framework or method of instruction which reverses the lecture and homework elements and draws on active learning and engagement (Diaz et al, 2013). This approach enables educators to personalise student's education and allow class time to be used more productively for students to test skills, apply knowledge and interact (Diaz et al, 2013).

Millennial students
Students born between the years 1980 and 2000 and grew up surrounded by social networking and ever-changing technology. To date they are the most ethnically diverse generation. They are confident due to being told that they can do and be whatever they dream of, while growing up; this has also resulted in them being a largely optimistic generation (Haughn, 2015).

Personalised learning
Also referred to as 'student centred learning' it refers to a diverse array of learning experiences and teaching approaches that aim to address individual students learning requirements, interests and backgrounds. Class preparation is centred on engaging students rather than what is convenient for the educator (Great Schools Partnership, 2015).

Student engagement
Refers to the amount of attention, interest and passion that students demonstrate when they are learning; this includes the level of motivation they portray and their progress. This concept is considered important as it has been documented that students who are engaged learn better and are less inclined to get bored (Great Schools Partnership, 2015).

4 RESEARCH METHODOLOGY

Research methodology can be described as the process of collecting and analysing information (businessdictionary.com [s.a.]); for the purpose of this research article an interpretivist approach has been adopted. Interpretivists use social constructions, in this case data collected via questionnaires to interpret/assume reality; through focussing on the meaning of data (Research Methodology [s.a.]) in order to understand student behaviour (Du Plooy-Cilliers et al 2014:28). As explained by Du Plooy-Cilliers et al (2014:27) interpretivism is specifically useful in research conducted in the field of social sciences, especially when conducted in natural settings, such as the classroom.

Furthermore, a quantitative research approach has been adopted; quantitative research makes use of statistically dependable data to conduct a baseline assessment of the opinions of respondents (Design, Monitoring and Evaluation for Peacebuilding, [s.a.]) from an objective point of view (Student Chapter of the System Dynamics Society, 2012). In order to reveal the truth the researcher needs to minimise involvement as much as possible. Quantitative research can also be used to measure attitudes, and student satisfaction with the teaching strategy under research (Sage Publications, 2010).

This collection of data is of particular importance when trying to assess trends (Sage Publications, 2010), such as flipping the classroom, and when simple, objective responses are sufficient such as student opinion on the teaching strategy. According to Works (2014) quantitative research means all respondents are exposed to the same questions so that data is more easily compared for standardised, objective results. According to Du Plooy et al (2014:254) data collected in this way will also be reliable, meaning it can be seen as credible and consistent.

A variety of methods can be utilised in the collection of the numerical data required for quantitative research (Design, Monitoring and Evaluation for Peacebuilding, [s.a.]). For the purpose of this study, emphasis will be placed on surveys with focus on the use of questionnaires.

The research design adopted for this study was cross-sectional, using a questionnaire as the data collection tool. Cross-sectional studies focus on a specific sample of the population who share certain characteristics, such as their area of study and are, therefore, often used for educational research (Cherry, [s.a.]) 2004). This method of study is, furthermore, often used to collect preliminary data to explore the necessity of further research (Cherry [s.a.]), making it well suited to the exploratory nature of this research

Questionnaires can be defined as a set of questions used to gain knowledge (Dictionary.com, 2015) and are often used, in academic research, for collecting data related to opinions, interests and experiences which cannot be gained through simple observation. The questionnaire used for this research article was compiled using a selection of close-ended; Likert-scale and open-ended questions. This combination questioning method was used allow students to elaborate on certain answers while still allowing the researcher to draw clear conclusions on the effectiveness or ineffectiveness of certain elements of the ‘flipped classroom’. The researcher was conscious of avoiding jargon, and of providing key terms and definitions so as to avoid any misunderstanding.

Prior to the completion of the questionnaire, the purpose and scope was explained to students. A professionally written and presentable cover letter was included in the questionnaire, explaining the reason for the study and that anonymity will be maintained. Due to the sample being so small and limited to one module, no questions pertaining to the students’ year of study or course were included

5 POPULATION AND SAMPLING METHOD

Research population is commonly a substantial collection of individuals, with similar characteristics or traits, which serve as the focal point of a scientific query (explorable.com, 2009). The population for this research study would, therefore, be 'students'. Due to this population be so large in size, researchers select a subsection of the population, referred to as the study population. An accessible population for this study is students at an independent higher education institute in Port Elizabeth, Eastern Cape. It is from this population that the researcher will draw the sample.

This study has made use of a non-probability, convenience, sampling method. According to Ross (2005) convenience sampling is a target group selected based on their accessibility to the researcher. For this purpose, third year marketing students will be exposed to the 'flipped classroom' teaching strategy; as it is only through exposure to the strategy that students will be able to complete the questionnaire in a valid and meaningful way. Bias will be avoided in that the entire class will be asked to complete the questionnaire and not just a select few, chosen by the researcher. The sample size consists of six (6) students. Due to this being exploratory research, the sample size can be viewed as irrelevant as the focus is on obtaining information pertaining to a problem shared by the sample group.

6 FEASIBILITY OF THE STUDY

The research was conducted over a six (6) month period with a total of sixty (60) hours contact time with the sample group. No funding was required. Only one questionnaire was used for the collection of data; because the research was conducted as exploratory research, the findings can be used to lay the groundwork for future research (Kowalczyk, 2015).

7 LIMITATIONS OF THE STUDY

According to Du Plooy et al (2014:291) limitations include any aspects that may hamper the research validity. The limitations of this study include the fact that there are no pre-test; post-test to assess the relevance of questions included in the questionnaire. Furthermore, because this study is exploratory in nature, it is not possible to generalise the findings to other modules.

8 ETHICAL CONSIDERATIONS OF THE STUDY

Through the introduction letter, respondents were informed of the nature of the research and the process which would be followed to collect information. Respondents were informed of how these results would be used and assured that confidentiality would be practiced. They were made aware that they were allowed to refuse to participate and/or withdraw at any time with no negative consequences being suffered. Due to all respondents being over eighteen (18) years of age, no guardian consent was required.

9 DATA ANALYSIS AND FINDINGS

Data analysis requires the examination of collected data and arrangement into meaningful information to better understand the problem. This includes looking for similarities and

relationships between data (Du Plooy-Cilliers et al, 2014:206). The researcher used a combination of various 'flipped class' elements, including pre-reading which allowed more class time for group work; informal quizzes and games; class discussions/debates and the creation of assessments. Online, outside of class, collaboration and engagement was also used. The questionnaire used for data collection included questions pertaining to student's enjoyment of each of these elements as well as levels of engagement and the resultant benefits. The data presented below has been grouped into 'in-class engagement'; 'elements of engagement' and 'out of class engagement' in order to draw conclusions from related questions; questions are grouped as per Figure 9, below:

Category	**Question number**
9.1 "In-Class Engagement"	Question 1 Question 2 Question 9 Question 10
9.2 "Elements of Engagement"	Question 3 Question 4 Question 5
9.3 "Out of Class Engagement"	Question 6 Question 7 Question 8 Question 11

Findings from question twelve (12) are included in the recommendations of the research.

