



FLIPPED CLASSROOM LEARNING-TEACHING PEDAGOGY FOR 21st CENTURY LEARNERS

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Abstract : The present paper reflects the acquisition of 21st century skills by the learners to enable them to contribute directly to transforming our nation's sustainability into a vibrant knowledge society with a suitable blend of online education at home through videos or other sources with in-depth learning through interactive classroom education. Repurposing class time, frees the teacher from direct instruction and uses the classroom time to practice learned concepts, engaging activities, and Higher Order Thinking. As per the views of varied researchers all over the world working in different fields of education flipped classroom learning is the need of 21st-century learners as it is responsible to take the students to a deeper level of thinking and collaborative learning environment. This paper is completely in sync with the suggested norms of the National Education Policy 2020. The paper concludes by suggesting Flipped Classroom technique at its core by ushering our students into the environment during which they take ownership of their learning.

Index Terms - Online education, classroom education, The National Education Policy 2020, Flipped Classroom, Higher Order Thinking, collaborative learning.

I. INTRODUCTION

Globalization and the demands of a knowledgeable society call for the acquisition of new skills by learners on a regular basis. It is important for them to learn how to learn and become lifelong learners. Therefore, it is essential that children and youth in the country are equipped with the knowledge, skills, attitudes, and values as well as employable skills that would enable them to contribute to India's social, economic, and political transformation. The National Education Policy 2020 lays particular emphasis on the development of the creative potential of each individual. It is based on the principle that education must develop not only cognitive capacities - both the 'foundational capacities' of literacy and numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving - but also social, ethical, and emotional capacities and dispositions. It envisions an India-centered education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all. This vision can be accomplished only with the perfect blend of online education with classroom education. This is possible only through flipped classroom learning, an innovative teaching pedagogy for 21st-century learners.

II. Review of Literature

Sams, A., Bergmann, J. (2012), an article that reviewed a computer program that recorded PowerPoint lectures, including digital ink that could be written on the screen and audio recording. At this point, they were ready to dive into teacher-created videos. This video will be watched by the students in their house i.e., the direct instruction is done through video, or some other digital media, which students can use individually before they come to class. This time shift allows the teacher to use the class time for work that either is better done as a large group or requires individualized attention by the teacher. That's it. The flipped class, in brief, is direct instruction delivered to the individual outside of class, so there is more strategic use of in-class time for group work and individualized attention. Bloom (1968), the flipped mastery model is an asynchronous approach in which students demonstrate mastery of content before moving to new topics.

III. Theoretical framework

Simplicity is the ultimate sophistication.

LEONARD DA VINCI

Simple ideas are more profound. Think back to Blackberry phoned with their many buttons. Everybody wanted one- until Steve Jobs of Apple told his design team to create a phone with one button. And as they say, the rest is history. The Flipped Class technique at its core is a simple idea, based on these two steps-

1. Students watch and interact with an instructional video (Flipped video) before coming to class.
2. Repurpose class time that you freed from direct instruction and use it to practice learned concepts, engaging activities, and higher-order thinking.

3.1 NEED FOR FLIPPED LEARNING APPROACH

The world of information has dramatically changed since most of us were in school. We grew up in an information-scarce world where information “lived” in libraries, books, and the heads of our teachers. Today we live in a saturated world where information is easily accessible to anyone with an internet-ready device. Whatever you teach is now available on instructional video on YouTube that teaches everything in your curriculum. There are countless videos on Newton’s First Law, how to balance an equation, etc.

If YouTube can replace us, we should be replaced. Teachers are no longer the only keepers of information, so our roles must change. We need to move from disseminators of content and instead become facilitators of learning. We will be adding more value to our students’ learning experiences in the classrooms as teachers can only help the students to explore the topics more deeply, and only a content area and learning expert can diagnose where students struggle.

3.2 THE FOUR PILLARS OF FLIPPED LEARNING APPROACH

To detail the concept of the flipped learning approach, experienced educators in this field identified the pillars of a flipped classroom that allow flipped learning to occur. These include a Flexible Environment, Learning Culture, Intentional Content, and Professional Educator (Flipped Learning Network, 2014).

