

## Flipped Classroom: A Concept for Engaging Nursing Students in Learning

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### ABSTRACT

Technological advancement have been created many aspects in leaning, which is immense force on our younger generation to keep themselves abreast with the new and advance technology in nursing science to impart education. This technology to augment these current education strategies. Nursing educators have to evolve innovative pedagogy and model techniques to prepare this generation for future challenges as the training periods are getting relatively shorter. Out of those most exciting advancements in the modern classroom is flipped. It hinges on the idea that students learn more effectively by using class time for small group activities and individual attention. It is also known as Inverted classroom, such innovation that can empower a learner to develop critical thinking skills and master ways to imbibe vast information by engaging students in active teaching learning process. Over the last few years, Flipped Classroom has rapidly gained popularity among faculty and administrators of institutes around the globe Teachers then assign students lecture materials and presentations to be viewed at home or outside of the classroom day, prioritizing active learning. The purpose of education is to move forward, improve and express. Flipped Classroom pedagogy has become popular in several different courses in Higher Educational Institutions. Information Technology have become an integral part of the teaching/learning process in academic courses at Higher education institutions, opening the way for the emergence of different pedagogical models like e-Learning, Blended Learning and the Flipped Classroom.

**KEYWORDS:** *Alternative learning strategies, Innovation, Inverted classroom, Pedagogy, Teaching methodology, Flipped classroom*

**Meaning:** “Flipping the classroom means that students gain first exposure to new material outside of class, usually via reading or watching lecture videos, and utilize class time to do the harder work of assimilating that knowledge, through problem solving, discussion, or debates in the presence of instructor or facilitator for interacting learning. This will allow for minimizing the number of participants in the “classroom” and allow for more interaction by the participants at the appropriate level.

**Definition:** A flipped classroom is a type of blended learning where students are introduced to content at home and practice working through it at school.

**Goal:** The main goal of a flipped classroom is to enhance student learning and achievement by reversing the traditional model of a classroom, focusing class time on student understanding rather than on lecture to foster skills at cognitively demanding levels such as analysis, synthesis and evaluation.

### Need for the flipped classroom approach:

Commonly used teaching-learning strategies are lecture cum discussion, demonstration, and tutorial, practical, clinical and field postings etc. These are occasionally augmented with seminar, student symposia, debate, role play, and panel discussion and many more. There is a felt need to enable a fresh graduate and post graduate to develop the key

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competencies so as to deliver socially responsive health care. Nursing education is shifting from traditional objective-based curriculum to Competency based training with focus on developing entrustable professional activities (EPA).

There is a need to introduce new and innovative methods which develop attributes of Meta cognitive skills, and the Flipped classroom fulfils the demand. Researchers have used flipped classes for postgraduate teaching. It shows positive impact on active and interesting way of learning, and providing more opportunities for students to engage in critical thinking. It helps them to independently facilitate their own learning, and effectively interact with, and learn from their peers and teachers.

**Concept:** The concept was first used in 1980's by some passionate teachers who used to distribute reading material to students before their class. They have been shown to maximize learning and create a more engaged student experience. As a result, classroom sessions reinforce and implement the concepts learned outside of the classroom. Numerous undergraduate and graduate programs have adopted

