Research Article

Overview of Students’ Perception of Flipped Classroom Adoption Paradigm in Higher Institutions

Ireti Hope Ajayi1,2*, Noorminshah A.Iahad1, Norasnitia Ahmad1

1Faculty of Computing, Universiti Teknologi Malaysia, 81310 Skudai, Johor, Malaysia.
2Department of Computer Science, Federal Polytechnic, Mubi, Adamawa State, Nigeria.

Abstract

The explosion of Information Technologies (IT) has undoubtedly affected ways of doing things in all facet of life including in the educational sector. This accounted for the shift of both teaching and learning methods away from the age long traditional face to face approach to computerized system of active learning among which is flipped classroom. The paradigm, though an evolving concept in the developing countries has continue to gain ground especially in higher institutions in view of its contributions in the field of education. The study is therefore aimed at investigating the students’ perception of flipped classroom adoption as compared to the traditional method. Meanwhile, the research was conducted using quantitative approach through the use of questionnaire to get students views of the paradigm, just as descriptive statistics was used to interpret the results of the test. Findings however revealed that sizeable number of students believed that there is significant improvement in performance in courses that were flipped than those offered in the conventional method.

1. Introduction

Flipped classroom otherwise called Inverted classroom is an evolving method of active learning in today’s world. The paradigm has reversed the teaching method away from the traditional face-to-face approach wherein teachers take a center stage and dominate the environment to an active and interactive learning process where both student and teacher participate fully Flaherty and Phillips, (2015). Flipped classroom can be traced back to the 90s, when Eric Mazar, a Professor of Physics at Harvard University, first used it in his research Mazur, 1997. Thereafter, Bergmann and Sams, (2012) applied the model in K-12 education, thus providing avenue for learners to perform individual task on their own before the in-class session as well as assist those that find learning difficult access to instructional materials in video format to enable them study at their own pace. This explained that the typical in-class activities done in the traditional face to face class are carried out by students at home, while the supposed home task is now review and/or discuss during the in-class session. Flipped classroom on this account has therefore continued to gain fast relevance in education, especially in higher institutions considering its merits including: ability to learn at own pace,
promote students-centered learning and collaboration, efficient, support peer interaction amongst others (Anger and Roulet, 2012; Guan et al., 2015; Tucker, 2012). However, there are some delusions on what inverted class is or not. Some thought that students spend all their precious time in front of their computer device(s), teaching materials replace teachers, or that inverted classroom is an online course (Szparagowski, 2014).

2. Literature Review
2.1 Flipped Classroom
It evolution has replaced the old method of teaching pedagogy such that teachers' roles have changed from what was then believed to be “sage on the stage” to “guide by the side” in the traditional and flipped classrooms respectively. This shift is explained from the fact that students are expected to have carefully studied the provided material individually prior to the face to face class. As a result, the in class period is use for discussion and research, thus removing the seemingly dominant roles played by teachers in the traditional class. The figure 1 below gives a clear description of a traditional and flipped classrooms.

![Figure 1: Traditional face to face and flipped classroom.](image)

2.1.1 Flipped Classroom Arena: Benefits and Challenges
Proponents of flipped classroom, including Morgan, (2014), have highlighted some of the positive contributions of flipped classroom in education. These includes; inherent ability for students to learn at their own strength, facilitators have ample time for more explanatory work during in-class activity, cost effective as it require no buying of hardcopy textbooks, students who miss class (es) as a result of unforeseen circumstances do not totally miss out as they can download instructional materials anywhere they are, academic activities is faster. However, critics of flipped classroom including Bergmann and Waddell,
(2012) are worried that notwithstanding the benefits associated with flipped classroom, there have been some drawback. Arguments are that some students are not disposed to learn via the electronic medium, just as some get bored in no distance time due to lack of motivation mechanism. In addition, technological gap, financial capabilities of the learners in acquiring necessary gadgets and absence of channel to immediately get clarification on contentious areas have been a problem.

2. Research Method
In investigating the students’ perception of flipped classroom, a survey was carried out to know their views of the pedagogy. The research focus on the undergraduate students from Faculty of Built Environment at the Universiti Teknologi Malaysia who have a clearer view of what flipped and traditional classrooms are all about. Meanwhile, about forty students was used as a pilot study wherein they were administered some sets of questions, while thirty-three (33) person responded. The survey included demographic part and quantitative part. The questions were measured using the 5-Likert scale ranging from strongly agree-5, agree-4, neither agree non disagree-3, disagree-2 to strongly disagree-1, just as students were allow to provide an open-ended answers to some questions in the design questionnaire. Meanwhile, descriptive statistic was used in analyzing the test results.

3. Results and Discussion
The research examined the perception of students in flipped course in relation to other courses that is not flipped. Thirty-three (33) persons (94%) out of the thirty-five students responded to the questions, the results obtained for the demographic and quantitative parts are as follows:

3.1 Demographic Data
Two (2) questions focusing on gender and age group were asked under this session. Meanwhile, the result shows that 39% (13) were male and 61% were female. This revealed relative split of male and female respondents. Meanwhile, response to the second question is unique as all the respondents fall under same age bracket of 15-25 years. See fig 4.1 below for the representation of the gender result.
3.2 Quantitative Results

Respondents were provided a survey questionnaire with a view to getting their thoughts on some features of inverted classroom model. The outcomes that dwelt on students’ perception were presented below;
**Figure 4:** Flipped classroom is more engaging than traditional face to face class

**Figure 5:** I have time to prepare for in-class activity in flipped classroom

**Figure 6:** In-class time in flipped classroom is devoted to discussion, question and answer session
Figure 7: Flipped classroom give room for group/peer discussion

Figure 8: I always go through the provided instructional materials before the in-class period

Figure 9: I always go through the provided instructional materials before the in-class period
Figure 10: I always go through the provided instructional materials before the in-class period

Figure 11: I suggest that other teachers adopt the teaching method

Figure 12: If motivation is added to flipped teaching, performance would increase as commitment will improve
The study has thus far shown that students’ perception of flipped classroom is positive as no student object to its contributions. This therefore translate in their readiness to continuance use. However, the significant response of students on whether the concept support group discussion shows that so far, the students do not have strong opinions to either support or against. This may therefore be linked to the fact that the technique is still and evolving method of active learning and as such, student may require more time to form their opinion on the model.

In the same vein, the number of respondent that belief that motivation could improve student engagement in flipped classroom may be a pointer to the fact that students need an incentive to improve their desire in flipped classroom. Motivation can be inform of awards on points and badges amongst others.

4. Conclusion
In conclusion, following observations and outcome of the study, it can be said that flipped instructional model has positively influence on learning capabilities of students. Meanwhile, attention need to be placed on some of the weakness of flipped classroom with a view to ensuring that students embrace the evolving learning approach. Future research would focus on how to ensure student full commitment in flipped classroom.

Acknowledgement
Special appreciation to the Management of Federal Polytechnic Mubi, Adamawa State, Nigeria, Tertiary Education Trust Fund (TETFUND), Nigeria; for the financial support/ grant. Similarly, the support of my lecturers at Faculty of Computing, Universiti Teknologi Malaysia is acknowledged.

References


Tucker, B, (2012). The flipped classroom. Education Next, 12(1), 82-83