

# Flipped classroom Teaching to enhance the quality of education among Engineering Students

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**Abstract**— Maths is one of the most vital courses of our life and it is very essential for having a good living in society. This paper signifies the use of flipped classroom to enhance the interest and curiosity among learners in mathematics. The art of teaching is that each teacher brings their unique talent and passions and shares them with their students. So, flip your classrooms and have more empowered students.

**Keywords**—Flipped classroom, maths

## I. INTRODUCTION

Maths is one of the most vital courses of our life and it is very essential for having a good living in society. Maths plays a vital role to make and judge the life of an individual more healthy and worthy and also for individual to have a successful career. It is very interesting and develop cognitive reasoning among students but from years mathematics trainers are having problems and challenges to rectify the overall performance of students So, today there is a dire need to use new strategies and techniques which enhance the curiosity of apprentice to understand, apply, analyse and evaluate the basic and applied mathematics.

Educators are dealing with the digital natives. To enhance their interest in mathematics, it's time to blend traditional teaching, and use of flipped classroom and information communication technology.

## FLIPPED CLASSROOM

Flipped classroom is a “pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter”.



The idea of flipped classroom was developed by Jonathan Bergmann and Aaron Sams It will be available to reach in every class to every Individual where there are some couple of reasons identified which every trainer should consider during teaching are: -

Flipping is the language of today's youth.

It helps individual student to keep themselves busy.

It helps the student to overcome their fear related to subjects.

It enables students to enhance their skills and knowledge

It allows students to learn the past and revise their lectures

It creates an interest and also built creativity among learners

It allows the trainers to know about their tutors

It creates changes in pedagogy and learning environment in class

It enables the change in lifestyle of parents and teachers.

Jeff Dunn (2014) has written an article on "The 6-step guide to flipping your classroom", which states the six different ways for the development and adaptation of flipped classroom

#### 1. Plan

It tells us that which lesson is to be flipped and to outcome a key learning from that and creates a knowledge plan.

#### 2. Record

To create and record a lecture plan will enable the student to learn and recalls at any time and also includes the basic key elements and tools which are used in the class

#### 3. Share

To create a video and share with the students which will engage them and also fell motivated about the video content and lecture

#### 4. Change

There should be depth of knowledge gained by the student after the listening and understating the content from videos

#### 5. Group

The most effective way to discuss the topic is to divide the groups into 2parts so that everyone can discuss the topic with their counterparts

#### 6. Regroup

The next step si to recreate the group and all the individual has to work with each other and can ask questions so that their knowledge will be increased

Again, after certain time period repeat all steps

- Active learning. It enables the students to apply their ideas which they can ask from seniors or teachers and can actively participate for feedback or clarifications.

- Peer instruction. Students can learn from each other about the creativity and lessons from their friends
- Combined learning.

It enhances student engagement student knowledge and hence increases student participation in all activities.

- Problem-based learning. Students can put more emphasis on learning and problem-solving skills.

## FLIPPED CLASSROOM AND MATHEMATICS

As being teachers, you know practice is important for every aspect in life. There will be challenges faced by student's which student need to solve the problems. There are great resources such as Edu grade, woo tube, engrade, mathtech and many more are the ICT tools which help students to learn in an interesting and effective manner. The classroom aims to change the strategy and mindset of the student at home and at school to learn the art of maths. In this most appropriate manner, student will learn new technologies and use the resources which is more easily available the internet. The commonest approach is to create a video byte or video lessons which the students used at home and can also make notes. The best thing about video is that student can learn the new things can rewind plan forward the videos for their own convenience. In the class student can ask questions to the teachers and can also responds to the activity which engage the student in the class and outside the class. Teachers, parents as well as students can use these resources for creating their own resources to turnround the table whenever they desire

## CONCLUSION

Using technology, it has created an outset in the mind of people to have interest in the maths. Creating and changing the mindset and improving he skills in the classroom which enabled the student to have more interest in difficult subjects. It provides a good opportunity for the students to listen their ideas creates discussions also innovative idea creates change the life of the future Now, it's time to allow students to use their inner intellect and strength rather than to impart instructions to them which will make them powerful, confident and help them in success. This make students to become resourceful and empowered learners.

The art of teaching is that each teacher brings their unique talent and passions and shares them with their students. So, flip your classrooms and have more empowered students.

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