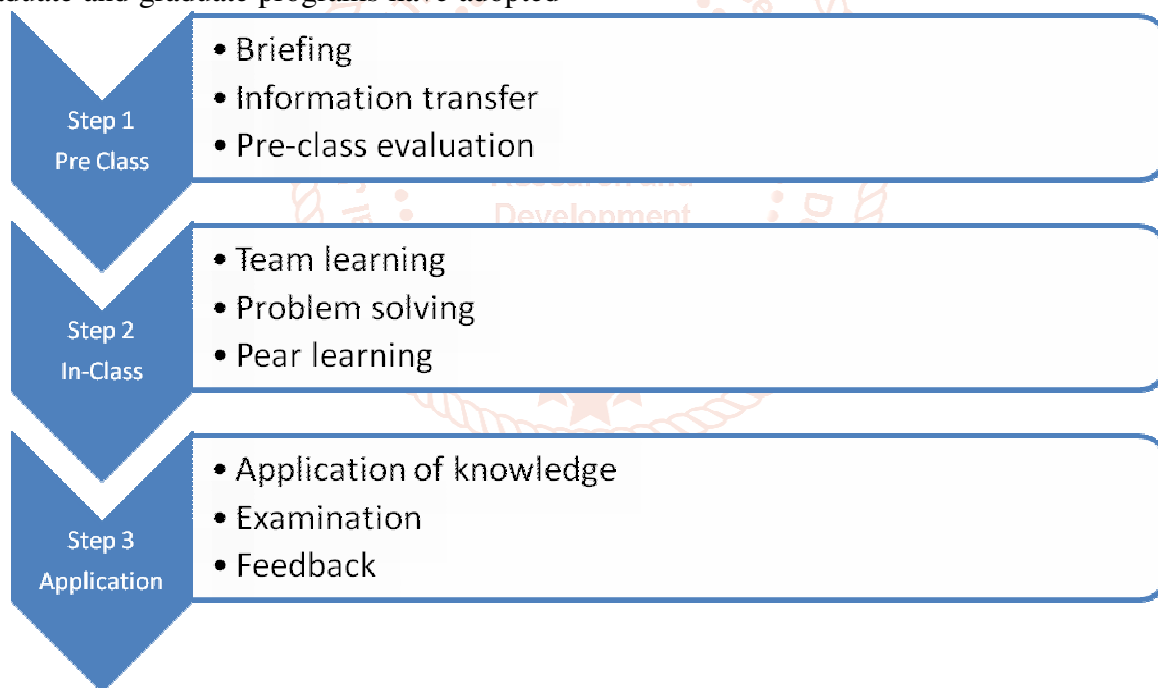
flipped classroom techniques to redesign traditional curricula.

Walvoord and Anderson proposed a model in which student's gain first-exposure learning prior to class and focus on the processing part of learning (scrutinizing, synthesizing, analyzing, and problem-solving, etc.) in class for students to engage in critical thinking. It helps them to independently facilitate their own way of learning,

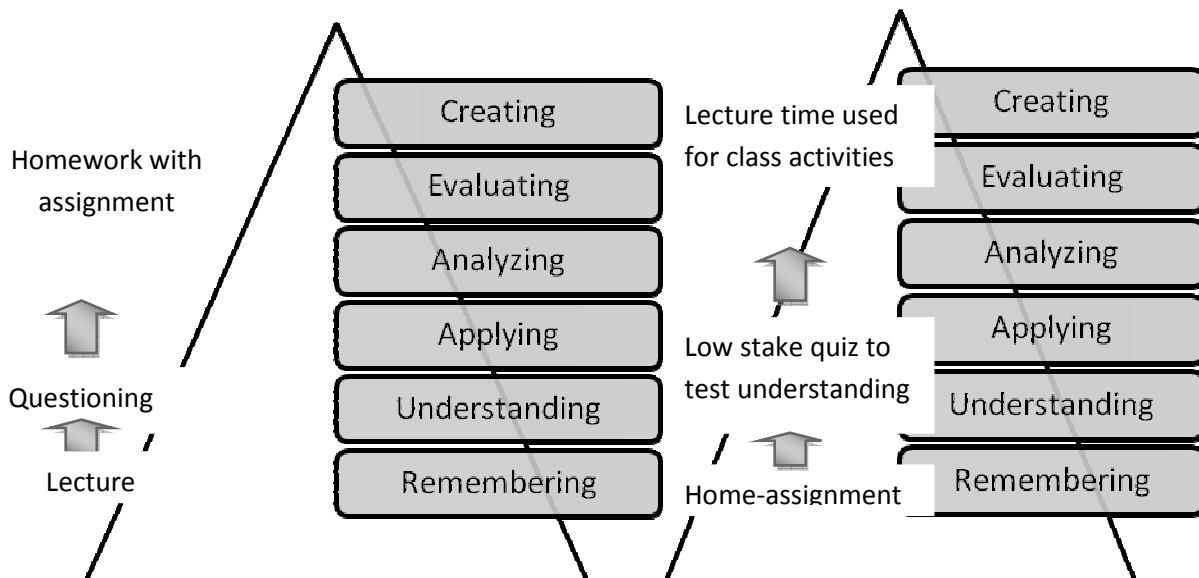
Karl Fisch in 2008 created a video "Shift Happens" and was credited for coining term as "Fisch Flip" and "Flipped Classroom." With the growth of new and advance technology, pre-class assignment is usually delivered via video, lecture; however, many other innovations have been experimented upon, implemented and evaluated.

