



FLIPPED CLASSROOM – STUDY BASED ON UNDERGRADUATE MEDICAL STUDENT'S POINT OF VIEW

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ABSTRACT

Introduction: In a flipped classroom (FC), the core material for a particular topic is shared with the students before the class. The material could be a video, text etc. describing the topic in detail. The student can go through the material in their own time and can make notes on it at their own pace – pausing and rewinding if they need to. The purpose of our study is to explore the students point of view on the flipped classroom.

Material And Methods: A survey is conducted among the undergraduate students of Osmania Medical College, Hyderabad, Telangana. A total of 250 students participated in the survey. The survey was conducted using google forms.

Results: most of the students were in favor of Flipped classroom and they find it advantageous over the traditional lectures. 40% agreed that the flipped classroom was better than the traditional lecture. 50% agreed that FC was more engaging. 50% stated that the FC gives them greater opportunities to communicate with other students. 50% told that they would recommend FC to their friends. 60% found the C to be more fruitful. 80% stated that FC has improved their learning of Anatomy. 70% stated that they would use FC in future semesters. 60% FC makes them more motivated.

Conclusion: Flipped classroom is one of the best methods of teaching effectively. Our survey revealed the same. All the medical teachers are to be trained before they can implement this in their colleges. The students are to be motivated too so that they can make the best out of the flipped classroom.

KEYWORDS : Flipped classroom, student opinion, advantages and disadvantages.

INTRODUCTION

In a flipped classroom, the core material for a particular topic is shared with the students before the class. The material could be a video, text etc. describing the topic in detail. The student can go through the material in their own time and can make notes on it at their own pace – pausing and rewinding if they need to. The flipped classroom is being increasingly used in wide range of instructional situations, yet little is known about how to facilitate it. The purpose of our study is to explore the student's point of view on the flipped classroom so that better utilization of this method of teaching can be done with the interactive sessions.

MATERIAL AND METHODS:

A survey is conducted among the undergraduate students of Osmania Medical College, Hyderabad, Telangana. A total of 250 students participated in the survey. The survey was conducted using google forms. The following questions have been included in the survey.

1. I would rather watch a traditional teacher led lesson than a lesson video.
2. The Flipped classroom is more engaging than traditional classroom instruction.
3. The Flipped classroom gives me greater opportunities to communicate with other students.
4. I would not recommend the Flipped classroom to a friend.
5. The Flipped classroom gives me more class time to understand the concepts of Anatomy.
6. I regularly use the resources provided online such as practice tests and dissection videos.
7. I anticipate that I will experience another Flipped classroom in the future, for example in clinical postings and next year subjects.
8. I like watching the lessons on video.
9. I regularly watch the video lectures.
10. The Flipped classroom gives me more time to perform lab activities in detail.
11. The Flipped classroom has not improved my learning of Anatomy.
12. Learning how to use a Flipped classroom will benefit me in my future education.
13. I am more motivated to learn Anatomy or other subjects in the Flipped classroom.
14. Social media (YouTube, Twitter, Facebook) is not an important part of my learning.
15. What are the advantages of Flipped Classroom?
16. What are the disadvantages of Flipped Classroom?
17. What improvements would you recommend in the Flipped classroom?
18. Any other comments you wish to make about Flipped Classroom.

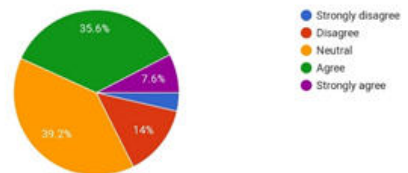
For 1-14 questions options like whether they Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree - were given and they opted their choice. For 15-18 questions they stated their answers in a line to a paragraph.

RESULTS:

40% agreed that the flipped classroom was better than the traditional lecture. 50% agreed that FC was more engaging. 50% stated that the FC gives them greater opportunities to communicate with other students. 50% told that they would recommend FC to their friends. 60% found the C to be more fruitful. 80% stated that FC has improved their learning of Anatomy. 70% stated that they would use FC in future semesters. 60% FC makes them more motivated.

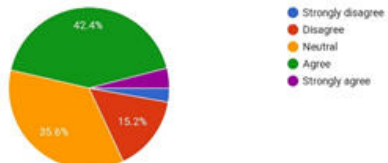
1. I would rather watch a traditional teacher led lesson than a lesson video

250 responses



2. The Flipped classroom is more engaging than traditional classroom instruction.

250 responses



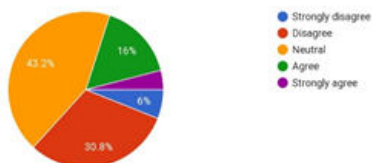
3. The Flipped classroom gives me greater opportunities to communicate with other students.

250 responses



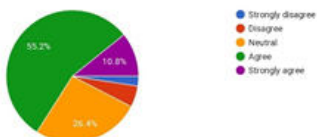
4. I would not recommend the Flipped classroom to a friend.

250 responses



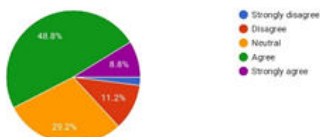
5. The Flipped classroom gives me more class time to understand the concepts of Anatomy.

250 responses



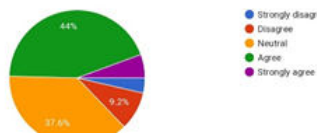
6. I regularly use the resources provided online such as practice tests and dissection videos.