9.1. In-class Engagement

The purpose of question one (1) was to determine the extent to which students felt engaged in the 'flipped classroom'. Figure 9.1.1 below demonstrates that while 60% of the sample group felt engaged; 40% of the class were very engaged through this teaching approach.

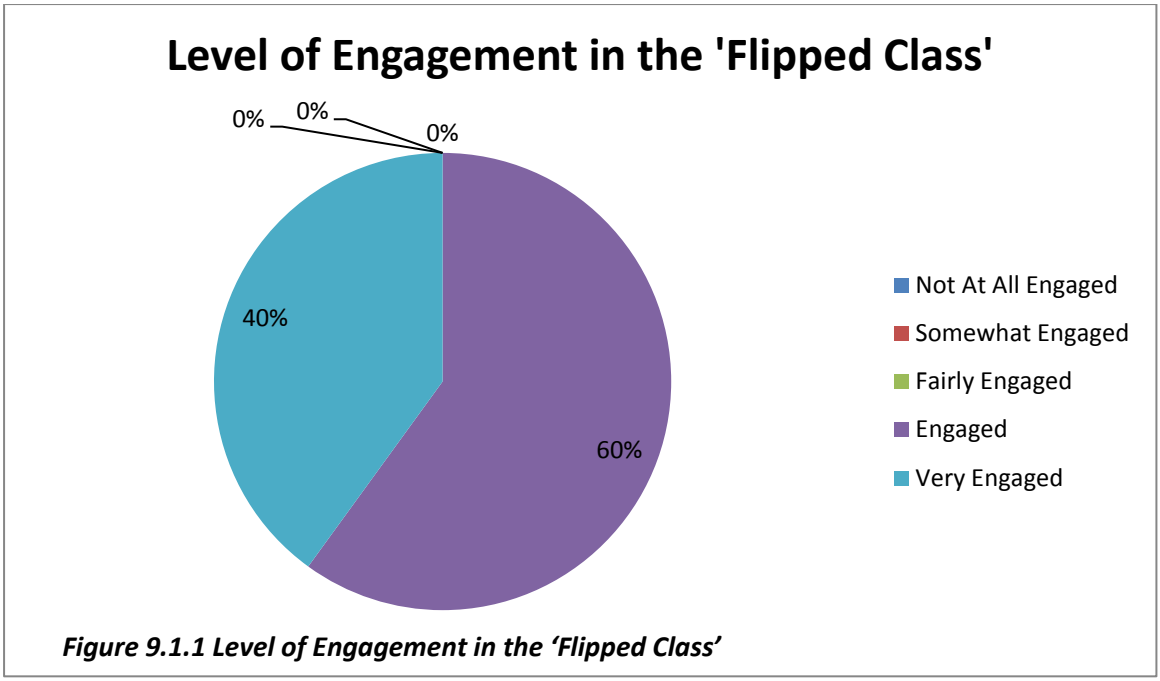


Figure 9.1.1 Level of Engagement in the 'Flipped Class'

Determining the level of engagement is important as, according to Kidwell (2010), engagement results in students being invested in their own education. From Figure 9.1.1's findings it is evident that all students, in the sample, felt engaged. Question two (2) was then asked to determine the reasons for students feeling engaged or unengaged, as per the answer to the previous question; Figure 9.1.2 illustrates the reasons the respondents gave.

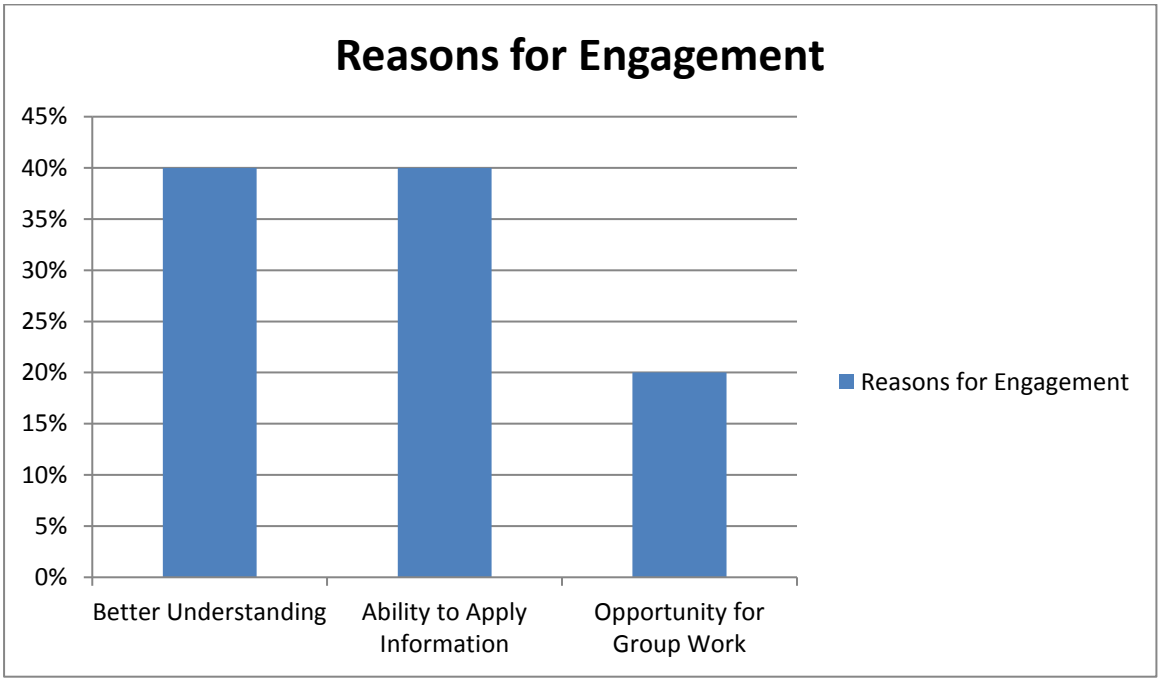


Figure 9.1.2 Reasons for Feelings of Engagement

Roberts and McNeese [s.a] substantiate the findings of the above by stating that engagement results in higher level thinking and the ability of students to apply and demonstrate knowledge more easily. In further substantiation of the above, question nine (9) asked the respondents whether the flipped classroom enhanced their understanding of concepts, to which 100% of respondents felt it did, as can be seen in Figure 9.1.3, below.