**Pre-Class Assignment:**

Pre-class activity or assignment can include low-tech as well as high-tech tools depending on expertise available with the instructor. One can begin with a simple tool such as delivering a voice-over lecture on Power Point.



**FIG. 1 Essential steps in Flipped Classroom**



**FIG. 2 The process of traditional classroom (A) vis-a-vis flipped classroom (B) as aligned with revised Bloom’s taxonomy.**

**Choice of pre-class work:**

The choice is limited only by the ingenuity of the facilitator. Investigators found that using the pre-class exercises in combination with integrative questions was effective at improving student performance in both the short- and long-term.

Three developments have significantly contributed to the increased spread of Flipped classroom model:

- A. Screen casts and instructional videos often promoted by websites like YouTube, Video, and NBC Learn etc;
- B. Availability of “Open Educational Resources”; and
- C. Massive open online courses (MOOCs) utilizing learning resource management.

Educators may prepare their own instructional videos. Some examples of low-tech tools are summarized in **Table I**. For tech-savvy, low-tech tool scan also be replaced by high-tech tools, for pre-class assignment **Table II**.

**Table I Examples of low-tech tools for pre-class work in flipped classroom:**

Tool	Remarks
Encourage reading	Instructions given to students to acquire basic knowledge before coming to class.
Teacher prepared conceptual notes as pre- class assignment or recitation	Using the pre-class exercises in combination with integrative questions was effective at improving Student performance in both the short and long term.
Conceptual notes through PowerPoint	Power Point can be distributed as handouts along with notes.
Problem triggers	Student felt out of their comfort zone initially but quickly adapted to new technology for their leaning.

**Table II Converting Low-Tech Into High-Tech Tools for pre-Class Assignment:**

Low-tech tools	High-tech tools
Paper based MCQs/quizzes	Online quiz
Comments/questions before class	Google form for survey
Reflective writing or summaries	Moodle based interactive modules
Attendance in the classes	Online presence
Self-report of completion	Using informatics and analytical tools to evaluate completion of assignment

But it is time consuming, involves costly software and requires appropriate expertise. YouTube videos are popular with students, faculty, and public. However, there is a concern on their dependability. It was observed that on the average; only 60% of videos are educationally useful .Power Point is also one of the highly used tools, but standalone slides do not serve the purpose as pre-class assignment. There are many functions available in Power Point; the instructor can add a voice-over, record it as a video, annotate with text, and insert a quiz or questions as posers or triggers for in-class activity; with a bit of learning, it may prove to be a handy tool for

flipping. It has been shown that the ‘hyperlink’ function in Power Point allows users to advance from one slide to another slide in the presentation when they click on a predetermined word, shape, or image, thereby allowing for a more dynamic and Interactive experience.

**Accountability:** Most Important challenge for the Facilitator is to ensure compliance with pre-class material. This also needs knowledge of best practices in using pedagogical principles. Mixed response was elicited from a study on students’ perception of Flipped classroom conducted at Ottawa, Canada. Some students expressed concerns with the method. It was noted that Sub optimal student preparation and insufficient direction may limit the student-centered benefits.

**Quantity of pre-class assignment:** The basic principle remains not to overload student with too much cognitive or complex information. By creating a feedback loop between students’ work at home and the classroom setting, time on task during class can be improved in both quality and quantity.

To be successful, a flipped class room should have three goals:

- A. Allow the students to become critical thinkers,
- B. Fully engage students and instructors, and
- C. Stimulate the development of a deep understanding of the material.

Many studies have shown benefits in relation to student satisfaction and their interest. Controlled trials using a variety of pre-class methods have been carried out, showing positive outcome. However, there is still scope and opportunity for venturing into research from Indian perspective using simple methods of quality improvement.

