
Implications of Flipped Classroom in Learning and Teaching Strategies

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ABSTRACT

The Flipped Classroom (FC) is a pedagogical model, which reverse the process of traditional learning strategies into collaborative learning strategies and also represent an opportunity to rethink teaching and learning in the context of virtual education. Typical lecture and homework practices of a course are reversed by changing it into lectures at home. Students viewed their lecturer through video streaming at home. While in class time they explore the topics in greater depth and create meaningful learning opportunities by exercises, projects or discussions. In this paper it is found that students who used interactive flipped classroom technologies in learning strategies were evaluated based upon their pre- and posttest of the students. The objective of this paper is to develop an immersive learning model to assure the quality of learning through the flipped classrooms.

KEYWORDS— *learning system, flipped classroom and learning model.*

I. INTRODUCTION

The main aim of educational system is to make the students easier to learn the content. During the past decades, the most important inventions in educational systems are related to the introducing a new technologies in the education system. The term of a Flipped Classroom (FC) is to improve the quality of education and an effective learning skill. Incorporating the learning strategies by technologies can significantly contribute to the formation of students in a collaborative way more creative, innovative, critical and able to solve problems independently

Teachers focus on being the “guide on the side not the sage on the stage”. Instructors prepares the learning opportunities in learning techniques to make the best decisions for the student's learning. This paper evaluates the importance of flipped classroom by analyzing the students in organization by using technology based learning at home and collaborative learning strategies at classroom which helps the students to develop the quality of learning.

II. IMPORTANCE OF FLIPPED CLASSROOM

The flipped classroom inverts traditional teaching methods into activity based learning. Technology based learning model revealed that using the flipped classroom through this immersive learning model has a statistical and practical impact on developing success and self-study skills among the students. Students watch lectures at home at their own pace, communicating with peers and lecturers via web based learning method. Collaborative learning take place in classroom with the help of teachers.



The two important key components of flipped classroom is Technology based learning and activity based learning. Technology-based learning constitutes learning via electronic media including the Internet, audio and video conferencing, chat rooms and webcasts. Different methods of evaluation of flipped classroom may include measuring learners’ efficiency with the help of experience, measuring their skill gains through pre- and post-tests. Comparing the pre-test and post test of the students (learners who received knowledge from traditional classroom approaches is compared with the flipped classroom approaches. Flipped classroom which employs video lectures at home and solve problems as homework at class time. Group-based problem-solving activities engage in the classroom.

In the flipped classroom model, teachers pre-records the students understanding of the content by conducting traditional teaching method and teachers given lecturer to the students using web based learning and immersive post test is recorded for evaluating the efficiency of flipped classroom[4]. The two groups of the students will be compared using scores from homework, examinations, and ten question numerical methods conceptual pre- post- test. The following diagram illustrate the immersive strategies of flipped classroom.

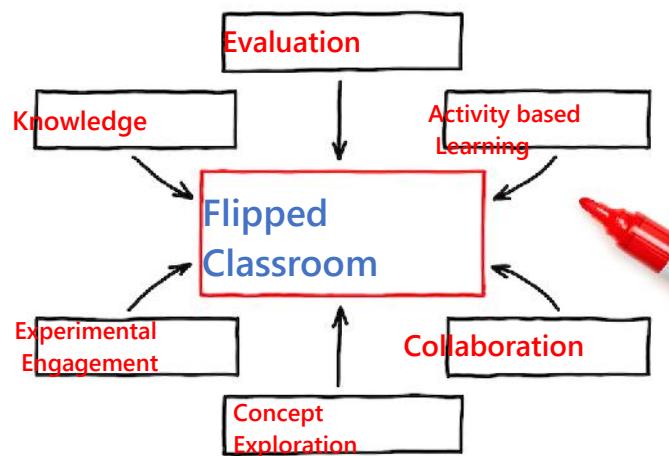


FIG1. Flipped Classroom strategies

III. RESEARCH DESIGN

This paper presents an experiment conducted using flipped classroom method to teach science subject for the class VII standard students, the topic which was covered is DIGESTIVE SYSTEM-nutrition in plants and animals. Based upon the flipped classroom model video lectures at home (concept delivered) and homework at the classroom by various experiments conducted to study the effect of flipped classroom strategy in teaching-learning process[4]. Different teaching and learning techniques were used in education system. To know the effective techniques in the education system, experiments can be done in education sector. In this presented work, the topics which instructed DIGESTIVE SYSTEM-nutrition in plants and animals. The following diagram illustrate the flipped classroom strategy in Method1 and blackboard strategy in Method2 to the Middle school students.



FIG 2. Traditional classroom method1.

