FLIPPED CLASSROOM AND VIRTUAL CLASSROOM LEARNING: A GATEWAY TOWARDS ICT

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Abstract: Traditional education system was good in its period but its emphasis is more on rote learning and it lacks interactivity. Today we are surrounded by technology which has proven to be helpful to human kind in many ways, especially in the educational field. Educators need to understand that technology can promote teaching and learning, inside and outside the classroom. Flipped and virtual classroom learning strategies serves as the best methodology in the teaching and learning process. Mere mugging up of information from the textbooks will not cater a student into a good social being with humane qualities and values. The emphasis in this paper is to identify the extent to which the flipped classroom and virtual classroom learning approach have been found to be useful in various signified areas and to find out how ICT (Information and Communication Technology) contributes in this realm. The importance of ICT and the areas it influenced in today's educational scenario are analyzed. The dominant areas where the ICT can influence are student centered learning, interaction and relationship, collaborative learning, fostering slow learners, exposure to audio visual aids and developing the skills. Thus the stereo typical methods of teaching and learning should be replaced by leveraging ICT to the utmost.

Key words: Flipped classroom and virtual classroom learning.

Introduction

"Teachers need to integrate technology seamlessly into the curriculum instead of viewing it as an add-on, an afterthought, or an event" is a quote by Heidi-Hayes Jacobs. Technology in the twenty first century helps us to get access to information by using internet and it can be accessed through numerous technological tools such as computer, laptop, mobile etc. A flipped classroom is an instructional strategy that reverses the traditional learning environment by delivering the content, often online, outside of the classroom. While virtual Classroom is a simulated classroom with the help of internet, which provides a suitable communication environment for distance learners. It helps the learners to attend classes from anywhere in the world and provides a learning experience that is alike to a real classroom. Instructions and learning contents are available everywhere and every time. Every student can access internet learning resources such as online video lectures for free, and they can see the contents everywhere according to their convenience, interest and attitude. The traditional learning approach is irrelevant in today's scenario as it focused on the instructor as the centre of knowledge. As a solution, traditional classroom activities such as lectures, labs, homework and exams can be moved to the class and the students can study even when they are outside the classroom.

Need and Significance of the Study

Although flipped classroom and virtual classroom learning are familiar strategy, it is not prevailing in the Indian education scenario. So the need for making it practically possible in the classroom is an inevitable part of education and learning process. The instructional approach blends video based learning outside the classroom and interactive group learning activities inside the classroom.

A virtual classroom enables to bring learners together around the world and greatly minimizing the travel, time, and expense of on-site teaching and other training programs. The purpose of the present study is to provide an overview of flipped and virtual classroom studies in the educational context. Particularly the emphasis is on revealing and addressing the opportunities of flipped and virtual classroom learning approach.

The areas related to flipped classroom and virtual classroom were analyzed in terms of student centered learning, interaction and relationship, collaborative learning, fostering slow learners, exposure to audio visual aids and developing the skills. And they are assessed on their importance and effectiveness in today's ambience.

My attempt is to see what all areas have been explored in the realm of flipped classroom and virtual classroom learning which act as a gateway towards ICT.

Objective

To identify the extent to which flipped classroom learning and virtual classroom learning are effective and imperative in today's education scenario.

Analysis

The analysis is based on various selected areas mainly student centered learning, interaction and relationship, collaborative learning, fostering slow learners, exposure to audio visual aids and developing the skills. These have been documented below separately.

a) Student Centered Learning

This facilitates interaction among students and between students and instructors. A much better learning result can be seen in this and the concept helps the students to effectively learn to acquire skills, knowledge and also to show a good attitude towards learning.

The flipped and virtual learning instruction using online written and oral interaction not only enhances the participants' motivation, but also makes the students more active in the classroom. This indicates that the flipped as well as virtual classroom learning as successful in achieving the instructional goals. It bridges a few gaps in research and practice. It clearly depicts the importance of cognitive and affective learning strategy. It contributes to our understanding of various learners perceptions and needs for such support as well as teachers experience with the perception of learning support in both flipped and virtual classroom.

b) Interaction and Relationship

The flipped and virtual classroom learning enhance the students engagement, improves their problem solving technique, and collaborative abilities and skills of the students are increased. It fosters student- teacher and student- student interaction and ends in a conclusion that the faculty can help in fostering relationship not only with experts but also between peers with peer leaders. When learners do not complete the necessary class preparation assignments, they are less likely to engage in group problem solving which hinders the development of healthy peer-peer and peer-expert relationship and students report poor levels of satisfaction with the course instruction. Through this we can conclude that the ability to recognize and accept the students' academic responsibilities in the instructional approach is increased.

c) Fostering Slow Learners

Slow learners are learners who have the ability to learn necessary academic skills, but at rate and depth below average same age peers. The flipped and virtual classroom learning promotes student engagement and more active approach to learning. Students appreciate learning using video material and giving opportunity to study in their own pace. Accessing video lectures paves way to flexibility and mobility. Thus learning is easier and effective. Complex problems of engineering education are solved with the help of this kind of classroom learning by increasing the number of engineering courses being converted into this new format. It focuses on the face to face class time for complex exercises where students can interact with each other and with instructor.

d) Collaborative Learning

Collaborative learning is a situation in which two or more people learn or attempt to learn something together. Flipped and virtual classroom allows the students the opportunity to control the pace of their learning by distributing lectures on videos. It is found that the students are more responsive to this learning and can self-regulate the learning. Students are more motivated to participate in class activities.

These studies facilitates for student learning that are not possible with other media. It pinpoints about more active participation when compared to traditional method and understood that these strategies are most effective methods to deliver the course. This replaced the direct instruction with videos that can be accessed anytime and anywhere by learner. There is a great increase in the contribution to the educational environment. The role of students and instructors are changed. Students in a flipped classroom show higher academic achievement and greater satisfaction with this approach than the students in a traditional lecture. Students prefer this kind of method and recognize the value of the collaborative learning activities afforded by the inverted instructional approach.

e) Exposure to Audio Visual Aids

Technology can foster students learning in various ways. The audio visual aids act as a catalyst in the learning process. The mental images will enable the learners to have a wider idea and understanding and stays in the minds of learners for a longer time. The use of audio-visual aids in the classroom is significantly helpful for the students in developing an understanding of difficult concepts. The use of audio visual aids enables the students to grasp these concepts rapidly and effortlessly. Latest technological advancements adapt the teachers to make their jobs easier. And it is the main reason that the teachers of all over the world have started incorporating the use of audio-visual aids in their lesson plans.

f) Developing the Skills

There is a great interest for the students to learn by using those strategies that are novel to them. The four skills like listening, speaking, reading and writing can be empowered with the help of flipped and virtual classroom learning strategies. Positive qualities like self-discipline and self-directedness are developed in them due to the fact that students take on responsibility for their own learning.

The academic performance, learning attitudes and participation levels of the students are increased. The flipped and virtual class lessons were more effective instructional design than the other class. Better learning outcomes and efforts are seen in this learning process. Classmates with better capability can help the lower level classmates. All students' participation is there and enhances their attitude towards autonomous learning and the learning outcome is increased.

Conclusion

The flipped and virtual classroom learning strategies are still a very effective, hands-on approach for improving student achievement. In general, technology or ICT acts as a catalyst in promoting education in an ease manner. Hands on experience and simulation are appreciated in this kind of learning in which it gives a deeper understanding on the content for the students. Teacher interaction becomes more personalized with proper guidance and act as a passive spectator. Thus ICT is a great boon for the learners to have an in depth knowledge and understanding of content in the learning process.

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