

PERCEPTIONS OF LECTURERS AND STUDENTS ON THE USE OF FLIPPED CLASSROOM INSTRUCTIONAL MODEL IN TEACHING AND LEARNING IN FEDERAL UNIVERSITIES IN ENUGU STATE

Ifeanyi John Eneovo

Department of Computer Education,
University of Nigeria, Nsukka.

&

Immaculata Nwakaego Akaneme

Department of Educational Foundations (Educational Psychology)
University of Nigeria, Nsukka.

Abstract

The study investigated the perceptions of lecturers and students on the use of flipped classroom instructional model in teaching and learning in federal universities in Enugu State. The study adopted descriptive survey research design. The instrument for data collection was a structured questionnaire. The data collected for the study were analysed using mean and standard deviation. Findings from the study revealed that lecturers and students have positive responses towards flipped classroom instructional model; hence both lecturers and students were satisfied with flipped classroom instructional model in teaching and learning. Some perceived benefits of flipped classroom utilization are facilitating active learning, developing collaborative teamwork, stimulating autonomous learning, and increasing classroom interaction. It was therefore recommended that flipped classroom instructional model should be integrated in teaching because of its importance in the development of the knowledge and skills of students; and it is a student-centered learning strategy that engages the students rather than spoon-feeds them.

Keywords: Flipped Classroom; Instructional Model; Teaching; Learning; Lecturers; Students

Introduction

Flipped classroom instructional model is an innovative pedagogical approach in the contemporary classroom. Flipped classroom has begun to revolutionize the way the students receive information from their lecturers; and is ushering in a new era of active and creative thinkers (Roach, 2014). Flipped classroom is an instructional model in which students view the learning content before class through instructor-provided video lectures or

other pre-class learning materials, and in-class time is used for student-centered active learning. Flipped classroom instructional model is a pedagogical model in which the lecture and homework elements of the course are reversed (Eucause, 2019). According to Bergmann and Sams (2012), flipped classroom instructional model is that which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class. In this model, lecturers prepare lessons through videos or any multimedia that the students can view at homes or in any other places by using their tablets or smart phones before attending the class, while the time of lecture is advocated for exercises, discussion, practices and helping solve home assignments (Elian & Hamaidi, 2018). Flipped classroom instructional model is a form of blended learning that incorporates technology and classroom instruction (Kim, Chun & Choi, 2014), which is usually provided with Learning Management Systems (Chun & Heo, 2018). This teaching technique typically involves students previewing lecture materials before class and participating in classroom activities designed so that the students can demonstrate understanding (Chan, Tse & Yu, 2015). Bishop and Verleger (2013) stated that flipped classroom instructional model is an educational technique that consists of two parts: interactive group learning activities inside the classroom and direct computer-based individual instruction outside the classroom. Flipped classroom can be considered more of a complement, rather than a substitute, to the traditional educational classroom because it allows classroom time to be geared more toward active and collaborative learning (Roach, 2014).

Flipped classroom is known by various names including: inverted classroom (Lopes & Soares, 2018), flipped teaching or flipped learning (Fidalgo-Blanco, Martinez-Nunez, Borrás-Gene & Sanchez-Medina, 2016). One of the core objectives of flipped classroom is to move students away from passive learning and towards active learning where students engage in collaborative activity, peer learning and problem-based learning (Higher Education Academy, 2017). The philosophy behind the flipped classroom instructional model is that it allows lecturers to teach both content and process using a student-centred learning environment (Kim, Kim, Khera & Getman, 2014). The roles of students in the use of flipped classroom instructional model according to Evseeva and Solozhenko (2015) include: students have opportunities to control their own learning (that is, students can study at their own pace due to availability and accessibility of all necessary resources in the e-learning environment); the flipped classroom instructional model encourages collaboration among students due to mutual projects and group work; and the flipped classroom increases students' responsibility for their own learning.

That is, the students become more self-directed and motivated than in a traditional classroom environment, thereby making the students active participants of the educational process. Evseeva and Solozhenko further stated that the flipped classroom instructional model has an impact on the lecturer's role as well. The role of the lecturer is shifting from delivering ready-made knowledge to students, to facilitating the students learning.