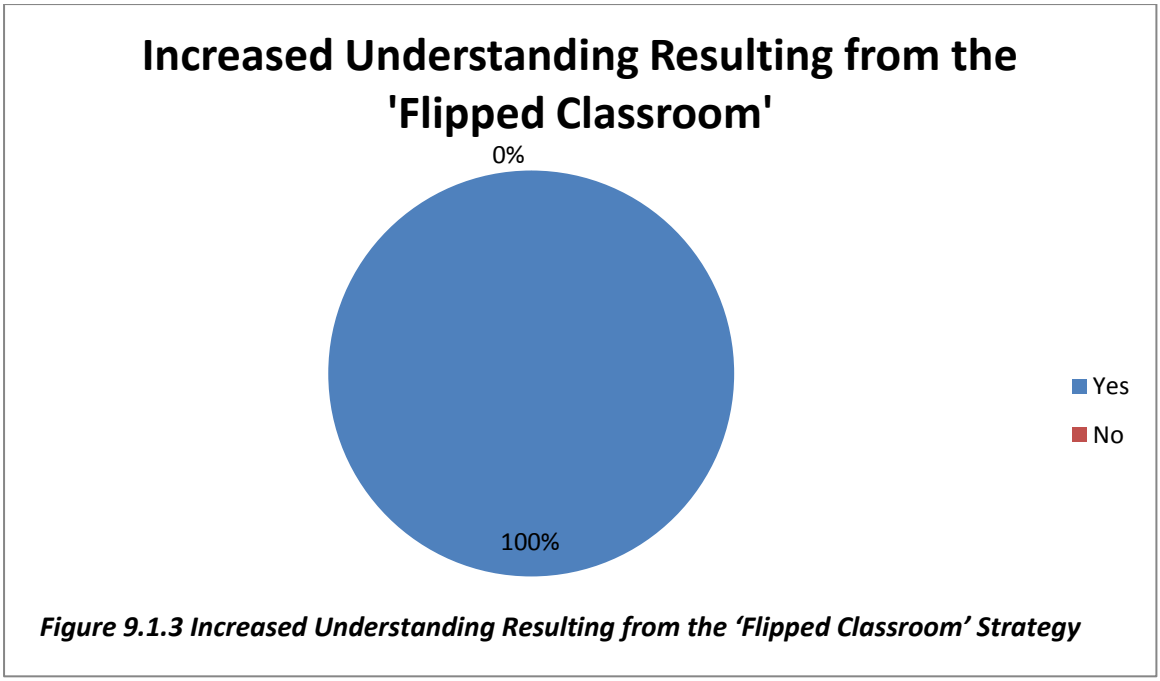


Figure 9.1.3 Increased Understanding Resulting from the 'Flipped Classroom' Strategy

Question ten (10) required that students provide an explanation on why they feel the 'flipped classroom' strategy assisted in increasing their understanding; as can be seen in Figure 9.1.4, below, 60% of respondents felt that the need to apply content deepened their understanding of the content; 20% of respondents felt that hearing their peers articulating their understanding helped to deepen and clarify their own; while the remaining 20% of respondents felt that the additional research and readings which were required in order to formulate responses helped reinforce their understanding.

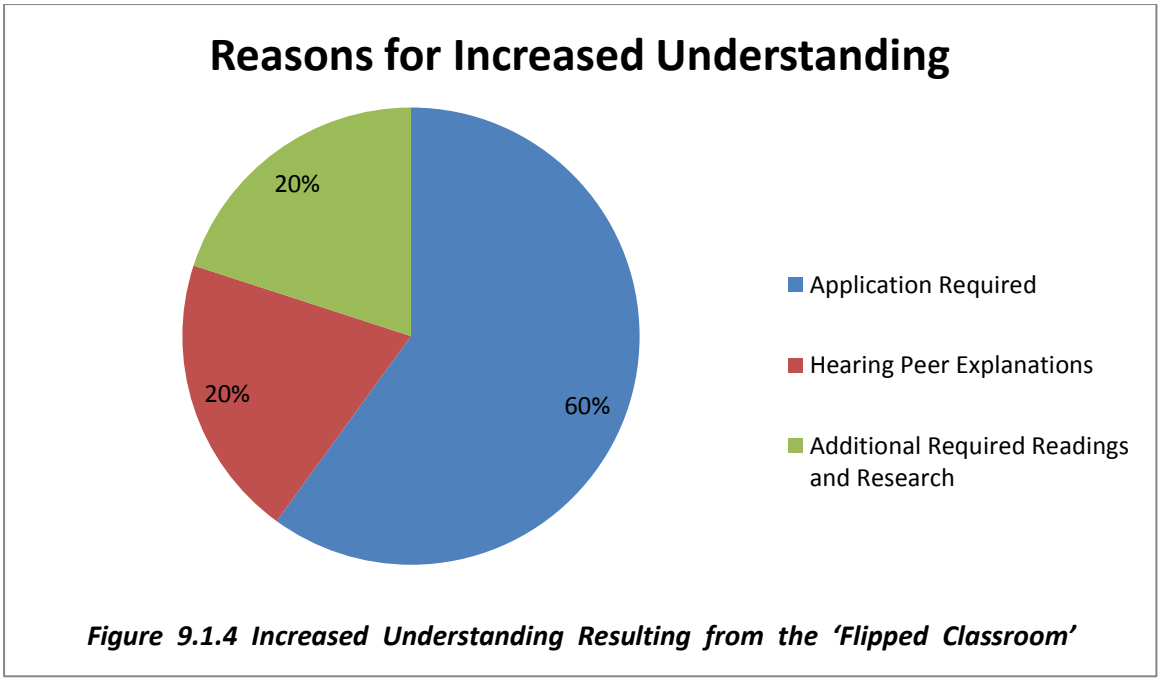


Figure 9.1.4 Increased Understanding Resulting from the 'Flipped Classroom'

9.2. Elements of Engagement

Question three (3) was asked to determine which of the elements of the 'flipped class' the students found the most enjoyable. This question is relevant as activities deemed enjoyable can be used with more frequency and those which the students find least enjoyable can be

altered to increase enjoyment and, possibly, engagement. Figure 9.2.1 illustrates that all of the students found each of the individual elements at least somewhat enjoyable. Informal quizzes and games rated the most highly with 100% of the class finding them very enjoyable; followed by creating assessments and having more time to complete tasks in class both being ranked as very enjoyable by 60% of the class while 40% of the class ranked each of these elements as being enjoyable. 40% of the class found group work very enjoyable while an equal amount found it enjoyable and only 20% found it somewhat enjoyable. Class discussion and debate was found enjoyable by 60% of the class while 20% found it somewhat enjoyable and the remaining 20% found it very enjoyable.