#### **In-class Activities:**

The in-class activities are considered the soul of a Flipped classroom. (**Box 1**). This period, unlike in a traditional didactic lecture, is used for interaction with learners so that their queries are clarified; therefore, they are motivated for deep learning and a habit of lifelong self-directed learning is established. The type, amount and quality of in-class activities are determined by the facilitator. The facilitator’s primary role is to monitor, guide, and support the learning process of their students. Students will have varied levels of understanding and comprehension. Following completion of their out of class work, and based upon its success by assessing their understanding, one may approach the in-class activities in (a) individual or (b) group-based activities. Individual activities can be used in advance of group activities to help students navigate a ‘higher-risk’ group activity and can be helpful for students who need more individual reflective time to learn. Group activities enable the students to bring their individual understanding of the content to the discussion in small groups and draw on each other’s knowledge and understanding to forge new understandings and applicability of the concepts. Any of these in-class activities can be used in solo or in combination depending on our educational objectives. For example, for a class on nutrition, learners can be asked to think of causes of malnutrition. They can then share their perception with their colleague sitting beside them and disclose the most appropriate to whole class. A negative idea can be introduced which the whole class can refute as in reverse brainstorming.

#### **Post-class Activities:**

Before and after the asynchronous (out of the class) and synchronous (in-class) components of flipping have occurred, teachers in the flipped classroom have an opportunity to increase and sustain student motivation for engagement outside of class time, and to assess learner progress. Various tools are available to assess learning. We may continue to use same assessment tools and compare pre-flip to post-flip class changes. One can also design one’s own rubric of assessment or take help of already existing rubrics online. e.g. <https://www.rcampus.com/indexrubric.cfm>. Alternatively, students may be involved in project portfolios, work assignment and surveys.

#### **BOX I IN-CLASS ACTIVITIES FOR FLIPPED CLASSROOM**

##### **Individual activities**

Problem solving exercise

Concept map preparation

Audience response using Clickers

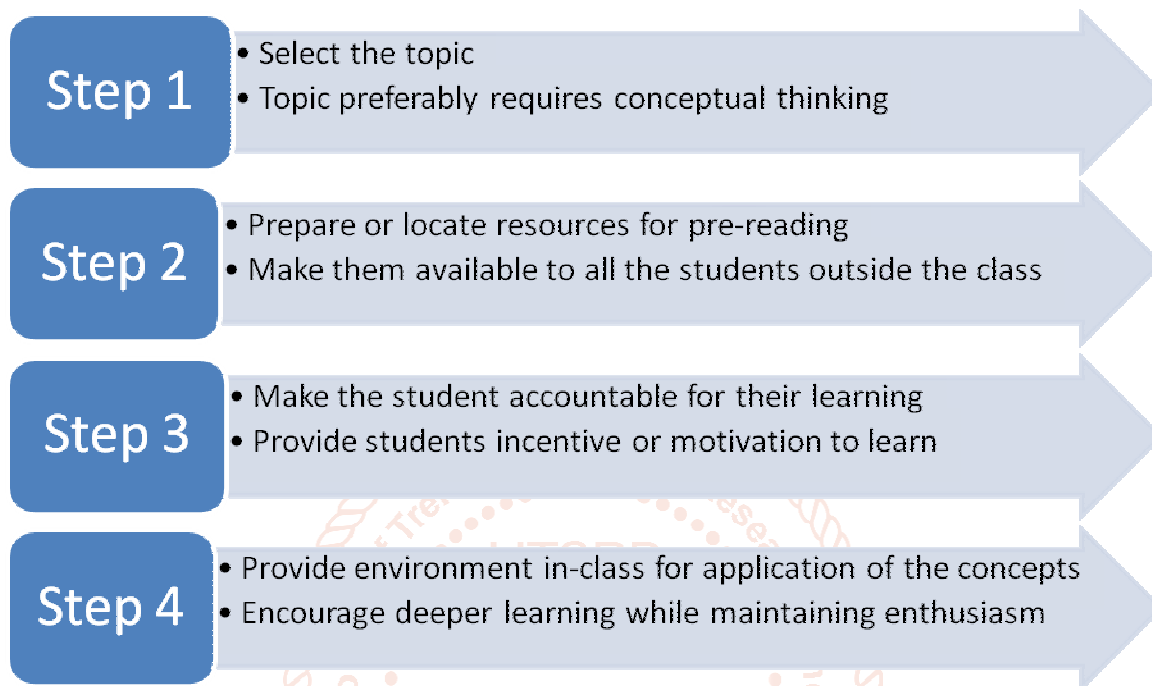
Plickers using Smartphone by teachers and cards by students