Flexible Learning Environments

The learning environment in a flipped classroom is characterized by a variety of learning modes being introduced in the classroom including group work, independent study, research, performance, and project work that optimize learners’ learning capacity.

By participating in different learning environments, learners themselves have the flexibility to choose when and where to learn which can gradually and constantly increase their autonomy level.

A Shift in Learning Culture

When talking about a shift in learning culture, there has been the shift from teacher-centered to students-centered approach since we entered the 21st century. Learners in flipped classrooms receive a great learning opportunity and explore the topics in greater depth. In addition, learners are actively engaged in learning new content or knowledge both inside and outside classroom. They can also pace and evaluate their own learning. Meanwhile, the teachers can emphasize the use of classroom interactions to ensure their comprehension of each learning topic.

Intentional Content

The teachers in flipped classroom play an important role in deciding what content they need to teach directly and what should be the appropriate materials to help learners explore outside classroom on their own. Therefore, the content chosen by the teachers is specific content to maximize classroom time, allowing learners to experience various methods of instruction such as active learning, peer instruction, inquiry-based learning, project-based learning or problem-based learning depending on the subject matters and grade level of the learners.

Professional Educators

Since it is essential to carefully choose the content for a flipped classroom, experienced, skilled, and professional teachers are required more than ever. They have to decide when and how to shift away from direct instruction toward individually directed learning. They also must decide how to provide the interaction between learners or even teachers and learners. Additionally, the teachers in the flipped classroom usually reflect on their teaching and share with others to improve their instruction as well as to gain mutual understanding of the concept taught in the flipped classroom.

3.3 FLIPPED LEARNING AND 21ST CENTURY SKILLS

According to P21 or The Partnership for 21st Century Learning (2015), the collaborative partnerships among education, business, community, and government leaders in the United State of America emphasize the importance of 21st-century skills for all learners regarding the constant change throughout the world, they recognize there are three main skills that 21st-century learners must have namely information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills in order to be ready for the challenges in the 21st century and beyond.

Under the three main skills sets mentioned above, each contains sub-categories in order to assist educators and teachers in designing lessons and learning activities in their classrooms. First, on information and communication skills, learners are expected to develop information, media literacy, and communication skills. Second, regarding thinking and problem-solving skills, learners are supposed to be able to think critically and systematically, identify problems and solutions, be creative, and have intellectual curiosity. Lastly, with regard to interpersonal and self-directional skills, learners are expected to develop their interpersonal and collaborative skills, self-direction, accountability and adaptability, and social responsibility.

One possible way to help 21st-century learners to develop 21st-century skills suggested by the partnership for 21st-century learning (2011) is to use 21st-century tools. It is undeniable that information and communication technology or ICT such as computers, social networking, audio, video, media and multimedia, and other technologies play an important role in the 21st-century learning context. These 21st-century tools are enablers for learners to perform what they have gained from the classroom more effectively. By using these tools, the traditional classroom will be transformed from where teachers are the center of the classroom to the 21st-century

classroom where learners are the most important part.

Hence, the flipped learning approach has stood out as alternative teaching pedagogical and practical approach that has been recently introduced in teaching not only core subjects like Mathematics and Sciences but also in almost all subjects across the globe to help learners develop 21st-century skills. For instance, learners gain content knowledge and develop their information, media literacy, and self-directional skills via the use of technology outside the classroom. On the one hand, the learners develop interpersonal and collaborative skills with their peers through the tasks inside the classroom (Baker, 2013; Bergmann & Sams, 2012; Cockrum, 2014; Lockwood, 2014; Morris & Thomasson, 2013; Witten, 2013).

3.4 FLIPPED CLASSROOMS IN SYNC WITH THE NATIONAL EDUCATION POLICY 2020

The National Education Policy talks about redesigning of teacher education for foundational literacy and numeracy which emphasizes teacher education and development at all levels and will also include strategies for more interactive classroom use of technology (such as apps for smartphones or tablets) in developing optimal individualized learning plans for students.