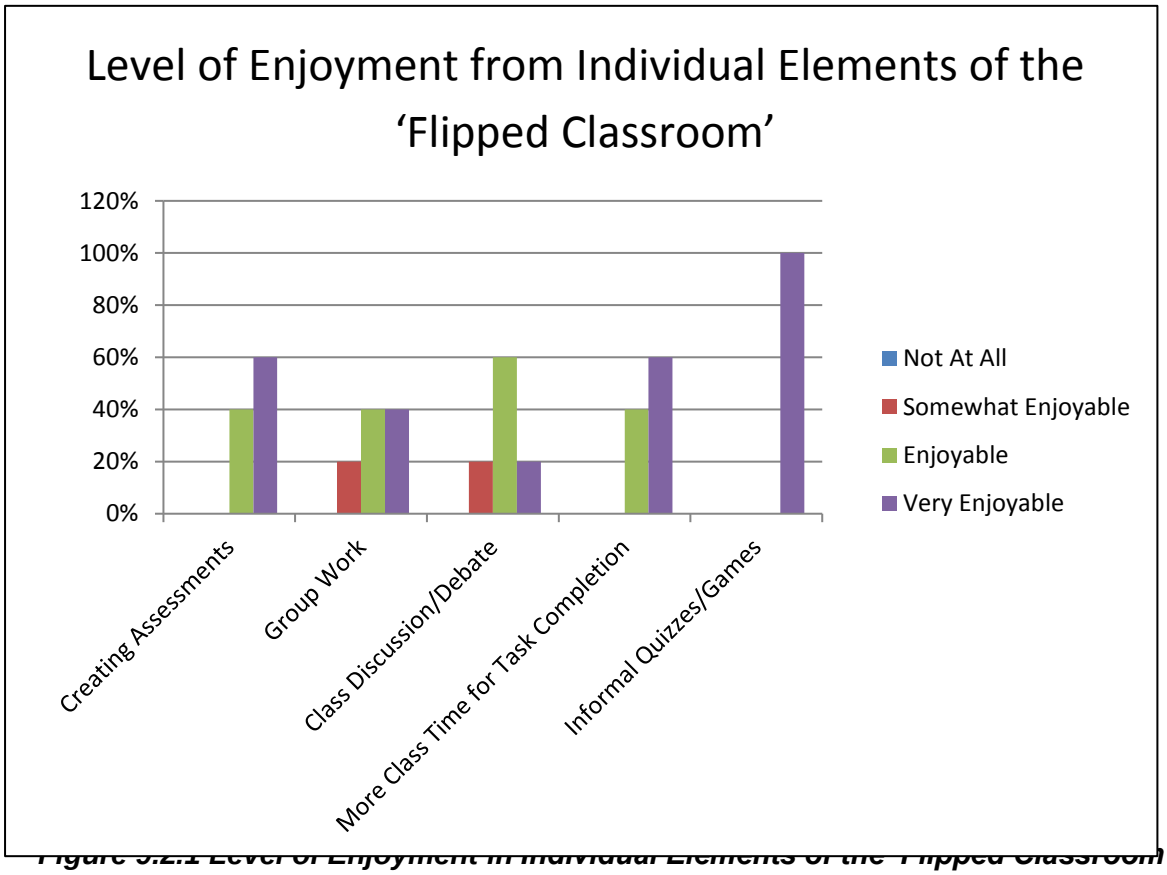


Figure 9.2.1 Level of Enjoyment in Individual Elements of the 'Flipped Classroom'.

From the above findings it is evident that students enjoy each of the flipped classroom elements. This fulfils the University of Queensland's [s.a] stance that students have diverse learning needs which can be addressed through varying methods of instruction which the 'flipped classroom' approach allows for. However, what is important to note is, that it is possible to find something enjoyable but not engaging. This is evident through the findings

from question five (5) which revealed that, although all respondents found informal quizzes and games very enjoyable, as is illustrated in Figure 9.2.2 below, the largest proportion of respondents, 40%, found creating assessments the most engaging element. The remaining 60% of the class were evenly divided between informal quizzes and games; class discussion and debate and group work. Although the students found it enjoyable to have more class time to complete work, none of them reported feeling engaged by this; although Edutopia (2015) suggests that the allowance of more class time for tasks may be used to address any gaps in student understanding, therefore the importance of this element should not be overlooked.

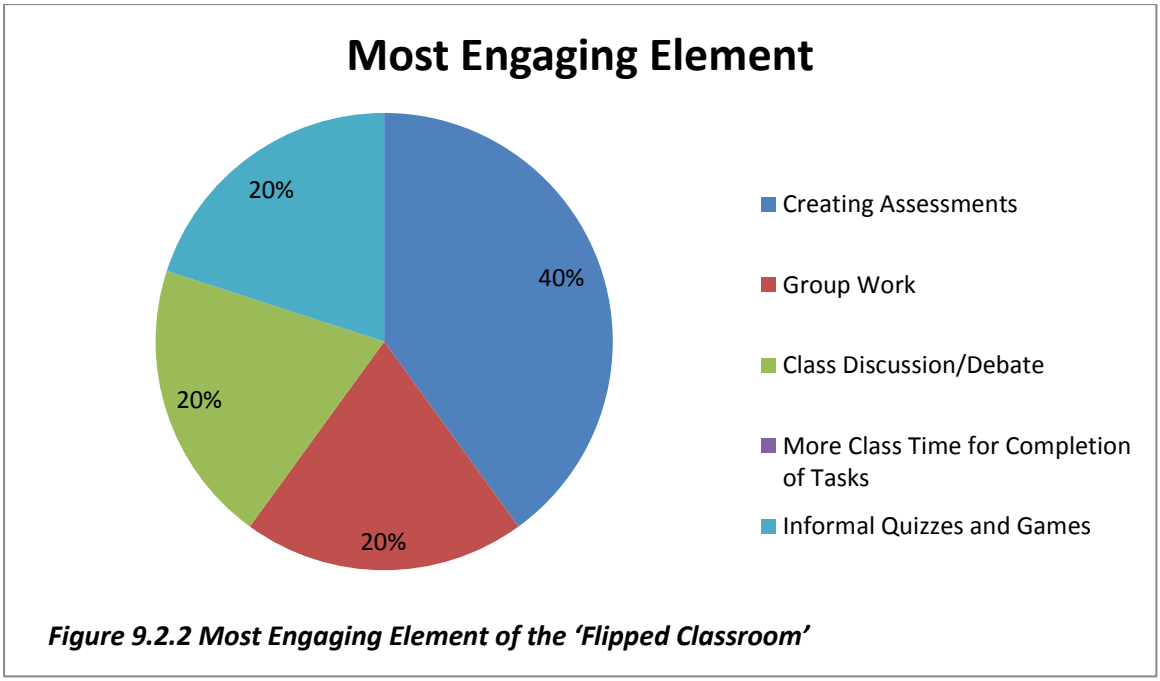


Figure 9.2.2 Most Engaging Element of the 'Flipped Classroom'

Educause (2012) points out that part of the value students see in the ' flipped class' is the fact that they have time to interact with each other and apply their knowledge, this is evident from the number of students who claimed to be engaged through group work and class discussion. In the open ended part of question five (5) 60% of the class cited the fact they needed to do research in order to create an assessment as the reason for feeling engaged by this; while 20% of the class stated it served as good practice for real tests and the remaining 20% expressed that they needed to understand the work, deeply, in order to create the assessment. Bergman and Sams (2012:viii) reiterate that students seem to understand content on a much 'deeper level', when learning through this teaching strategy. Parsons and Taylor (2011) add that students that are more actively engaged tend to retain information for longer periods of time; have a deeper understanding of content and are therefore able to apply it more easily and are better able to form coherent and substantial answers in tests and exams.

