



## “The Impacts of the Flipped Classroom on Students' Academic Achievement”

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### Abstract:

Education institutions are under increasing pressure to implement technological improvements in the educational system; in reality, they are under increasing pressure to shift away from traditional teaching methods and toward more innovative, flexible, creative, and student-centered teaching approaches. As a result, a new method known as "FLIPPED Classroom" has been developed to address this issue. It is the preferred type of teaching in many advanced countries. Even in India, only a few B-schools are already in use. However, the focus of this research is on the difficulties in implementing Flipped Classroom in India. As a result, a descriptive research was conducted to examine the effectiveness of the FLIPED Classroom, as well as its relevance, benefits, and drawbacks.

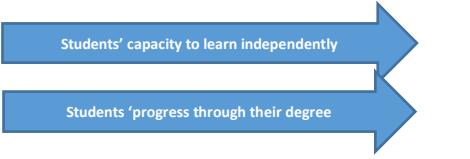
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### Introduction:

The worldwide epidemic of Covid 19 had an impact on various sectors, including agriculture, industry, economy, and service industries. The education industry has also been impacted by Covid 19. When it comes to lockdown, schools and colleges across India have been closed for more than 19 months, leaving parents in a quandary over their children's future careers. Only urban schools will be able to solve this problem by introducing online education. They bought ICT enabled classroom with the use of mobile apps and other online tools like Google meet, Cisco WebEx platforms. In this way many online apps, tools and methodology in teaching came into existence.

Many developed countries much advanced in implementing teaching methods. Infact, universities are being charged with producing a new kind of graduate like creative, critical thinkers able to synthesis and respond to complex socio-ecological problems. All these put pressure on Indian universities to innovate their learning and teaching, while supporting an increasing diverse student cohort's transition into higher education. These mandates call for critical and reflexive approaches in teaching and learning. However, the innovation in teaching bought variety of strategies among education institutions. One of the prominent one is Flipped classroom. The name itself tells about FLIP means turnover. In the past and present we use traditional classroom like “I Do”, “We Do”, You Do” shift from teacher use “you do “, We do”, “I do”. This approaches created much interest among educational institution.

Here with focussing flipped classroom, significance of FC and pro and cons of implementing flipped classroom. When it comes to implementation of Online classes, Advanced countries are much advanced in implanting such practices, in fact, many higher education institutions shifted from traditional teaching model into more flexible, effective, active, and student centred teaching strategies models. The flipped classroom is being adopted by teachers worldwide. It continues to inspire both students and teachers while offering great level of versatility in education. It is the most engaging way to share learning content as flipped classroom empowers students to have a better approach towards learning. Shift taking place from traditional classroom to flipped classroom. The below picture describes shift from Traditional lecture to flipped classroom.

<p>Traditional Lectures</p> <p><i>High levels of teacher-direction</i></p>		<p>Flipped Classroom</p> <p><i>High levels of teacher-direction</i></p>
<p>Students acquire knowledge in-class through direct instruction (didactic lecture)</p> <p>Class time is content-driven, with an emphasis on lower-order thinking skills (remembering, understanding) – question and answer, and practice exercises</p> <p>Knowledge is applied outside class through analysis and problem-solving exercises</p>	<p>Students acquire knowledge before class through flipped videos</p> <p>Students independent learning is supported in class by teacher-led –instruction to ensure understanding</p> <p>Some opportunity for active learning, with teacher guidance and scaffolding</p> <p>Knowledge is applied in class in simple or familiar contexts</p>	<p>Students acquire knowledge before class through flipped videos</p> <p>Knowledge is applied and extended in class in complex and unfamiliar contexts through engagement with active learning pedagogies</p> <p>Higher order thinking skills are emphasised</p>

(Source: Louisa Tomas, Neus(snowy) Evans, Tanya Doyle and Keith Skamp (2019), Are first year students ready for a flipped classroom? A case for a flipped learning continuum”, International Journal of Educational Technology in Higher Education, pp 2-22, 16:5.)

