

BLENDING LEARNING AND FLIPPED CLASSROOM DURING PANDEMIC: OPPORTUNITIES AND CHALLENGES

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ABSTRACT

A health crisis translated into economic crises, the spread of Covid-19 brought the global economy into its knees and induced lockdown worldwide. Social distancing is the only antidote to fight against this pandemic. Lockdown raised major challenges globally, led to shutdown in almost every sector. Starting from the small business units to the corporate giants all are shuttered. The impact on education sector cannot be overlooked however; the online teaching learning process played the role of a not out batsman. The academic institutes started practicing online platform to cope with this outbreak and engaged students meaningfully over the online and that nevertheless delivered a feeling of home away home to the students' fraternity. The current research work tried to understand the significance & different aspects of flipped classroom with the help of available literature. The paper also shades light upon challenges ahead to adopt the flipped teaching learning process.

Key Words: Flipped Classroom, Online Teaching, Virtual Teaching, Covid-19, Students Learning.

INTRODUCTION

Article in Bloomberg Business Week (March, 2020), highlighted that \$600 billion teaching industries forcedly shift on online teaching learning process in the age of Covid-19. Number of universities and educators taught themselves about popular software programs of video conferencing and online teaching. UNESCO reported approx 1197.84 learners from 151 countries are affected by

Covid-19. The pandemic resulted in lockdown and social distancing; people are compelled to stay inside for their well being and contrast to it the online teaching and learning process elevated the teachers and learners knowledge and technical skills. Plentiful academic institutes espoused online mode of connectivity initially for meetings and later linked to the learners for virtual teaching. Although this worldwide lockdown forced education institute to adopt the online platform as it is the only way out but the entire education system is underprepared for this be it primary, secondary or higher education. No room for technology anxiety is left, not by choice but by chance everyone has to shift from contemporary teaching to the virtual mode. To mitigate the loss of learning more and more creativity and deeper digital mastery is needed on virtual platform to bridge the gap between contact learning and virtual learning. Almost every sector in the world developing an ecosystem to cope, recover and prepare them for future challenges. Imparting educational content online is the only way out to cope and sustain in academic industry. However the entire online education ecosystem needs to be designed in a dynamic way to make the experience as close to real classrooms.

Though the face to face interaction simply cannot be replaced but with the help of technological tools such as screen sharing, whiteboard, document sharing, discussion forums certainly engage the student meaningfully even in the online platform.

Flipping the class has already been introduced to enhance the understanding in contact class. Working on flipped class and virtual teaching simultaneously helps the instructor to have more interactive sessions. Certainly integrating these two conversations together would bring more focused learning.

The flipped classroom is an instructional model in which students viewed the learning content before class through instructor-provided video lectures or other pre-class learning materials, and in-class time is used for student-centered active learning. Video is widely utilized as a typical pre-class learning material in the flipped classroom (Long et al.,2016). The concept of flipped classroom increases the student teacher access one in classroom either a contact / virtual or another one in video form at home. The main objective of the flipped classroom is to providing a platform to the students to have got an initial exposure to understanding of the content prior to the class. The aim of the pre-class learning phase is to better meet the individual learners' needs (Bergmann and Sams, 2012).

When a student is sitting in the class without a prior understanding of what is going to be discussed, an average attention he gives is not more than 15-20 mi at

1. Concept: Teaching model where video replaces the lecture with valuable class time. Content is understood at home discusses in the class. It leads to high student engagement and more face to face interaction.

2. Flipped Class Matters because: It reshapes the teaching approach. Teachers are rethinking over the content as well as on the delivery front. The flipped classroom concept also improves the

the beginning of the session and it decline rapidly after this. Also an average performer remembers only 20% of the material taught in the class (Wilson & Korn, 2007). Passive learning bores the students and leads to disengagement. Wherein active contribution of student such as in-class discussion, team work, problem solving. And the active learning and contribution is only possible when learner is prepared well aware with the content going to be discusses in the class. Self engagement fosters learning and retention. Flipping the class model significantly supports active participation also the pre class learning inculcates interest in students to perform better. The core concept of flipping is to shift the attainment of content before the class in form of instructional videos, recorded lectures and other remotely accessed instructional items. After this homework the focus of the teacher is to spend in-class time with practical aspects complex problem solving, deeper conceptual coverage and peer interaction (Jensen et al., 2015).