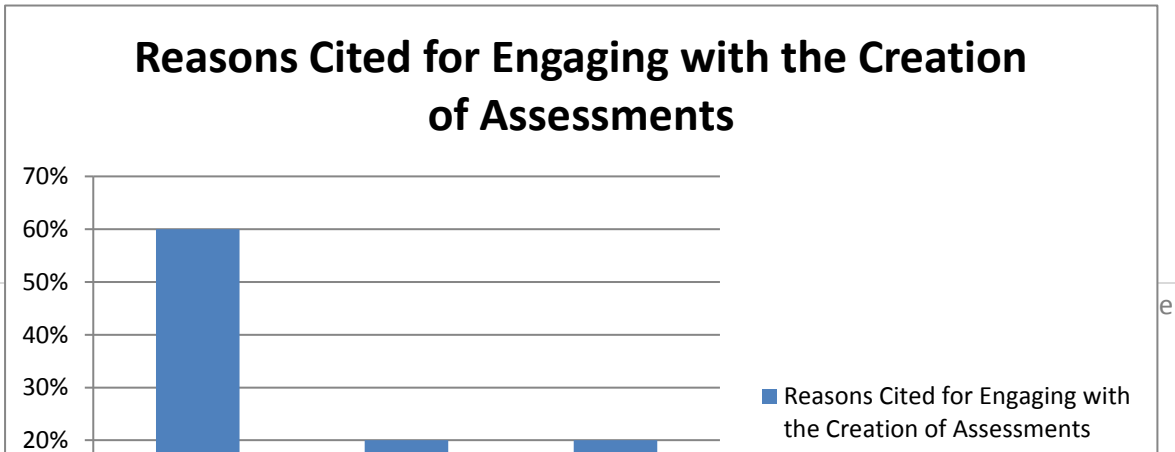


Figure 9.2.3 Reasons Cited for Engaging with the Creation of Assessments

Interestingly, however, although 20% of the class found group work to be the most engaging element, results from question four (4) revealed that 40% of the class found it to be the least engaging, as can be seen in Figure 9.2.4 below. An equal percentage of the class found class discussion/debate the least engaging; while 20% of the class found informal quizzes the least engaging despite 100% of the class having found it the most enjoyable element, as was seen in Figure 9.2.1

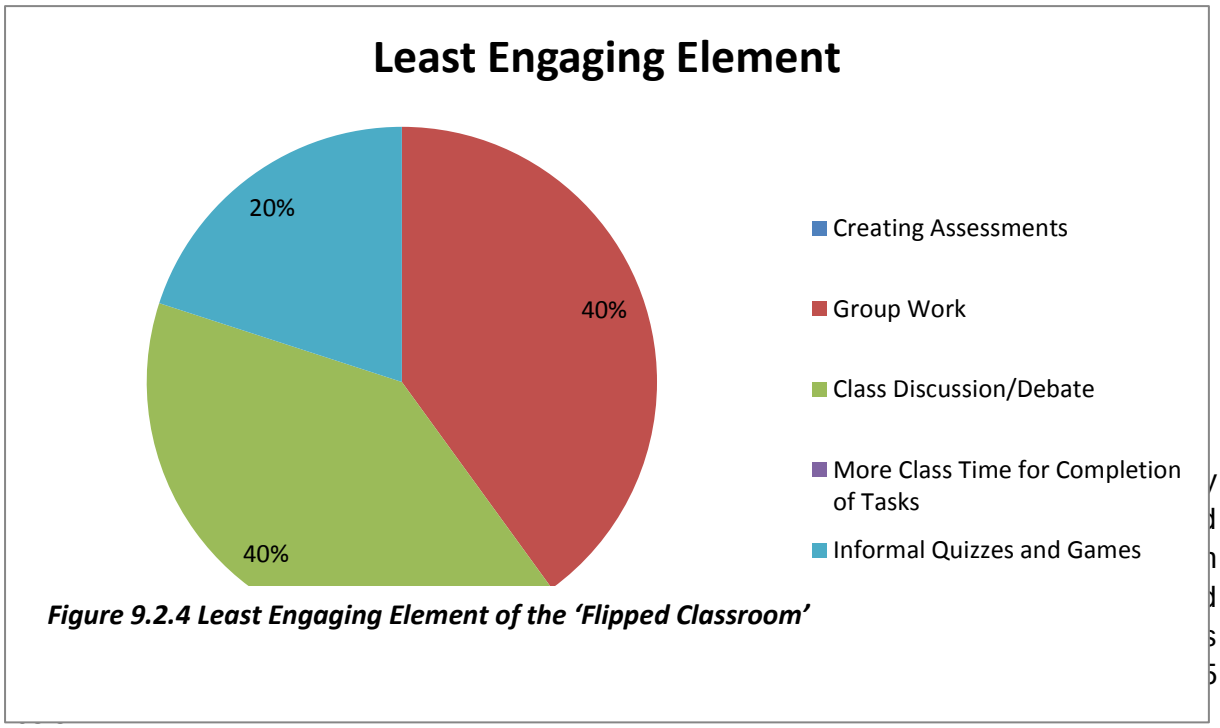
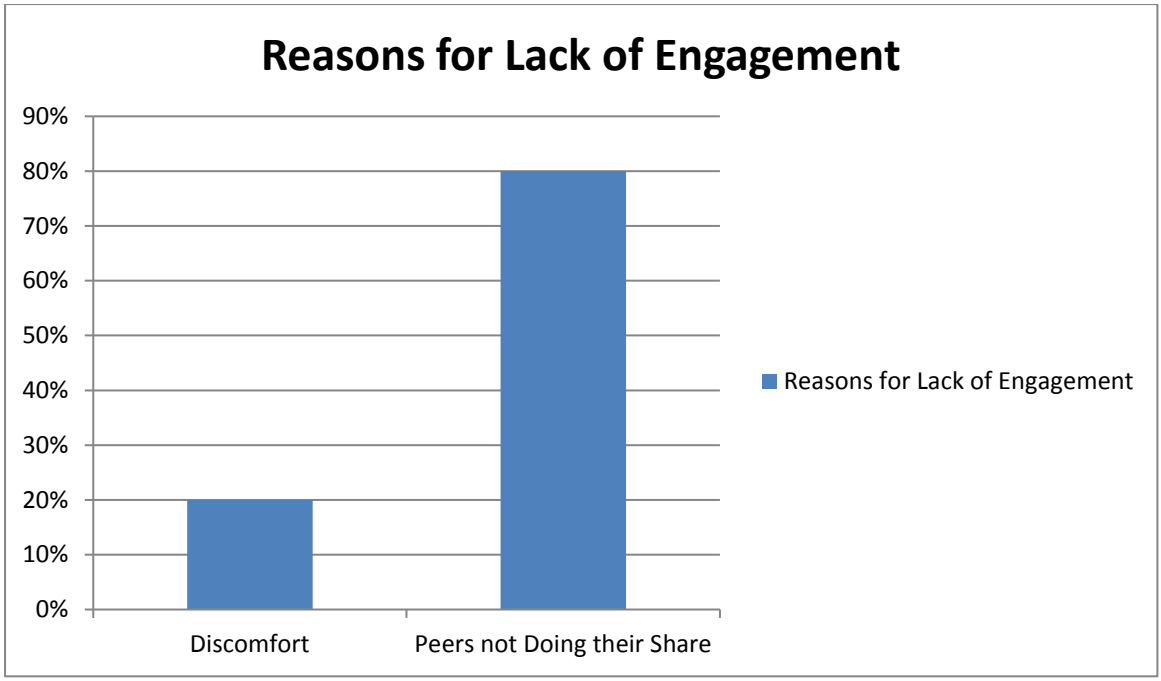