##### **Individual feedback**

Working with students individually who failed to understand

Polling using hands, color papers

**Group activities**  
 Think-pair-share  
 Reverse brainstorming  
 Prompts and questioning  
 Nominal group activity to set priorities  
 Affinity mapping  
 Modified Fish-bowl, round robin etc.  
 Immediate feedback and assessment technique  
 (IFAT) cards



**FIG. 3 Four step approach to flip a class.**

**Planning exemplified:**

Now with this guidance – are you ready to flip your first class? The four-step approach can be followed as guidance for flipping the class (**Fig. 3**). Several studies on Flipped classroom are available for the readers for ready reference. Some of the best practices and tips for Flipped classroom are detailed in **Table III. Web Table I** summarizes a few misconceptions about the Flipped classroom and clarifications thereof. **Box 2** presents few Challenges for the strategy of flipped classroom.

**Table III Best practices and tips for flipped classroom:**

Best practice	Application
Priming and Modeling	Students should be briefed about the flip class activity at the start. The responsibility for gathering basic information should rest with students. Clarify query, create positive environment for imitativeness, collaboration.
Balanced pre-class material	Present balanced material both in quantity and quality considering the understanding level of learners, ensuring not to overburden learner.
Time lines	Post material at least few days prior to class.
Accountability	Provide an incentive for students to prepare for class. Low stake grading may motivate learner to come prepare with the assignment.
Encourage active learning	Maintain enthusiasm, use variety of technique described above, be ready to clarify query.
Make student collaborator	Incorporate student suggestions into the class when feasible and appropriate; Apprise students of Changes made based on their feedback.
Time on task	Consider time compensation for complex problem.
Linking activities	Interconnect between out of the class work and in class activity with clear guidelines is most effective.
Technology	Using familiar technology with ease of access and flexibility improves students’ involvement.

Sharing best practices	A satisfying Flipped Classroom can be shared through blog, research article, online discussion boards and groups.
Faculty development	Create awareness about the innovation and motivation for its use in the classes.

### Box 2 CHALLENGES IN FLIPPED CLASSROOMS

1. Students must recognize and demonstrate self-directed learning skills.
2. Spontaneous questions from students after pre-class activities which a teacher must be able to respond during in-class activity.
3. Technical issues as creation play and access of the material including copyrights may be a deterrent. However, teachers should start their flipped classes with low tech methods as outlined above.
4. Time constraint is being observed that it is the biggest challenge both for the teacher as well as the student. The teacher should make attempt to use brief, simple material and maintain enthusiasm during the whole process.
5. Student being more tuned to traditional lecture format may dislike it initially. A good teacher will be able to steer the student in right direction.

The flipped learning approach is gaining traction every year. According to a 2014 survey from the Flipped Learning Network, 78 percent of teachers said they had flipped a lesson, and 96 percent of those who tried it said they would recommend it to other educators. This indicates that flipped learning inspires teachers to update traditional methods and bring new technology into their classrooms through the use of video, screen casts, and more.

#### Advantages:

- Students take ownership of learning.
- It is beneficial for students centered learning.
- Content material is more accessible.
- It inculcates co-operative learning.
- It provides more time to explore the leaning material.
- It is more convenient t and best method of learning.

#### Disadvantages:

- Many argue that flipped board divides students digitally.
- The technology required (computers, smart gadgets, internet, etc.).
- Flipped classrooms that utilize videos to deliver instruction sometimes suffer technical challenges/ difficulties.
- Require time on screen.

#### Instructor Role:

In a Flipped Classroom approach instructors plays the important role of being the facilitator and guides their students to deeper thinking and learn higher levels of application.