Flipped Classroom talks about managing the chaos, for which we need to be cognizant of which students need more help, which are ready for the next challenges, and which one has learned something incorrectly and needs clarification. There is no easy way to determine which student needs more assistance. One strategy you might try is Visual Cue. Cara Johnson, an anatomy teacher in Texas, uses a set of three cups at each table to create a quick visual trigger to identify which students need help. This helps the teacher to assess the level of need, and it gives a teacher a way to assess individual and group needs quickly.

The National Education Policy emphasizes on Self-directed personal development of teachers according to which all States should adopt a technology-based system for enabling choice-based Continuous Professional Development and tracking the professional trajectory of each teacher. The resource people for delivering these Continuous Professional Development programs will be carefully selected, effectively trained, and will have tenure in the role. The capacity of these resource persons/teacher educators will have a considerable impact on the quality of the Continuous Professional Developments, so they will be suitably invested in. Such resource persons will most often be selected from amongst the best teachers and must be given every opportunity to continually develop their knowledge.

Flipped Classroom learning approach supports successful flipped teachers in collaborating time and works to maximize their time. Flipping your class will not only make the teaching easier, but it will make it better. Following are the suggested ways-

- a. Hire substitute teachers for a day and have two teachers plan to create videos and in-class activities.
- b. Use Professional Learning team time to create shared video assets and other learning objects.
- c. Schedule common planning time for teachers.
- d. Use staff professional learning time to focus on flipping the class.

-Flipped Class 101

The National Education Policy emphasizes revamping Continuous Professional Development where teachers must be able to choose what they want to learn, the content as well as the delivery methods. Teachers will have the opportunity to choose from multiple modes of learning - namely, expert-driven, peer-supported, or self-directed; in-person workshops, blended, or online; etc. - which would be all informed by the curriculum and will include short and long-duration workshops, short discussions, exposure visits, in-class demonstrations, online apps and content, and other creative methods.

The Ideal Flipped Class emphasizes on the choice of teaching through multiple modalities is the best way to organize. The choice board approach uses Bloom's taxonomy as a basis for determining levels of cognition.

Table- Choice Board Approach

	Knowledge/ Understanding Level Activities	Application-Level Activities	Higher Order / Hands-On Activities
Activity 1	Read textbook and take notes	Worksheet (odd questions)	Experiment A
Activity 2	Watch video, take notes, and interact with the video using online tool	Worksheet (even questions)	Experiment B
Activity 3	Search the learning objective online and summarize your finding	Interactive Online Simulation Meet your teacher and explain the concept	Student Project Design your own experiment that demonstrates the key point of the objective.

3.5 ADVANTAGES OF FLIPPED CLASSROOM LEARNING APPROACH

- a. Allows the learners to find out ways to learn at their own pace.
- b. It is customized, active, and interesting.
- c. Flipped lecture videos help the children to revise for exams.
- d. Flipped content is often made rich through curation and continuous improvement.
- e. Flipped classroom garnering enthusiastic support in helping improve student performance in classrooms

3.6 FOUR MAJOR HURDLES IN FLIPPED CLASSROOM LEARNING APPROACH

- a. Flipping your thinking
- b. Technological barriers
- c. Finding the time
- d. Training yourself, students and the parents

3.7 RECENTS ICT INITIATIVES OF MINISTRY OF EDUCATION AND UGC

Availability of e-Learning resources which are Open Educational Resources-OER (NMEICT,NPTEL, e-PG Pathshala, SWAYAM PRABHA, e-Content courseware in UG subjects, CEC- UGC You Tube Channels, Spoken Tutorial NDL, Shodhganga, e-Shodhsindhu, Shodh Shudhhi, Vidwan, etc.), MOOCs and SWAYAM etc. These along with DIKSHA and the One-Nation-One Digital Platform project of the Ministry of Education shall ensure the availability of online learning resources. Therefore, each fears expressed, and suspicions raised recently in the public domain about the feasibility and utility of Flipped learning in our learning system are uncalled for and sans merit. In fact, blended learning during a form of flipped learning is the new normal for the 21st Century learners. Recommendations within the guidelines on blended learning that UGC has uploaded on its website for soliciting the opinion of the stakeholders are: (i) the universities have the freedom to implement blended learning or otherwise, (ii) the universities/faculty members shall have the liberty to decide the amount of blending of face-to-face and on-line learning depending on the requirement of the discipline, (iii) the schools need to ensure the availability of essential ICT resources before embracing BL, for allaying the fear of digital divide, (iv) the schools should monitor the successful implementation of blended learning, and (v) blended learning should be carefully implemented and will not be used as a pretext to forego classroom teaching. Moreover, every educational institution should prepare itself to implement all new imperatives stipulated in NEP including blended learning for transforming and democratizing the learning system.