### Theoretical framework of Flipped Classroom

The concept of a flipped classroom, in which students are primarily focused on their studies, is both innovative and futuristic. The flipped classroom has piqued the interest of researchers and educators as a viable alternative to regular classrooms. The emergence of interactive videos, whiteboards, and video conferencing tools has made the flipped classroom a viable alternative to the traditional classroom methods. Studies on flipped classrooms appear in fields like information systems, engineering, education, and marketing. Flipped classrooms are assumed to be the most effective method of utilizing technology in education.

However, The FC Model is a type of new pedagogical model where classes are taught through digital resources shared outside of the classroom, and related content is also shared asynchronously through this external platform. Problem-solving activities, including collaborative, interactive, and active learning activities, are conducted inside the classroom. The flipped classroom encourages students to be active in the class by giving them a variety of tasks to accomplish in class. claimed that the flipped classroom was an educational method with two major components: (1) computer technologies such as video lectures and (2) the involvement of interactive learning activities.

**The famous and most successful flipped classroom has three characteristics.**

1	In class learning environments are highly structured, which means the educator has to plan for every single minute to keep the students engage with the lesson.
2	In class activities need to design in such a way that students solve the problems, answer the quizzes, apply the content that they learned in the flip video.
3	The students are massively encouraged via grading, in class activities, and educator expectations to complete out of class work and show up for in person session.

## The Four pillars of FLIP

### F: Learning Environment with Flexibility

When you eliminate the traditional lecture, you also eliminate the static rows of seats and replace them with more adjustable seating arrangements. Interior design should accommodate a variety of group and individual activities. Similarly, a flexible lesson plan allows students to fully study and absorb a topic at their own pace.

### Learning Culture (L)

In contrast to typical teacher-centered learning, the flipped classroom places students at the center of the lesson. Professors function as a "guide on the side," allowing students to choose their own pace and method of learning. When students need help applying new information, instructors will use an experiment or a practice set to guide them. Culture of Learning (L).

### Purposeful Content

Flipped learning instructors are constantly seeking for new ways to make the most of their class time so that students are actively engaged in learning and practice. Selecting lessons that fit this paradigm and designing strategies to encourage learners to work independently are both required by this method.

### Professional Educator.

Instructors in flipped classrooms must constantly study their students to discover who and why they need assistance. Instructors must be adaptable and sensitive, and they must understand that this dynamic teaching technique requires a high level of pedagogical expertise. In order to foster students in a flipped classroom, instructors must be at the top of their game despite being less visible.

### Need for the Flipped Classroom Approach:

Lecture, demonstration, tutorial, practical, clinical, and field posts are frequent teaching-learning techniques that are augmented with seminars, student symposia, debate, role play, and panel discussion on a regular basis. There is a perception that a new graduate must be able to develop essential skills in order to deliver socially responsive care. Medical education as we know it is being phased out. The goal of the Flipped Classroom is to shift from passive to active learning in order to promote cognitively demanding skills such as analysis, synthesis, and evaluation. Researchers have employed flipped classes to teach postgraduate students. It promotes active learning and gives students more chances to engage in critical thinking. It is advantageous. It allows students to actively aid their own learning while also efficiently interacting with and learning from their classmates and teachers. It enables children to assist their own learning independently, as well as effectively interact with and learn from their classmates and teachers. It enables children to promote their own learning autonomously, as well as effectively communicate with and learn from their peers.

- Flipped classroom is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space.
- The resulting group space is transformed into a dynamic, interactive learning space where the teacher guides students as they apply concepts and engage creatively in the subject matter.
- In traditional education. Lower-level learning, such as remembering and understanding, is done in class, while students are left to engage on higher-level learning tasks on their own.
- Students in a flipped classroom can complete lower-level cognitive tasks such as remembering and understanding prior to the session.
- They can engage in greater cognitive levels of learning in class. As an example, they could analyze and evaluate alongside their peers and teacher.

