

EDUCATIONAL TECHNOLOGY AND ICT

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Week-02

Lecture-08

Module-8: Flipped Classroom

Hello Dear learners, welcome to the SWAYAM NPTEL course on Educational Technology and ICT. I am Dr. Sarita Anand from the Department of Education, Vinaya Bhavana, Visva-Bharati, Santiniketan. Today, we are going to talk about the flipped classroom. Earlier, we covered the concept of blended learning, its meaning, origin, history, types of blended learning, its advantages, and limitations, also, we discussed the integration of individualized learning with blended learning.

Now, we will talk about the flipped classroom. The flipped classroom is an innovative instructional strategy that reverses the traditional teaching approach. Instead of delivering content in the classroom and assigning homework, students engage with the learning materials at home and use classroom time for discussions, problem-solving, and interactive activities.

This approach fosters a more student-centric learning environment and enhances engagement and comprehension. By shifting the focus from passive lecture-based learning to active student-centered engagement, flipped classrooms offer several advantages. Firstly, they promote deeper understanding and critical thinking. Students can pause, rewind, and replay instructional content at their own pace, allowing for a thorough grasp of the material.

Secondly, flipped classrooms foster a more collaborative learning environment. In-class activities, encourage students to work together, share ideas, and develop problem-solving skills. Thirdly, this approach can enhance student motivation by providing choice and flexibility. Students feel more empowered and invested in their learning. Now, the concept and the meaning of the flipped classroom. At its core, the flipped classroom model is

designed to maximize the use of face-to-face time for active learning. It shifts the focus from teacher-centered lectures to student-driven explanations and applications of concepts.

By reviewing instructional videos, reading materials, or other online resources outside the classroom, students can pace their learning according to their needs. During class, teachers act as facilitators, guiding students through collaborative activities and addressing individual challenges. So, it is an instructional method where students gain exposure to new materials outside the classroom, typically through video lectures or other digital content and use classroom time to deepen their understanding through active learning experiences and discussions.

The definition. There are many definitions given by different researchers. Here, the flipped classroom is an instructional strategy where traditional in-class learning and homework assignments are reversed. In this model, students first encounter new content at home, typically through video lectures or other digital resources, allowing them to learn at their own pace.

Classroom time is dedicated to engaging students in interactive activities, discussions, problem solving and collaborative work, which reinforces and applies the concepts learned at home, given by *Bergmann & Sams, 2012* in 2012. This approach aims to enhance student learning by shifting the focus from passive reception of information to active hands-on learning during the class time key features of this flipped classrooms are pre-class learning students receive instructional material before attending the class they may include watching videos reading articles or completing online modules then in class activities classroom time is devoted to interactive Tasks such as group discussion, hands-on practices, projects or guided problem solving activities.

The next one is student autonomy: Learners take responsibility for engaging with the content their own pace before attending the classes. And the teacher facilitation. Instructor provides support, clarification, enrichment during the classroom sessions. It means here the teachers are the facilitator in the classroom teaching learning process. Origin and the history of flipped classroom.

The concept of flipped classroom had its roots in broader educational movements that emphasize active learning and student-centered approaches. The term “flipped classroom” was popularized by Jonathan Bergmann and Aaron Sams, two high school chemistry teachers in Woodland Park, Colorado, in 2007. They began recording their lectures and making them available online to help students who missed their classes. Over the time,

they noticed that the students preferred this model as it allowed them to learn at their own pace. Whenever they are getting the time, they are attending those lectures. However, the principles of flipped classroom can trace back to the earlier pedagogical theories.

For example, active learning. 1960s to 70s, educational researchers like John Dewey and Paulo Freire emphasized that importance of experiential and participatory learning. Inverted classroom in 1990s. Maureen Lage, Glenn Platt, and Michael Treglia introduced the "inverted classroom" concept in their 2000 paper, focusing on using class time for active engagement instead of lectures.