The use of the flipped classroom instructional model is one of the ways lecturers begin bringing more technology into the students' learning environment and support a self-directed learner. In other words, the use of video and other pre-recorded media puts lectures under the control of the students; that is, the students can watch, rewind, and fast-forward as needed. One of the potential benefits of flipped classroom is that students are able to cover course material at a pace that conforms to their learning style (Roach, 2014). Other benefits of flipped classroom instructional model according to Bergmann and Sams (2012) include: students can learn at their pace; the teacher-student interaction is enhanced; it allows for differentiation (individualize instruction to meet the individual needs of learners); it helps when students are absent; it helps when the lecturer is absent; students get help on difficult topics; it creates an atmosphere of learning; and relationships with students are better.

Further benefits of flipped classroom according to Strohmyer as cited in Elian and Hamaidi (2018) include: guarantees for lecturer making good use of classroom period; enhances the critical thinking, self-learning, building experiences, communication skills, and cooperation among students; and provides a technique to evaluate the students' understanding because tests and short tasks that students perform are indicators of weaknesses and strengths in their understanding of content. Furthermore, flipped classroom promotes student-centered instruction, providing opportunities for students to review material when it is convenient for the students. According to Davis (2016), students take ownership of their learning and arrive at class prepared for activities and discussion; and flipping the classroom allows students more time to interact with peers and their lecturers, and collaborate with teams. The rationale of flipped classroom instructional model is to facilitate students in becoming self-regulated learners (Eugenia, 2018). Hence, the need to make use of modern technology such as flipped classroom for instructional delivery therefore arises.

Statement of the Problem

Nowadays students grew up with Internet access, YouTube, Facebook, Whatsapp, Twitter, MySpace, blog, and a host of other digital resources. But

the students are still faced with a lot of difficulties in learning as a result of using only traditional teaching method which is believed to be unsuitable for the present technological age. Studies have shown that teaching and learning characterized with the use of traditional method made lecturers dominate the class while the students remain passive. The traditional method has also failed to enhance problem-solving skills, curiosity, and critical and logical thinking among students. On the other hand, lecturers frequently encounter the problem of having too little allotted class time to complete required tasks. Therefore, learning paradigm must shift from being teacher-centered to student-centered (using flipped classroom instructional model); expecting the students to take a more active role in their learning.

Purpose of the Study

The main purpose of this study was to investigate the perceptions of lecturers and students on the use of flipped classroom instructional model in teaching and learning in federal universities in Enugu State. Specifically, the study sought to find out:

1. lecturers' perceptions of using flipped classroom instructional model to teach undergraduate courses in federal universities.
2. students' perceptions of using flipped classroom instructional model to learn undergraduate courses in federal universities.
3. students' attitudes towards using flipped classroom instructional model to learn undergraduate courses in federal universities.

Research Questions

The following research questions were raised for the study:

1. What are the lecturers' perceptions of using flipped classroom instructional model to teach undergraduate courses in federal universities?
2. What are the students' perceptions of using flipped classroom instructional model to learn undergraduate courses in federal universities?
3. What are the students' attitudes towards using flipped classroom instructional model to learn undergraduate courses in federal universities?

Methodology

The study adopted a descriptive survey research design. The study was carried out in the Department of Computer and Robotics Education, University of Nigeria, Nsukka during the 2018/2019 academic session. The

population consists of 109 respondents comprised of 36 staff (18 lecturers and 18 academic instructors) and 73 students (33 second-year students and 40 third-year students) respectively. The instrument for data collection was a structured questionnaire titled “Flipped Classroom Instructional Model Questionnaire (FCIMQ)” designed by the researchers for both lecturers and students. FCIMQ was subjected to face and content validity by three experts from the Department of Computer and Robotics Education, University of Nigeria, Nsukka. Each of these experts was requested to use their expertise in determining the suitability, conformity, content, and language of the instrument for data collection. Observations and suggestions made were used to improve the quality of the instruments. Furthermore, FCIMQ is a 32-item questionnaire that has a 4-point Likert rating scale with weight values from 4 to 1 (Strongly Agree, SA = 4; Agree, A = 3; Disagree, D = 2; and Strongly Disagree, SD = 1) respectively. Reliability of the instrument was established using Cronbach Alpha reliability method and reliability indices of 0.71 for lecturers and 0.73 for students were obtained. The instrument was administered by the researchers with the help of two research assistants through personal contact; and the consent of the respondents was voluntarily given. The data collected for this study were analysed using mean and standard deviation to answer the research questions; while null hypotheses were tested using independent samples t-test at 0.05 level of significance. Any item with a mean value of 2.50 and above was accepted, while any item with a mean value less than 2.50 was not accepted.