250 responses



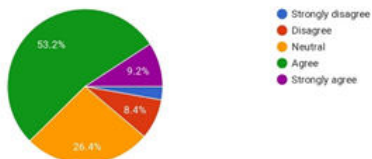
7. I anticipate that I will experience another Flipped classroom in the future, for example in clinical postings and next year subjects.

250 responses



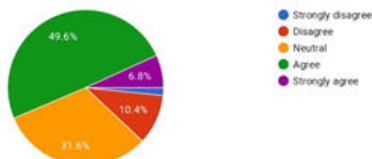
8. I like watching the lessons on video.

250 responses



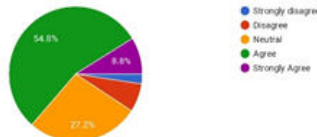
9. I regularly watch the video lectures.

250 responses



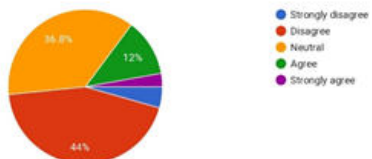
10. I am finding flipped classroom more fruitful because the concept is clear when I attend the discussion after having read the topic prior.

250 responses



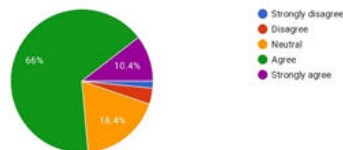
11. The Flipped classroom has not improved my learning of Anatomy.

250 responses



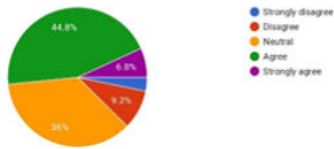
12. Learning how to use a Flipped classroom will benefit me in my future education

250 responses



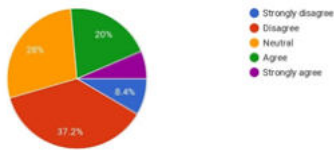
13. I am more motivated to learn Anatomy or other subjects in the Flipped classroom.

250 responses



14. Social media (YouTube, Twitter, Facebook) is not an important part of my learning.

250 responses



The students opinion on the advantages of the flipped classroom were mostly positive. Few said that they are actively engaged, time is utilized in a proper way, they can actively involve in the lab during practical sessions, videos posted before are very useful in having a clear concept of the topic that's going to be discussed in the next class. And many more.

Disadvantages were few – students were missing the experienced teaching of the professors. They want to be guided first and then interact. Few students were finding it difficult to understand the topic.

DISCUSSION:

In our study the opinion of the students was recorded through the google forms survey. Majority of the students were finding the flipped classroom advantageous over the traditional lectures. They were happy with the way the flipped classrooms were conducted with more of student involvement.

Tomas et al reported a high level of student engagement in the flipped classroom with the videos and believed that the supported the student learning. Opinions were divided on whether the flipped classroom was preferred over traditional lectures.¹

Minkyong Kim et al stated that Firstly, data suggested that 'demonstration' occurred more than the 'problem-solving' approach. From a conversation with the instructor, we believe providing required instructional activities that check learners' understandings on a weekly basis would be beneficial. However, thirty percent of lab time used for demonstration activities is significant, leaving insufficient time for deep interactions and discussions.²

There is extensive literature on the effect of instructional video podcasts, which have been shown to have a positive impact on student attitudes (Bolliger, Supanakorn, & Boggs, 2010;³ Fernandez, Simo, & Sallan, 2009; ⁴ Hill & Nelson, 2011; ⁵ Holbrook & Dupont, 2010; ⁶ Lonn & Teasley, 2009); ⁷ student behavior (Chester, Buntine, Hammond, & Atkinson, 2011; ⁸ Foertsch, Moses, Strikwerda, & Litzkow, 2002; ⁹ McCombs & Liu, 2007); ¹⁰ and student performance (Alpay & Gulati, 2010; ¹¹ Crippen & Earl, 2004; ¹² Traphagan, Kusera, & Kishi, 2010; ¹³ Vajoczki, Watt, Marquis, & Holshausen, 2010)¹⁴. All of this bodes well for their use in the flipped classroom.

Swenson, and Lents (2012), for example, examined the use of video tutorials as a supplement to learning in an undergraduate analytical chemistry course. Concepts and problems that students found particularly difficult were identified by assessing students' homework assignments and exam responses. A tutorial video clip aimed at each specific "knowledge point" was designed by the instructor using Camtasia and uploaded to the course website. To assess the effectiveness of the video tutorials, students' oral and written feedback, pre- and post-video exam performance, and data from previous classes

taught by the same instructor were examined. The researchers concluded that online video tutorials are a valuable, flexible, and cost-effective tool for "improving student mastery of chemistry problem solving."¹⁵

Kay and Kletskin (2012) developed a series of 59 problem-based video podcasts covering five key areas in mathematics (operations with functions, solving equations, linear functions, exponential and logarithmic functions, and trigonometric functions) as self-study tools using Camtasia for a 1st-year undergraduate calculus course. The podcasts were posted to the course website and used over a 3-week period. A custom-designed tracking tool was used to track the total number of video podcast visits. The data showed that a majority of students used the video podcasts frequently (two-thirds of the students viewed over 4,500 video podcasts during a 21-day period). Information collected using a survey and open-ended response question indicated that students found the podcasts useful, easy to follow, and effective in helping them understand new material.¹⁶

CONCLUSIONS

Flipped classroom is one of the best methods of teaching effectively. Our survey revealed the same. All the medical teachers are to be trained before they can implement this in their colleges. The students are to be motivated too so that they can make the best out of the flipped classroom.

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