While designing the content for flipped classroom an instructor shall keep in mind that the content is easy to understand so that a student dose not lose the interest while personalize learning. Bringing homework to school and class work to home an instructor may tag on the following points to make the flipped content more accessible:

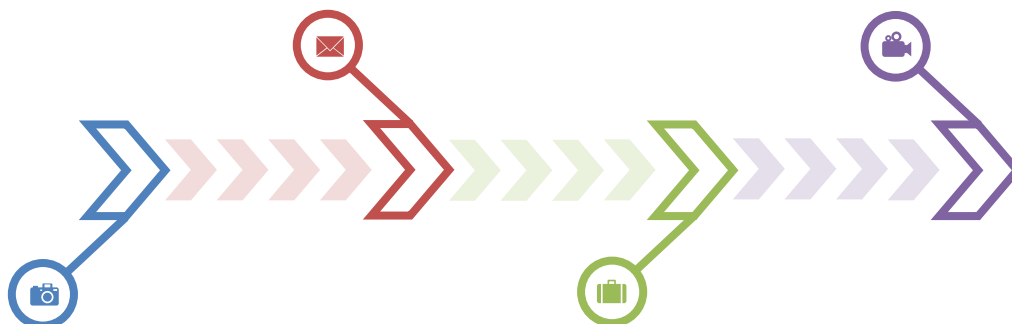


Figure 1. Holistic Concept of Flipping the Class (Self Constructed)

The effectiveness of flipped classroom model greatly depends upon how easy & meaningful content is designed by practitioners. Many of the researches have been conducted comparing traditional didactic methods vs. flipped classroom concept and finds positive trend for flipped learning. In a research over 91% of the respondent concluded that compare to traditional method, hybrid method (lectures online and activities during class) have improved the learning skills of an individual (Stone, B., B., 2012). Meta analysis results from 225 studies based on traditional approach vs. active learning model comparison records that active learning is superior to traditional lecture-based teaching, increasing exam scores by 6% and decreasing fail rates by more than 50% (Freeman et al., 2014). Flipped learning is a hand holding to virtual mode of teaching. Virtual educator do not get adequate time to discuss each and every concept or with each and every student in the class like contact classes and it become more cumbersome when you have 50 to 60 students attending your virtual class. Flipped class improves the

3. Creativity: Vodcasting, Youtube, WiKi, Ted Talk and the list goes on. The teacher prepares planned, short, meaningful and interesting content. Continues motivation to the students enhances the teaching learning process.

4. Challenges: Not all students learn well from the concept. So, many a time's flipped homework still remains homework in the class. The flipped concept greatly depends upon internet and technology.

learner's attention in the virtual class.

The present research focuses on understanding the application of flipped concept on virtual teaching also to develop a model supported by previous researches to enhance the virtual flipped teaching learning approach.

BACKGROUND OF THE STUDY

The budding of literature along with the current education scenario points out the need to re-think the traditional teaching model. Flipped learning enables the flexible education and caters diverse need of the students. It improves the participation as well as engagements of students in the learning activities (Roehl et al., 2013). Present scenario witnessed almost all the universities and higher education institutes forced to adopt the one virtual teaching process, and bland of flipped and virtual learning has come up with fertile result in terms of engaging students meaningfully.

For effective transfer of knowledge break down the class into different constructive hours is a result oriented strategy. The theoretical background of the study discusses the different viewpoints and productive outcomes of the flipped concept.

- **INDIVIDUAL CONSIDERATION**

The concept of flipping is a blended learning and it integrates flexibility (Johnson, Becker, Estrada and Freeman, 2014). The flexibility enables learner to reach out the content individually, perform active role and follow the content according to individual interest (Bishop & Verleger, 2013). From the students standpoint online videos and ICT resources inspires and fosters independency, self directed learning and understanding the concepts ahead of class meetings (Cleveland-Innes & Campbell, 2012). Often it happens that despite of a strong delivery in the class the understanding is unclear and vague, reason could be that the teacher is unable to give individual attention and guidance to all the students and unable to engage them in creative thinking (Sam and Bergmann, 2013). However, the concept of flipped classroom offers bundle of opportunities to overcome these issues, as videos and presentations are offered to the students beyond the class as homework.

A beforehand understanding about the topic leads to effective class hours as students practice what all they have learnt through provided materials (Gayathri & Vijayarani, 2017). Along with above, an instructor is able to give individual attention to struggling students and offer complex task to those who are already well worse with the content.

- **Collaborative learning**

Collaborative learning is the widely acceptable practice of learning. It is based on the ideology that learning is a naturally social act in which group of people study together on a common goal (Gerlach, 1994).