A Flipped Classroom is a student-centric teaching-learning methodology. Flipping the classroom enables educators to enhance the classroom experience in the following ways:

**Dive deeper into subject** – Once students have a basic foundation on a certain subject, they can dive

deeper into the learning material. Therefore, instructors can deliver more in-depth learning material to those who are looking for a deeper understanding of the subject.

➤ **Faculty can work more closely with students inside the classroom** – The faculty can spend time in the classroom working more closely with students, ensuring the progress of their learning by answering individual questions as well as helping them to understand concepts taught in the material or video lessons.

➤ **Students can share their understanding of the concepts with peers** – The typical classroom model allows for minimal peer engagement where students typically attend class for lectures and then do their work at home. The Flipped Classroom allows students to study the material at home and then work with their peers on projects during class time. This increases classroom engagement, teamwork skills, and peer understanding. The students work together and apply course concepts under the guidance of the instructor. The increased interaction helps to create a learning environment that encourages students to build knowledge together inside and outside the classroom.

➤ **Students actively participate in learning** – The student's role shifts from passive recipient to active constructor of knowledge providing them

opportunities to practice and apply using the intellectual tools of the discipline.

- **Constructive feedback** – With more opportunities for students to apply their knowledge and therefore demonstrate their ability to use it, gaps in their understanding become visible to both themselves and the faculty.

### Conclusion:

Though still in infancy, Flipped classroom is slowly paving its way into Indian classrooms and teachers are devising newer methods to deliver knowledge to students for different subjects. Many strategies can be used to develop self-directed and lifelong learning skills. Once these lifelong learning attributes are inculcated; the process of inverted class becomes more satisfying for both instructor and teachers. The concept is evolving, with active discussions on Flipped classroom taking place in social media platforms. The research on these topics is still lacking due to the complexities of human learning.

However, body of evidence is accumulating towards balanced use of this new method along with traditional methods of learning. Flipped classroom techniques are increasingly understood to be an important aspect of modern nursing education also. Investigations have demonstrated that students who participated in a “flipped classroom” approach were more likely than traditional classroom students to agree that active student engagement was encouraged by the instructor and preparation for class was necessary to be successful. Academic and career advising serves as an effective avenue for the flipped classroom approach because it enables students to be more adept at navigating the rocky terrain of

university education. When students are given a pre-advising session task, they become proactive in guiding their adviser to assist them in accomplishing their goals.

### Reference

- [1] Singh K, Mahajan R, Gupta P, Singh T. Flipped Classroom: A Concept for Engaging Medical Students in Learning. *Indian Pediatr.* 2018 Jun 15;55(6):507-512
- [2] Robert Connor Chick, Guy Travis Clifton, Kaitlin M. Peace, Brandon W. Propper, Diane F. Hale, Adnan A. Alseidi, Timothy J. Vreeland. Using Technology to Maintain the Education of Residents During the COVID-19 Pandemic, *Journal of Surgical Education*, Volume 77, I, 2020, Pages 729-732, ISSN 1931-7204, <https://doi.org/10.1016/j.jsurg.2020.03.018>.
- [3] Amini R, Laughlin BS, Smith KW, Siwik VP, Adamas-Rappaport WJ, Fantry GT. "Flipped classroom" for academic and career advising: an innovative technique for medical student advising. *Adv Med Educ Pract.* 2018 May 14;9:371-376. doi: 10.2147/AMEP.S162504.
- [4] [https://www.google.com/search?q=FLIPPED+CLASSROOM&spell=1&sa=X&ved=2ahUKEwjfx4G69vDxAhVEVH0KHTuBC\\_QQBSgAegQIARAw&biw=1034&bih=584](https://www.google.com/search?q=FLIPPED+CLASSROOM&spell=1&sa=X&ved=2ahUKEwjfx4G69vDxAhVEVH0KHTuBC_QQBSgAegQIARAw&biw=1034&bih=584)
- [5] <https://www.globsyn.edu.in/blog/how-is-flipped-classroom-flipping-the-role-of-traditional-classroom-pedagogy/>
- [6] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5855972/>