Figure 9.2.4 Least Engaging Element of the 'Flipped Classroom'



[***Figure 9.2.5 Reasons for Lack of Engagement***

roupwork, Reis (2012) states that students who participate in activities whereby they need to explain concepts to peers and collaborate with others, results in them receiving immediate feedback, forcing them to evaluate their own understanding resulting in deeper-level understanding and information retention. These elements therefore cannot be discounted and a method for addressing students concerns, at having to do all the work, need to be addressed before further research is conducted.

9.3. Out of Class Engagement

The purpose of this question is to determine whether students are willing to engage with content and peers outside of class and to ascertain their reasons for doing so or for being unwilling to do so. Question six (6) simply asked students whether they participated in online discussions, outside of class, as Figure 9.3.1 below illustrates, 60% of the respondents participated in all out-of-class activities, while 40% of respondents participated in some of these activities.

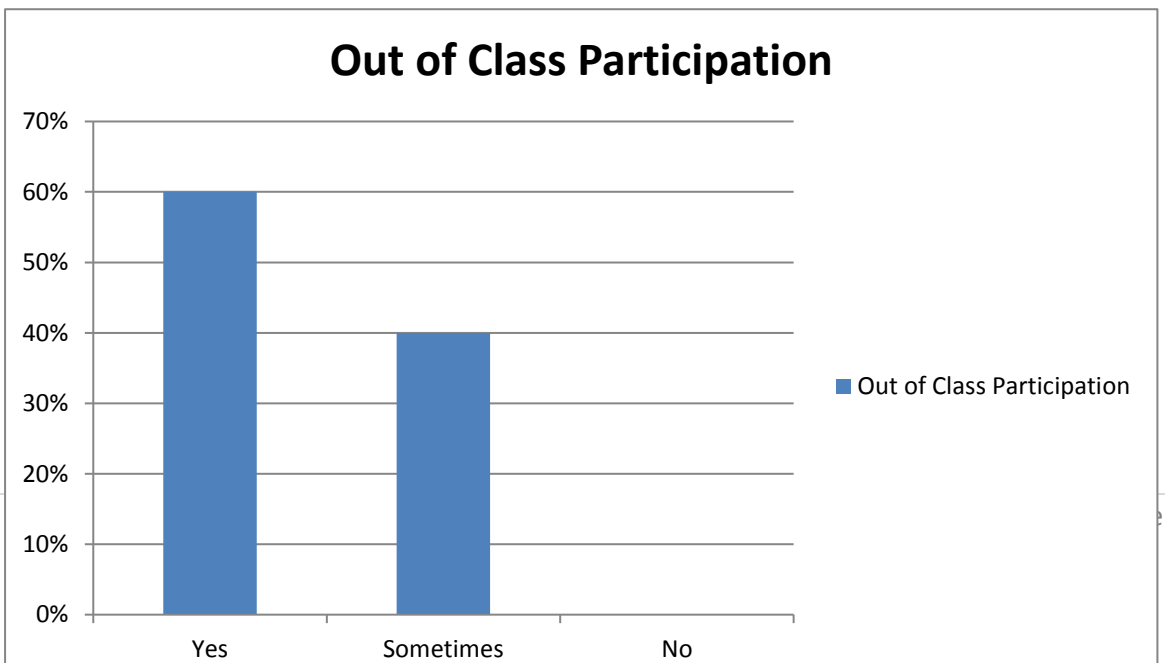


Figure 9.3.1 Out of Class Participation

Respondents were encouraged, in question seven (7) to state any/all reasons for participating, or choosing not to participate, in online activities outside of class. Although 100% of the respondents reported to participating in these out-of-class activities, the reasons they gave varied, as illustrated in Figure 9.3.2, below. The greatest reason, 80%, is the knowledge that respondent's postings may assist their peers in understanding concepts. An equal number of respondents, 60%, were motivated by the marks awarded for participation; enjoyment of engaging with peers outside of class and the knowledge gained from reading their peers comments and opinions.