The mutual learning provides a chance to the learners to participate in discourse also they have the liability for their own particular learning and thus they become critical thinkers (Babu, 2017). The flipped classroom analysis is incomplete unless the references are drawn on collaborative learning. Flipped learning itself has dual dimensions; Individual Learning Spaces and Group Spaces.

Rather than being confined to home or class the individual learning space is when the students are learning independently with the help of provided content such as videos and other e-materials. The group space is defined as face to face interaction with the instructor, it focuses on two way communication not the simply delivering the lecture by the instructor (Bergmann, 2016). These two spaces simultaneously increase student participation and classroom interaction,

also emotional involvement in promoting active learning (Jamaludin & Osman, 2014).

In comparison to flipped classroom the traditional classroom approach makes learning difficult due to more focus over delivering of lecture rather than a discussion, whereas environment in flipped classroom is student-centered and improves student interaction and engagement (Kellogg, 2013). The said arguments are supported by various researches also the students get over from the difficulties encountered during self learning via constructive discussions during class (Chen, Wang & Chen, 2014). Hence the flipped classroom integrates the small group activities in the classroom with concept and content delivery in the rich media formats for individual understanding (Kim et al., 2014).

- **Active Learning**

Active learning classrooms are known to support student learning outcomes (Baepler et. al, 2014). Flipped classroom encourages active learning both during the class and after the class because of its distinctive features. The flipped classroom extensively uses web-based technology to deliver course content outside of class, with application based learning during class time (Strayer, 2007). The application based learning imbibes greater degree of involvement on the part of the student, a greater dynamism in learning and a greater interaction with the contents (Graeff, 2010). The underlined theory of the flipped model addresses several challenges of traditional method of teaching and paves way for active learning strategies and utilizing the classroom hours in application, analysis, and synthesis (Krathwohl, 2002).

- **Technology and Flipped Classroom**

Blending of technology in teaching learning process is the necessary feature of flipped classroom. In comparison traditional teaching flipped classroom requires a proper integration of technology into teaching practices (Lai, Hsiao & Hsieh, 2018). Hence, many researchers have defined the flipped classroom concept in respect to technology. Technology plays an important role in developing rich media formats such as video, podcast of lectures, online tutorials to make learning easy outside the class (Herreid & Schiller, 2013).

The significant role of technology in redefining the teaching approaches is undeniable (Prensky, 2001). However studies also concluded that technology is essential in self learning rather than it contributes in developing and sharing the content via various platforms (Hwang, Lai & Wang, 2015). It is not the

educational technology that helps students to learn but content representation, explanations using visuals and diagrammatic presentation allows scholar to have greater understanding (Sams& Bergmann, 2013).

Multiple learning styles are incorporated in teaching to meet the need of different students. Due to evolution of technology in teaching learning process, the recent momentum is gained by flipped classroom approach. To enhance the learners experience in terms of content delivery, learner's engagement, learning assessment and taking feedback; contribution of technology cannot be overlooked (Barnett &Coate, 2005). The integration of technology enables multiple teaching styles, improvises teaching quality and fulfills learning outcomes by adopting variety of teaching and learning strategies.

- **Student engagement through self learning**

Various literatures have been established and agreed upon that flipped classroom as a teaching method promotes student engagement and a more dynamic approach to learning. Students in flipped classroom concluded that instructor keeps on encouraging students to participate and learn in comparison to traditional methodology (Ferreri a & O'Connor, 2013). Therefore the Flipped Instruction Model is considered to be more student-centered and have an encouraging impact on students learning environment (Ng, 2014). The flipped technology is a shift from teacher leads direct teaching to focuses on getting students involved (Kostaris et al., 2017). Effective utilization of classroom hours where instructor is able to attend the students individually, provide guidance to strugglers and motivate the performing students with challenging tasks by engaging them in higher order thinking (Lai et al., 2018).

Student involvement leads to dynamic learning. The cognitive presence of the student in teaching learning process direct to self regulated learning and it is possible only in lesser teaching and more presence of online and offline discussion forums (Shea &Bidjerano, 2012). The improvements are incorporate in flipped learning model, promoting engagement convert the students from just a listener to be responsible for their own learning. This refinement motivates active learning environment, and the shift promotes self-learning with a view to convert the students as lifelong and independent learners (Lai et al., 2018).

- **Virtual Flipped Classroom**

The flipped classroom also known as inverted classroom model, has emerged as promising substitute to traditional lecture-based teaching. It not only offers active

involvement of students beyond the class but also act as a supportive tool to virtual mode of teaching (Chick el al., 2020).