### **Importance and Benefits of Flipped Classroom**

- 1) A flipped classroom provides enough exposure by sharing learning resources with students in advance of the actual teaching-learning process in the classroom.
- 2) The flipped classroom method gives students plenty of time to prepare topics for the real class.
- 3) Students have enough time and space in a flipped classroom to investigate and experiment, practice and analyze, and gain comprehensive knowledge on a specific topic. Students acquire critical thinking and higher order thinking skills in flipped classrooms (HOTS).
- 4) Students' knowledge and understanding are improved through the use of a flipped classroom method.
- 5) The instructor can plan appropriate learning activities to create complete knowledge and maximize learning outcomes in a flipped classroom.
- 6) Homework is less frustrating because students watch/listen to lectures at home and then answer problems.
- 7) When students have questions about a new concept, they can get it cleared immediately through targeted answers.
- 8) Enough time in the classroom to explore new concepts/subjects via cooperation and peer discussion.
- 9) It becomes quicker and easier for students to catch up with their peers on missed lectures.
- 10) Because the students are already knowledgeable about the subject, the teacher does not need to go over everything with them.
- 11) Once a lecture is completed, it can be re-used as and when needed.
- 12) More flexibility for teachers in deciding how much time they want to spend on each topic with pupils.
- 13) Improved two-way contact between parents and instructors, as well as greater transparency for parents
- 14) Instant feedback for students: Teachers have more time to assist students in explaining difficult concepts.
- 15) Students are less frustrated: In the past, many students would abandon their assignments if they became frustrated with it. Working on problems in class helps to mitigate this issue.
- 16) Teachers go over subjects that students don't comprehend again. Students jot down any questions they have after watching lessons, and teachers go over those topics with each student personally.

- 17) Teachers support students in class; Students who might not have technology or parents to help them outside of school now have teaching guiding them in class
- 18) Flipped classroom is a suitable learning approach for the 21<sup>st</sup> century learners. Flipped classroom explores various tools and techniques of educational technology and integrates in ensuring learning outcomes in the classroom.
  - a. Maximize meaningful interaction between teacher and student
  - b. Maximize meaningful interaction between two students
  - c. Minimize distractions in the classroom
  - d. Maximize learning outcomes through student's active participation

### **Advantages of Flipped classroom**

1. More one-on-one time with the lecturer or teacher: The flipped classroom format allows for more one-on-one time with the lecturer or teacher. This implies that students will have more time to ask questions or seek assistance if they find any difficulties.
2. Students have additional group work or student collaboration/interaction time to encompass academic activities, discussions, and peer reviewing.
3. Self-paced learning: Students can learn at their own pace and at their own time with self-paced learning. This is especially beneficial for slower learners.
4. Increased student engagement: When students are studying, performing tasks, or discussing the subject in flipped classes or lectures, they are more engaged. In traditional classrooms, the teacher would often provide all of the information.
5. A better understanding of the subject and related subjects: -As students investigate and discuss themselves, they get a deeper comprehension of the subject and related subjects.
6. Workplace accessibility: The flipped classroom or lecture approach makes homework and work more accessible. Teachers must produce learning resources for the subject and make the work available on the intranet system of the school, institution, or university.
7. May boost test performance: Recent research suggests that flipped classrooms or lectures can help students do better on tests. According to a poll conducted by the Flipped Learning Network in 2014, 71 percent of teachers saw test score improvements as a result of employing a flipped classroom format.
8. Parental transparency: Parents now have more access to learning materials and their children's current performance. If the student's comprehension is a problem, parents can assist.
9. Absences are less of a problem: The flipped classroom format allows students to make up on missed lectures or classes. The beginning knowledge needed for the class will be available online, and the student will be able to catch up on their own.
10. More content: Richer information is encouraged in flipped classrooms or lectures. Students would be given one method of looking at the subject in traditional teaching, but flipped lectures or

classrooms encourage students to look at a topic in a variety of ways, using different diagrams, language, and videos.