Results

Research Questions 1: What are the lecturers’ perceptions of using flipped classroom instructional model to teach undergraduate courses in federal universities?

Table 1: Mean and standard deviation of lecturers’ perceptions of using flipped classroom instructional model to teach undergraduate courses in federal universities.

S/N	ITEM STATEMENT	\bar{X}	SD	Decision
1	Implementing flipped classrooms helps me to teach better	3.17	0.97	Accepted
2	Flipping the classroom removes passive learning from the classroom	2.56	0.90	Accepted
3	Flipped classroom allows the lecturers more time to personalize instruction for students	3.00	1.01	Accepted
4	Flipped classroom allows the lecturers to have	2.94	0.83	Accepted

	increased interaction with students			
5	Flipped classroom allows lecturers to teach both content and process using a student-centred learning environment	2.83	0.94	Accepted
6	Lecturer-student interaction is enhanced using flipped classrooms	2.61	0.87	Accepted
7	Flipped classroom helps me to collaborate more intensively with my students	2.72	0.98	Accepted
8	Flipped classroom makes the teaching process more enjoyable	3.39	0.69	Accepted
9	Flipped classroom gives me a chance to develop professionally	3.10	0.96	Accepted
10	Flipped classroom allows me to reuse and improve learning materials	2.95	1.07	Accepted
11	Flipped classroom allows making students responsible for their own learning	2.83	0.91	Accepted

Key: \bar{X} = Mean, SD = Standard Deviation, N = 73 (N = Number of Respondents)

Table 1 shows that all the variables have mean scores above 2.50. The respondents accepted all the items as lecturers' perceptions of using flipped classroom instructional model to teach undergraduate courses in federal universities. The standard deviation of all the items ranged from 0.69-1.07 showed that the respondents were close in their responses to the items.

Research Questions 2: What are the students' perceptions of using flipped classroom instructional model to learn undergraduate courses in federal universities?

Table 2: Mean and standard deviation on students' perceptions of using flipped classroom instructional model to learn undergraduate courses in federal universities.

S/N	ITEMSTATEMENT	\bar{X}	SD	Decision
1	Flipped classroom is useful because I can learn at my own pace	2.93	1.05	Accepted
2	I have opportunities to control my own learning	2.81	1.02	Accepted
3	Flipped classroom promotes independent learning	2.86	0.92	Accepted

4	The ability to watch, rewind, and fast-forward the video lecture helps me learn	2.92	0.92	Accepted
5	Having watched the video lectures and revised the provided materials before the class sessions helped me to complete the in-class activities easily	2.89	0.86	Accepted
6	I believe I had more opportunities to ask questions when the classroom was flipped	2.82	0.92	Accepted
7	I believe I learned better when the classroom was flipped	3.22	0.79	Accepted
8	I prefer to have these kinds of flipped classroom in other courses	3.16	0.87	Accepted
9	Flipped classroom promotes student-centered active learning	3.03	0.99	Accepted
10	Flipped classroom allows students to develop better relationship with their peers through co-operation and collaboration	2.85	0.97	Accepted
11	Flipped classroom helps when students are absent	3.14	0.96	Accepted

Key: \bar{X} = Mean, SD = Standard Deviation, N = 73 (N = Number of Respondents)

Table 2 shows that all the variables have mean scores above 2.50. The respondents accepted all the items as students’ perceptions of using flipped classroom instructional model to learn undergraduate courses in federal universities. The standard deviation of all the items ranged from 0.79-1.05 showed that the respondents were close in their responses to the items.

Research Question 3: What are the students’ attitudes towards using flipped classroom instructional model to learn undergraduate courses in federal universities?

Table 3: Mean and Standard deviation on students’ attitudes towards using flipped classroom instructional model to learn undergraduate courses in federal universities.