Virtual classroom environment allows teachers and learners to communicate with each other without the need to be physically together at the onetime. The same challenge lake of time is faced by the instructor even in virtual mode of teaching. Virtual flipped classroom is bland of self learning stage (through basic video lectures and study material to be studies at home) and interactive activities during the virtual class (student apply their knowledge in a virtual synchronized classroom in a way similar to the real classroom environment) (Ismail & Abdulla, 2019). If the students have alreadydone the primary learning at home through the flipped content, the virtual classroom time is well utilized in review and reinforcement.

Flipped classroom lists several benefits such as allow students to learn in their own pace, encourage them in active learning process, frees up classroom time in more creative learning activities, also instructor gets ample of opportunities to interact with students and understand what all they have learned through flipped content (Gilboy, Heinerichs, &Pazzaglia, 2015).

The advancement of technology brought about a paradigm shift in the teaching and learning practices by creating a learning environment conducive for wider engagement in the teaching and learning process (Lai, Hsiao & Hsieh, 2018). The need of current scenario i.e. bland of flipped activity with virtual teaching; where dialogue with self: understanding the flipped content, dialogue with others: active participation in virtual classroom, observation: understanding the viewpoints of peers and doing: learner experiences doing through direct, allows a students to participate in active learning approach.

New approaches have been applied to various subjects especially in higher education which have a focus on STEM Subjects (Lundin et al., 2018). The results of an experiment done on management students of Spanish University students related to the flipped classroom were very satisfactory and students really found that the new method of the learning process is really useful for their academic performance (Jiménez&Jiménez 2020).

Flipped classrooms are gaining popularity, especially among the nonnative speaking students. It was found that there was continuous access to the flipped classroom material by all the students throughout the semester. The students are not only accessing the flipped material in a specific time period but they were

accessing it prior to the weekly exams, project submissions, and revisions as well (Walsh&Rísquez, 2020).

CHALLENGESAHEAD

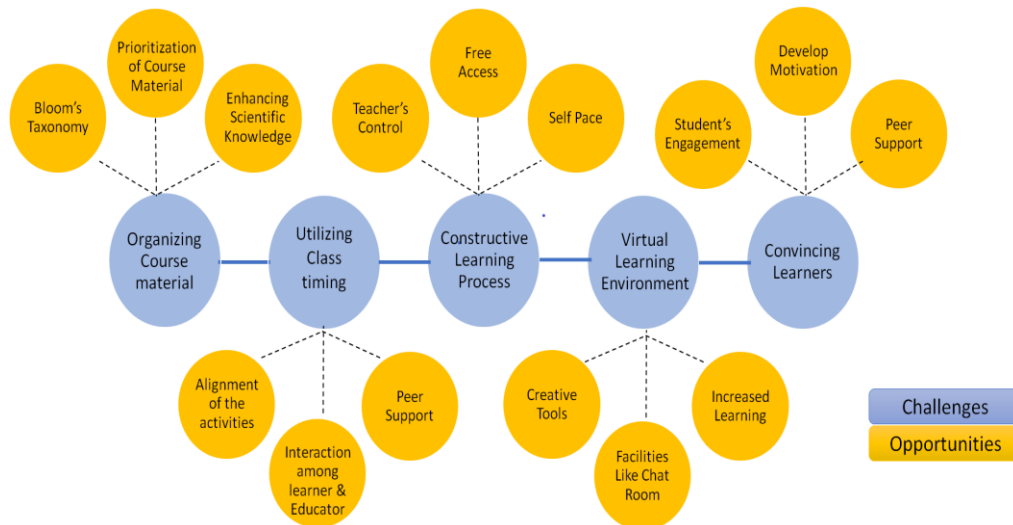


Figure 2. Challenges and Opportunities of Modern Teaching Learning Process

• HOW TO ORGANIZE THE COURSE MATERIAL

One of the primary challenges is to manage the course material for the flipped classroom. The faculty must know that what exactly he/she want to deliver in the classroom, some educational models like Bloom's Taxonomy (Anderson & Krathwohl 2001) can be used for a better approach. This is the stage where prioritization of course material is taken care of. Educators who belong to the medical field often face the challenge of enhancing scientific knowledge for increasing competition among students (Densen 2011). There might be a risk of dumping content in a flipped-classroom approach which can overload the student with some irrelevant content (Johnson 2013; Wagner et al. 2013). A well designed flipped classroom strategy must be introduced so that it should increase the efficiency of both educator and student. The well defined strategy will also enhance the understanding in virtual classroom. The time consumed in the flipped classroom for pre-class and virtual in-class activities is more result oriented less than the time used in a traditional classroom.