CONCLUSION

Marzano and Toth, 2014 and his group which collected more than 10 million data points from the United States, found that-

- a. 58% of class time is used to interact with new content. The majority of this class time is dedicated to direct instruction.
- b. 36% of class time is used for practicing and deepening content.
- c. 6% of classroom time is used for cognitively complex tasks involving generating and testing hypotheses.

These numbers need to change to meet the changing needs of education. In a flipped classroom, the teacher is more integral to the learning experience of all students. We are adding value beyond the content in the classroom. We are ushering our students into an environment in which they take ownership of their learning.

The flipped classroom is a modern pedagogy for students of the 21st century. Through the method of active learning in the classroom combined with the flexibility and personalized nature of the internet that the flipped classroom truly shines as a sustainable way forward for education, benefiting students and instructors alike. Briefly, a replacement pedagogy was born and its adoption throughout the world of education has been nothing short of astonishing.

REFERENCES

- [1] Bergmann, J., Overmyer, J., & Willie, B. (2012). The flipped class: Myths versus reality. *The Daily Riff*. Retrieved from <http://www.thedailyriff.com/articles/the-flipped-class-conversation-689.php>.
- [2] Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. Virginia: International Society for Technology in Education.
- [3] Bergmann, J. & Sams, A. (2014) *Flipped learning: Gateway to student engagement*. Eugene, OR: ISTE.
- [4] Bloom, B.S. (1968) *Learning for Mastery*. UCLA-CSEIP Evaluation Comment, 2, 1-12.
- [5] Cockrum, T. (2014). *Flipping your English class: To reach all learners strategies and lesson plans*. New York: Routledge.
- [6] Doman, E., & Webb, M. (2015). Benefits of flipping an EFL classroom in Macao. In E. Doman (Ed.), *Reframing English education in Asia* (pp. 16–34). Salt Lake City, UT: American Academic Press.
- [7] Draft National Education Policy, 2019
- [8] Flipped Learning Network (FLN). (2014). The four pillars of F-L-I-PTM. Retrieved from https://flippedlearning.org/wp-content/uploads/2016/07/FLIP_handout_FNL_Web.pdf
- [9] Lockwood, R. B. (2014). *Flip it! Strategies for the ESL classroom*. Ann Arbor: The University of Michigan Press.
- [10] Marzano, R., & Toth, M. (2014, March) *Teaching for rigor*. Rep. Marzano Research Labs. Retrieved from www.marzanicentre.com/essentials/teaching-for-rigor-landing.
- [11] Morris, C., & Thomasson, A. (2013). English. In J. Bretzmann (Ed.), *Flipping 2.0: Practical strategies for flipping your class* (pp. 37-73). Wisconsin: The Bretzmann Group.
- [12] Partnership for 21st Century Learning (2015), P21 Framework Definitions. Retrieved from http://www.p21.org/storage/documents/docs/P21_Framework_Definitions_New_Log_o_2015.pdf
- [13] Witten, H. (2013). World languages. In J. Bretzmann (Ed.), *Flipped 2.0: Practical strategies for flipping your class* (pp. 265-280). Wisconsin: The Bretzmann Group.
- [14] <https://www.hindustantimes.com/education/news/blended-learning-a-new-normal-for-21st-century-learners-101622464626789.html>
- [15] <https://www.thefreedictionary.com/in> <https://www.scribd.com/doc/302311843/the-future-of-education-ppt>
- [16] <https://www.thefreedictionary.com/struggle> <https://www.britannica.com/dictionary/learner>