S/N	ITEMS	\bar{X}	SD	Decision
1	I watched the lecture videos before the class	3.23	0.95	Accepted
2	I rewind and fast-forward the video lecture which helps me learn	2.76	0.86	Accepted

3	I do not need to do assignments outside the class	3.11	0.97	Accepted
4	I learn the topic outside the class and consolidate them in the class	2.85	0.74	Accepted
5	I completed the activities and learning materials before in-class sessions	2.99	0.99	Accepted
6	The flipped courses did not limit my interaction with the lecturers	2.66	0.80	Accepted
7	The flipped classroom allows me greater opportunities to communicate with other students.	2.89	1.04	Accepted
8	I like the ability to self-pace my learning with flipped courses	3.26	0.69	Accepted
9	I prefer the flipped class over conventional teaching	3.08	0.92	Accepted
10	I would take another course that used the video lectures alongside traditional classroom learning	2.93	0.96	Accepted

Key: \bar{X} = Mean, SD = Standard Deviation, N = 73 (N = Number of Respondents)

Table 3 shows that all the variables have mean scores above 2.50. The respondents accepted all the items as students' attitudes towards using flipped classroom instructional model to learn undergraduate courses in federal universities. The standard deviation of all the items ranged from 0.69-1.04 showed that the respondents were close in their responses to the items.

Discussion of the Findings

The findings of the study revealed that implementing flipped classrooms helps lecturers to teach better; flipping the classroom removes passive learning from the classroom; flipped classroom allows making students responsible for their own learning; among others, were lecturers' perceptions of using flipped classroom instructional model to teach undergraduate courses in federal universities. This finding is in consonance with Ansori and Nafi' (2018) who found out that implementing flipped classrooms helps lecturers to teach better; as well as flipping the classroom removes passive learning from the classroom. The finding of the study is also in agreement with the findings of Villalba, Castilla and Redondo-Duarte (2018) who stated that flipped classroom allows making students responsible

for their own learning; and flipped classroom gives lecturers chance to develop professionally.

The findings of the study revealed that flipped classroom promotes independent learning; flipped classroom promotes student-centered active learning; flipped classroom allows students to develop better relationship with their peers through co-operation and collaboration; flipped classroom helps when students are absent; among others, were students' perceptions of using flipped classroom instructional model to learn undergraduate courses in federal universities. This is in line with Ansori and Nafi' (2018) asserted that flipped classroom helps when students are absent; and flipped classroom allows students to develop better relationship with their peers through co-operation and collaboration.

The findings of the study revealed that students watch lecture videos before the class; students rewind and fast-forward the video lecture which helps them learn; the flipped courses did not limit their interaction with the lecturers; the flipped classroom allow a student greater opportunities to communicate with other students; among others, were students' attitudes towards using flipped classroom instructional model to learn undergraduate courses in federal universities. Sullivan-Green (2019); and Galen Newman, Jun-Hyun Kim, Ryun Jung Lee, Brandy A. Brown, and Sharon Huston (2016) agreed that students like the ability to self-pace their learning with flipped courses; watched the lecture videos before the class; and flipped classroom allow a student greater opportunities to communicate with other students.

Implications of the Findings

When flipped classroom instructional model is used in all departments at various universities, it will help to increase students' involvement in instructional activities through enhanced confidence, the interaction between lecturers and students during the period of teaching and learning, and students' ability to learn at will. This implies that there will be increase in engagement and communication between lecturers and students. The high level of engagement occasioned by the flipped classroom is bound to translate into heightened academic outcomes on the part of the students.

Conclusion

Use of flipped classroom instructional model increases students' responsibility for their own learning; become more self-directed and motivated, increase learners' knowledge retention, hence making the students active participants in the learning process. That is, flipped classroom instructional model has a positive impact on students' self-discipline and self-

directedness due to the fact that students take on responsibility for their own learning. The findings deduced that undergraduate students have positive attitude towards the use of flipped classroom for learning. Thus, flipped classroom could be adopted for teaching and learning in all tertiary institutions in Nigeria.

Recommendations

The following recommendations were made based on the findings of the study:

1. Flipped classroom instructional model should be integrated in other related courses.
2. Lecturers should adopt the flipped classroom approach because it is a student-centered learning strategy that engages the students rather than spoon-feed them.
3. The faculty members are advised to adopt applications of flipped classroom in teaching because of its effectiveness in the development of the knowledge and skills of students.
4. Students should seek personal improvement by obtaining free online resources to augment their learning of any course, even when the classroom is not flipped by the lecturer.

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