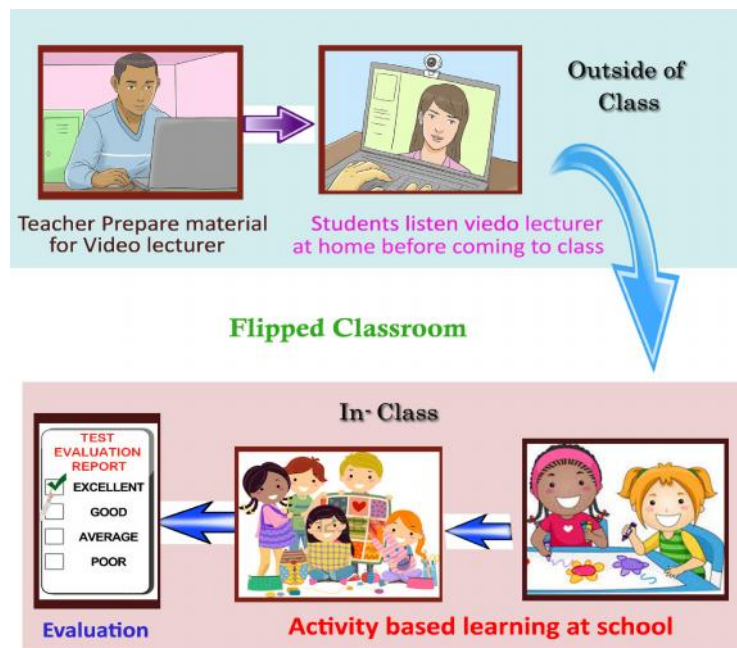


FIG 3. Flipped classroom Method2.

IV. RESEARCH METHODOLOGY

The topics instructed was digestive system for the class students VII (A) section for Flipped classroom strategy and for blackboard strategy for the class VII (B) section. The complete experiment is recorded and is divided into two methods – Method1 and Method2 [2]. The topic instructed using flipped classroom strategy. Here, both methods get executed concurrently and the efficiency of the strategies is evaluated using the outcome of the result.

This research work give an insight into the lectures watched outside the class time and homework is done during class time with the help of teachers and is executed in class VII (A). Same topic is covered to students of class VII (B) in traditional classroom method1. Both the outcome of the results is evaluated using R-

programming tool. The following table illustrate the students name list who were undergone to Method1 and Method2.

Table1. Students Name of the Class VII (A & B)

s.no	Students name VII(A)	S.no	Students Name VII(B)
1	S. ARATHI	1	A.MANIKANDAN
2	S. RAMYA	2	S.VIKESH KUMAR
3	S. JEYAM	3	HANEESHA
4	K. AISHWARYA	4	FOUZIA .K
5	R. PAVITHRA	5	PRIYA.L
6	J. NIHAR FATHIMA	6	MOHAMMED RAFI.S
7	AYSHA	7	PRIYANSHA.D
8	INDRA	8	HANISHA.M
9	ABDHUL RAHUMAN	9	FEROX.S
10	MUNEESHWARI	10	SABIYA.M
11	VIGNESH	11	SIVA.B
12	VASANTHKUMAR	12	PRIYANKA.K
13	ANUSHYA	13	MANOJ KUMAR
15	N.PRIYA	15	ASHA BEE.L
16	S.VIJAY	16	RAMOLA.D
17	M.RAHUL	17	INDU.K
18	KAREESHMA	18	SWATHI.K.M
19	ESTHER	19	SURUTHI.M
20	MONISHA	20	VINOTH.L
21	KAVYA	21	EVANGELIN.R
22	KARTHICK	22	ANU PRIYA.J
23	ISHWARYA		

The efficiency of the teaching strategies is evaluated by conducting test at the end of the lecturers. The following set of question is conducted among the students and efficiency strategies are evaluated in educational system. This FIG4 illustrate that, 10 set of questions is given to the students of class VII (A) and (B) in Method1 and Method2 teaching method. Immersive teaching method is evaluated and help the student's in overcoming the difficulty of understanding the content of the lesson. No student is exclusively one style or another, the important scope is to utilize a variety of modalities when learning [9]. It is important to focus on different learning strategies. In this methodology flipped classroom learning style in effective learning for the students is evaluated and proved in the graph.

VI. CONCLUSION

This paper, describes the effectiveness of flipped classroom in learning style. In this research works the effectiveness of learning style between flipped and traditional classroom Method 1 & 2 are compared. The results implies that how students interact with others while learning in an activity based learning method at the class time with the help of teachers and listen to video lectures at home before coming to class. By implementing these learning styles, motivate the students to succeed in a competitive learning environment. This result reveal that more effective ways are needed to nurture the students in flipped classroom teaching/learning method.

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