11. More freedom for teachers: Using the flipped classroom method, teachers or lecturers have more time to deal with pupils who they believe require further support or assistance.

### Disadvantages of Flipped classroom

- 1) **Relies on student preparation:** The flipped classroom method relies on students pre-planning their classes. If the kid is already a social loafer, this strategy will result in their not finishing their job or learning.
- 2) **More screen time:** When employing the flipped teaching technique, computers or tablets are used more frequently due to the nature of the research, activities, and discussion required. This could add to students' already excessive screen time.
- 3) **Exacerbates digital divide issues:** Lack of access to the internet or a home computer can prevent students from accessing learning resources. This could worsen the digital divide and learning challenges that students from low-income homes already face.
- 4) **Teacher time and effort:** The initial time and effort required by a teacher when preparing flipped class material is greater than in a typical class. The material, on the other hand, can be reused the next year.
- 5) **May not cover everything required for a test:** Students in flipped classes may not cover the entire subject required for a test. The depth of the subject can be dictated by the student themselves or the group the student is working with.

### Implementation of FC in India

The concept of flipped classrooms, which began in high schools in the United States a few years ago, has gained traction in business schools, with instructors from Tuck School of Business, Columbia Business School, and NYU Stern School of Business testing the model. Coursera, a major open online course platform, was previously rumoured to be exploring the flipped classroom idea with a number of universities. In other hand, Introducing and adopting FC is increasing day by day in India, in fact, The Indian School of Business (IBS) introduced FC to teach Post graduate students course on entrepreneurial decision making with the help of 'Creatist' technology to deliver FC to larger classes. Simultaneously, another B- school, named SP Jain Institute of Management and Research introduced to MBA course.

## Challenges in India to implement Flipped Classroom

1. According to the ASER research, implementing FC is difficult since new schemes and educational concepts are imposed on students who are struggling to manage their education. The primary difficulties in India are the massive digital divide, slow Internet penetration, and ineffective management.
2. Inadequacy of internet and communication (ICT) abilities, as well as a lack of interest in visiting far-flung locations, will be important roadblocks in bridging children's learning gaps and ensuring access to high-quality education.” CEO and co-founder Beas Dev Ralhan
3. Issues with infrastructure in schools and institutions.
4. There is a significant digital divide, and Internet penetration is slow.
5. Various digital systems, such as SWAYAM and E-Paathshala, are already in the works, but no follow-up audits or data-driven assessments to assess their efficiency have been done.
6. First and foremost, this form of education is not appropriate for persons in low-income situations. They don't have easy access to technology like computers. As a result, it can only benefit the wealthy or societies.
7. Some students lack the discipline required to benefit from this technique.
8. In order to gain knowledge, flipped learning places too much emphasis on the student's responsibility and wisdom. People's perspectives differ. As a result, some students may never open their pre-recorded courses.
9. This teaching style is difficult for the teachers as well. This is due to the fact that they must take time away from their regular teaching schedule to record effective lessons.
10. In addition, it's possible that a large amount of money may have to be spent on teachers. In order to teach kids how to use computers.
11. This approach has the drawback of not instantly resolving a problem. This is due to the fact that the appropriate teacher is unavailable at the time the student is watching a lecture video at home. As a result, the student's pertinent problem or uncertainty may slip his or her mind later.

## Conclusion

the flipped classroom is progressively making its way into classrooms in India, only few B-schools and Medical colleges adopted such model and professors are coming up with novel ways to communicate knowledge to pupils in various topics. The process of flipped classroom becomes more gratifying for both the instructor and the students once these lifetime learning characteristics are instilled. The concept is evolving, with active discussions on Flipped classroom taking place in social media platforms. Due to the intricacies of human learning, research on these areas is currently limited.

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