- **HOW TO UTILIZE VIRTUAL CLASS TIME CREATIVELY AND EFFECTIVELY**

Another biggest advantage in a flipped classroom is to utilize the time. It is very important to align the activities of the flipped classroom with the given syllabus. Rowe et al; (2013), suggested that educators must use these activities which are interactive, reflective, learner-centric, integrated, and which can add value in his/her engagements. How I spend time in front of the students is the biggest question for the innovative flipped-classroom activity. Case-based learning, peer support groups some of the good examples of various methods available for the flipped classroom activities. It is very difficult to say which method is the most effective and it requires a lot of research to conclude (Bishop & Verleger 2013), but we can say that the flipped classroom eventually increases the interaction between the educator and the student which lead towards the proper guidance, support and clarification about the topics, at the same time educators are getting real-time feedback in virtual in-class activities. Both educators and students concluded that increased interaction is the most important and valuable outcome of the flipped-classroom (Snowden 2012; Johnson 2013).

- **CONSTRUCTIVE LEARNING PROCESS**

Flipped-classroom is a platform that allows exposure to the student towards behaviorist and Constructivist principles of learning (Hawks, 2014). According to behaviorist learning theory for an outside class activity, the student must involve in lectures, drills, and tutorials which are controlled by the teacher (Hawks, 2014). Whereas the principle of constructivist learning is based on student's previous knowledge, some other theories of flipped-classroom include problem based learning, student centered learning and peer assisted learning (Elliot, 2014). At the same time flipped classroom allows students to access content from anywhere at any time which helps them to learn new things and utilize their own. Flipped classroom also provide a freedom of self pace, students in flopped class room can pause and replay the video until they learn the concept (Bergmann and Sams, 2012). The flipped learning helped them to perform better in the virtual classroom. The enhanced performance of the student could easily been seen when compared to traditional mode of teaching.

- **VIRTUAL LEARNING ENVIRONMENT**

Modern Virtual Learning Environment (VLEs) are found very difficult by educators but sometimes they are very useful and creative, tools like Blackboard, Moodle, Prezzi, etc can be used to support flipped-classroom for making the class

more interesting. Learners become engaged in problem-solving situations by using the concept of equity-based learning at their centre (Berge 2002). These modern VLE techniques in the classroom are actively working in maintaining the environment of online classes. The flipped-classroom also provide a platform like chat rooms so that learners can discuss things which encourage peer learning and helps educator to identify gaps in the understanding level of students (Faust & Paulson 1998).

- **CONVINCING LEARNERS**

Convincing learners is the biggest challenge in front of the educator. For instance, a student who is engaged in a traditional classroom approach resists him in accepting the flipped-classroom approach or online. Strayer (2007) conducted a study in the US and stated that the students were not much satisfied with the flipped classroom approach. Flipped-classroom sometimes left a student is lost as compared to the traditional classroom; hence educators are advised to engage students in evidence-based learning for better monitoring. It was also found that adult learners are found more motivated and passionate towards flipped-classroom for enhancing their knowledge and skills (Swanwick 2010).

CONCLUSION

Enriching teaching learning process in current unsure environment is most challenging aspect in education industry. In order to ensure that the learning of students shall be in a way that they stay connected to virtual classes; new teaching learning processes has to be incorporated. The flipped classroom allows student self learning and allows instructor to conduct two way communication or discussion during the virtual classes as the students are well worse with the theoretical aspects of the topic going to be delivered in the session. And this is how the blend of flipped learning along with virtual teaching augment students' participation and learning. The current research paper discussed the benefits of flipped learning such as individual consideration, collaborative & active learning, technology involved to enhance the content & blend with virtual teaching. The blend of these two concepts engages learners in collaborative and coordinated learning.

The success of all these model pedagogy greatly depends upon how well the technology is adopted and accepted by the instructor as well as by the learners. If anyone fails to adopt and to understand; the purpose could not be solved. The sole objective of blended learning is to increase participation in virtual classes and it is only possible when students are meaningfully engaging themselves in

provided content. Their understanding of flipped content will help them to redirect from learning during the class to participating in discussion. While the need of technology in online education is rapidly growing, additional insights to enhance the online education is required. Virtual flipped classroom provides plethora of options from designing the course to execution of it with innovative technology and guides students to learn through more meaningful and practical approaches.

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