With advancements in technology, the flipped classroom model gained momentum especially with the rise of video sharing platforms like YouTube and LMS. By the 2010s, the approach was widely adapted in schools, universities and professional training programs globally. Thus, it is accepted that flipped classroom is an instructional strategy and gives a type of blended learning environment to the learners.

It involves the traditional teaching methods by shifting instructions online and transforming the classroom into an interactive learning space. Now, how it works? First, the content delivered at home. Student access instructional content, either it's video, reading, material or simulation outside of the class before attending the classes, they receive this content to study. This content can be created by the teacher, found online, or a combination of both active learning in class. Class time is dedicated to applying knowledge and skills through activities like problem-solving, group discussions, project labs, and other teacher-led activities.

Advantages of the flipped classroom: Increased student engagement. Students actively participate in discussions and collaborative tasks during class. Active learning strategies keep students engaged and motivated. Real-time feedback and discussions foster deeper understanding.

Next is personalized learning: Pre-class materials allow students to learn at their own pace, revisiting concepts as needed. They are free to learn or read it whenever they choose. Teachers can provide targeted support and enrichment. The third one is enhanced critical thinking. Students develop higher-order thinking skills through problem-solving and analysis.

The fourth one is improved time management. Students can manage their time more effectively by completing assignments at their own pace at their home. before coming to

the classes. The fifth one is stronger teacher student relationship. More time for one-on-one interaction and building rapport between the teacher and the student they get at the time of classes.

Classroom teaching is used for meaningful interaction between the teachers and students and students are more responsive because they have already studied the given content at the time of flipped classes at their home and the sixth one is development of critical thinking. These interactive activities encourage analytical thinking and problem-solving skills of the students. They incorporate digital tools to provide a rich learning experiences.

Now, the challenges of flipped classrooms. However, implementing a flipped classroom requires a careful planning and consideration. Teachers must create high quality instructional materials that are engaging and accessible to all students. Additionally, it is essential to provide adequate technological support to ensure that students have the tools they need to access and interact with the content. Furthermore, effectively communication with the parents and the guardians is crucial to inform them about the flipped classroom model and its benefit because many times when students are using the gadgets like mobile phone or the tablet at home, parents are thinking that they are playing games not studying. So, insisting to the parents about the flipped classes and their importance to explain them is very important for the teachers.

So, there are some challenges like access to technology. Not all students may have reliable access to the internet or devices for pre-class learning. Teacher training. Teachers need to create or curate quality instructional materials. So, they need to provide teachers with the necessary training and support to implement the flipped classroom model effectively. Without training or proper knowledge of this model, teachers cannot implement it in their classes. Student accountability. Ensuring that students complete pre-class assignments can be challenging. Some students may need additional support to adapt to the flipped classroom model. So, teachers have to motivate the students to follow the flipped classroom approach.

Now, the adjustment period. Both teachers and students may require time to adapt to this new approach. Communicating with parents about the flipped classroom model and its benefits is most needed for the students as well as the teachers. Thus, the flipped classroom is a transformative teaching strategy that aligns with the demands of modern education by shifting the focus from teacher-centered instruction to student-centered activities.

This model empowers students to take ownership of their learning and develop the skills they need to succeed because it provides active learning and student engagement creates a dynamic and interactive classroom experience. While it presents certain challenges, its potential to enhance the learning outcome makes it a valuable approach for educators worldwide. By careful planning and implementing this integrated approach, educators can create dynamic and effective learning environments that empower students to reach their full potential.

So, in conclusion, we can say that the flipped classroom approach not only fosters deeper understanding but also promotes self-directed learning as students take responsibility for their own preparation. Teachers in turn assume the role of facilitator, providing personalized guidance and support. In the context of Indian education, the flipped classroom has the potential to bridge the resource gaps especially in the area where access to quality teaching is limited. It aligns well with the digital initiatives like DIKSHA and the e-learning platforms making it a scalable and inclusive solution for modern educational challenges.

Overall, the flipped classroom is a powerful strategy to enhance learner engagement, encourage higher order thinking and prepare the students for this digital and data-driven world. Now, these are the few references for your further studies you can go through the given references.

Thank you.