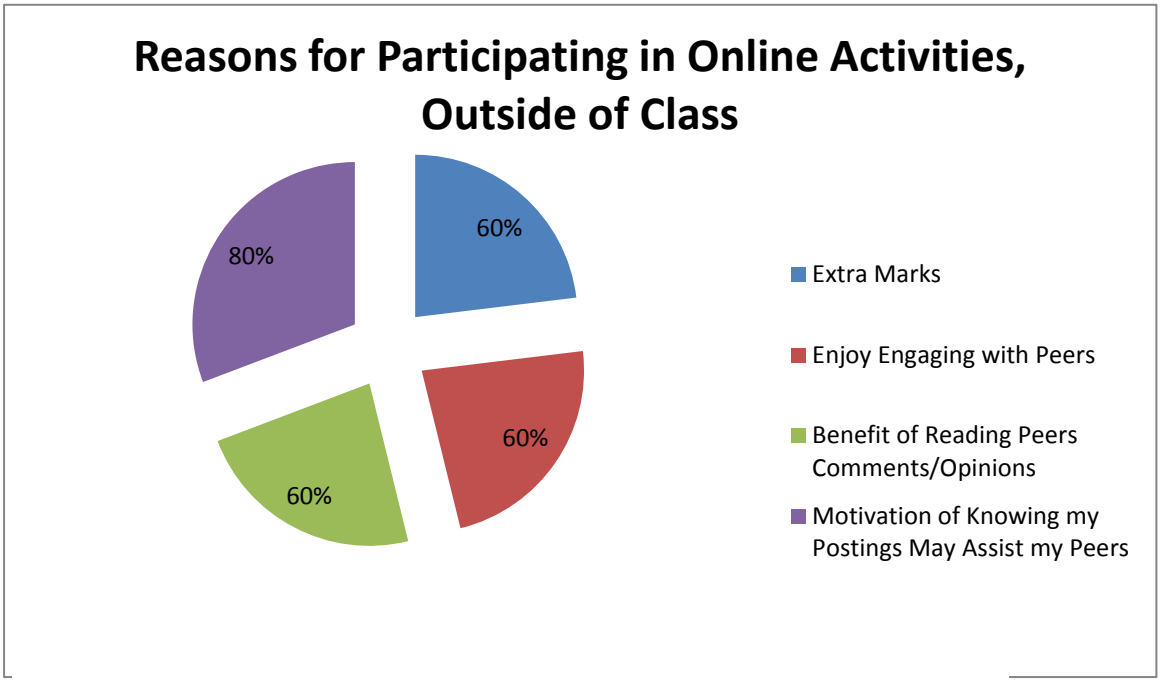


Figure 9.3.2 Reasons for Participation in Online Activities, Outside of Class

These findings are conducive to those from research conducted by Massey (2015) which revealed that students rely on collaboration, outside of the classroom, as a method of study assistance and a way of improving engagement and focus on content. Veigga (2015) adds that engaging with content outside of class helps students to consolidate and revise what students have learned. In addition, by reading others comments and opinions, it may assist in pinpointing areas where there is a gap in understanding. However, although all respondents stated that they did participate, at least sometimes, when faced with the question of why they did not always participate in these activities, 80% cited no internet

access at home as the reason; while the remaining 20% claimed they did not have the time to do so.

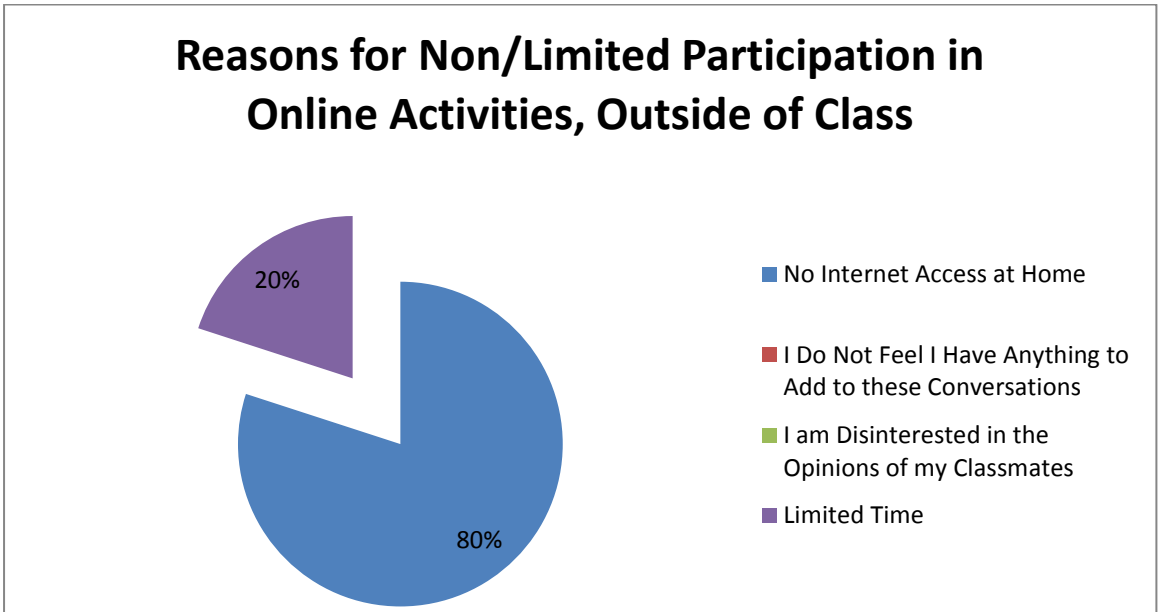


Figure 9.3.3 Reasons for Non/Limited Participation in Online Activities, Outside of Class

In an attempt to address student inaccessibility to technology, the University of Queensland [s.a] claims that the 'flipped classroom' teaching strategy can be accomplished without the use of technology. They do, however, reinforce the benefits of technology; such as the ability to access content at times that are convenient to the student, as well as allowing the student to work through online lectures at a pace that is suitable to them. As well as the fact that technology appeals to a multitude of learning styles, through sight, sound and movement. It is fair for educators to expect students to arrive on campus before lectures to work on 'on-line' or 'out-of-class' work, however if students do not have access to devices then they will still be at a disadvantage. As Edutopia (2015) points out, campus libraries are usually full with queues of students waiting to access computers. It is for this reason that an argument could be made that flipping the classroom results in students, who have limited access to technology, falling further behind because topics don't get covered in the traditional educational sense (Diaz et al., 2013). On the flip side of this, Gleanson (2008) points out that millennial students are in constant contact with the outside world through technology and social media; opening the gap for educators to take advantage of using technology to keep students engaged. Therefore, what needs to be addressed is how educators can use social media as a way of engaging with students outside of class.

Considering that respondents admitted to engaging out-of-class, despite it not always being convenient, question eleven (11) addressed whether the expectations placed on the students to engage outside of class were reasonable; 100% of the class agreed that it was, as can be seen in Figure 9.3.4, below.

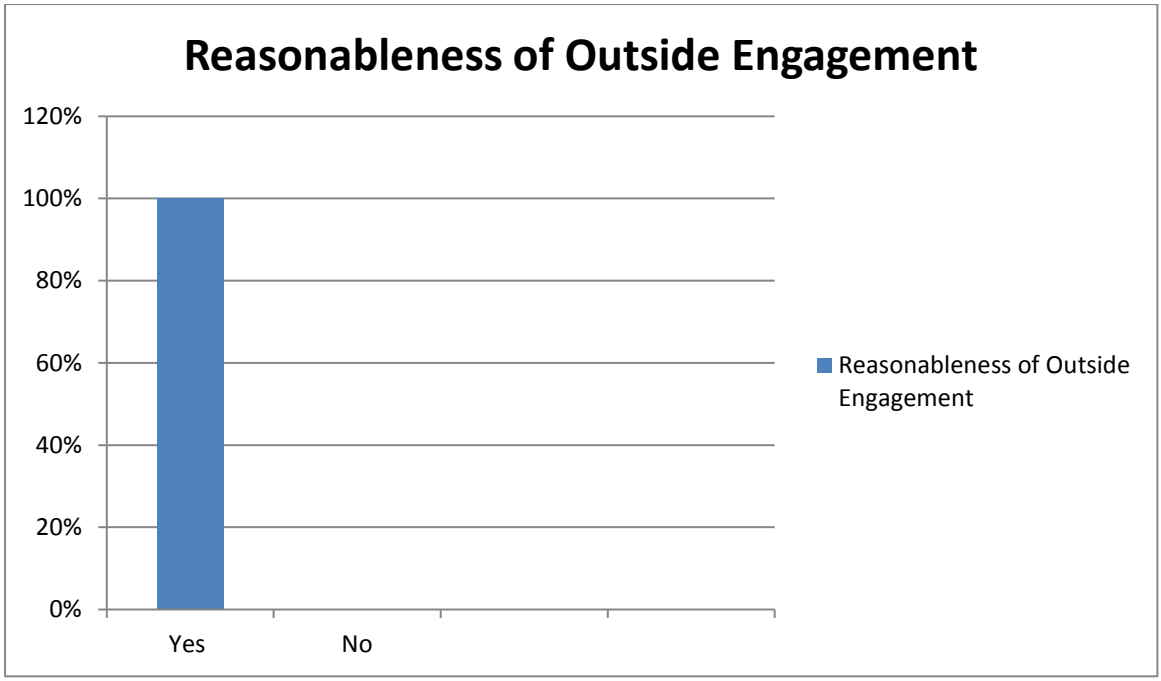


Figure 9.3.4 Reasonableness of Out of class engagement, expectations.

The approach the researcher took to out-of-class engagement, considering her knowledge of the students lack of resources at home, was a combination of at-home readings, limited online collaboration and written application questions; it is believed that it is for this reason that respondents claimed the expectations were reasonable.

10 RECOMMENDATIONS OF THE STUDY

The first recommendation is taken from respondent feedback to question twelve (12) in the questionnaire which asked for feedback to improve the 'flipped classroom' strategy. From this feedback it is recommended that the concept of group work is addressed early on so as to prevent negative feelings which may result in no students participating in group discussions/debates or tasks. In this vein, a mark could be allocated, by group members, to group members, based on their contribution toward work and discussion; this mark should count toward actual grades for this approach to be effective.

A further suggestion to question twelve (12) is to allow class time for completing online tasks due to the lack of access to internet and technology at home. A recommendation, in light of this suggestion, would be for campuses to provide laptops to students as part of registration. This has been done on the researchers' campus, on select courses, in the past and proved to be useful in terms of students being able to download content, while on campus or in wifi hotspots. Having their own devices also allows students to work on tasks, at their own pace, in class.

In order for the 'flipped' strategy to work it is important that a balanced approach of in-class and out-of class activities be maintained and to consider that students already completing their third year of studies are accustomed to traditional teaching strategies. It is therefore important to not totally eliminate traditional teaching, but to minimise it and to eventually start

introducing more student-centered tasks which give students increasing amounts of responsibility for their own learning.

11 CONCLUSION

Martin Luther King stated that “the function of education is to teach one to think intensively and to think critically” (Iqirugajun, [s.a.]. By exposing students to a ‘flipped classroom’ teaching strategy they are being forced to look critically at their own learning experience and participate actively in that experience to promote deepened learning. From this research it is evident that the sample group students have seen the benefit in engagement through their reports of increased retention of content and ability to recall and apply information.

It is important to note that although this research is intended to add value to the educational environment in its entirety, focus is narrowed to higher education in South Africa with all research being conducted in a private institution; therefore, where comments are made and/or opinions and findings are given, these should be read in context. Furthermore, due to the study being exploratory in nature the findings cannot be generalised to other modules meaning that the study should, in future, be applied to other environments and the findings compared in order to create a more general view.

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ADDENDUM ONE:

STUDENT ENGAGEMENT QUESTIONNAIRE

Dear Respondent

For the past three months you have been exposed to a new teaching strategy called flipping the classroom. The emphasis of this strategy was to encourage you to engage more actively with the learning content and explore the topics of the module in more depth. This was achieved through preparing for a topic outside of class and then working individually and/or in groups to apply this information to case studies and problems; to create assessments; conduct class/group discussions and debates; all with the end goal of creating a deepened understanding of content.

The aim of the questionnaire is to provide you with the opportunity to express your view on this 'flipped classroom' strategy. Please note that this questionnaire is anonymous. Participation is completely voluntary. You can withdraw from the research at any point and will not be penalised in any way if you wish to do so.

However if you do choose to participate in the research, please be honest in your answers. Findings will be used to compile a research article regarding the success of this strategy in engaging students in learning. You are welcome to contact me if you would like to view the findings.

Thank you for your participation and honest opinion.

Please answer all the questions in this questionnaire.

Kind regards

Gail Archibald
Gailarchibald3@gmail.com

Question 1: On a scale from one (being not at all) to five (being very), how engaged did you feel in the flipped class? Please circle your choice.

Not engaged at all	Somewhat engaged	Fairly engaged	Engaged	Very engaged
1	2	3	4	5

Question 2: Please explain your views on being engaged as identified in question 1. For example, if you felt that you were not engaged at all, please explain why.

Question 3: Using the scale, please tick the appropriate block for each of the following flipped classroom elements.

Element	Did not enjoy at all	Somewhat enjoyable	Enjoyed	Very enjoyable
a) Creating assessments				
b) Working as part of a group				
c) Class discussion/debate				
d) Having more class time to complete activities				
e) Interacting with content through informal quizzes and games				

Question 4: From the list above, which element of the flipped classroom did you find the least engaging and why?

Question 5: From the elements given in question 3, which element did you find the most engaging and why?

Question 6: Did you participate in the online discussions, outside of class? Please tick the appropriate block.

☐ Yes

- No
- Sometimes

Question 7: Please select the options from the list as reasons why you have engaged in the online environment, outside of class. Tick as many options as you feel is relevant to you.

a. I engaged in the online activities because I wanted the extra marks	
b. I enjoyed engaging with my peers through this online environment	
c. I feel I benefitted from reading my peers comments and opinions on topics.	
d. I felt more motivated to do work, outside of class, knowing that my postings may help my peers	

Question 8: Please select the options from the list as reasons why you do not want to engage in the online environment outside class. Tick as many options as you feel is relevant to you.

a. I do not have access to the Internet at home and cannot log on.	
b. I do not feel I have anything to add to these conversations	
c. I am disinterested in the opinions of my classmates on topics discussed in the online environment.	
d. I do not have the time to engage online	

Question 9: Do you feel your understanding of the module contents was enhanced through the flipped classroom?

- Yes
- No

Question 10: Please explain your answer to question 9, above. For example, if you feel that the flipped classroom did not help you understand the module contents better, explain why not or if it has, please explain why.

Question 11: Do you feel the expectations placed on you to watch videos and complete tasks at home, , are reasonable? Please tick the appropriate block.

- Yes
- No

Question 12: What suggestions/recommendations would you make for improving on the flipped classroom? Please answer this question, constructively.