

Flipped Classroom Approach: Making A Right Flip For Health Profession Education

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Corresponding Author:

Soumendra Sahoo

Email:

soumendra.sahoo@manipal.edu.my

Soumendra Sahoo^{1*}

¹Department of Ophthalmology, Faculty of Medicine, Manipal University College Malaysia, Melaka, Malaysia

INTRODUCTION

Basically, the flipped classroom (FC) approach is a pedagogical approach where traditional lecture and homework elements are reversed, which means activities that have traditionally taken place inside the classroom now be taken outside the classroom, and vice versa. Jonathan Bergmann Lead Technology Facilitator at Kenilworth School District, Illinois is the pioneer of the Flipped Classroom Education Model. This innovative idea was to counter the drawbacks of traditional lecture sessions. The flipped classroom approach has its educational principle & when adopted, the educator should not distort the prime elements adhered to flipped classroom session.



Figure source: <https://teaching.washington.edu/course-design/flipping-the-classroom/> downloaded 15th Nov 2023

The bottom line of FC approach is to bring active learning engagement among students.

FLIP concept:

Flexible learning is the key to motivating 21st century learners. Flexibility is pointed to various aspects like physical space arrangements, tasks assigned, timelines, and flexible assessment methods. The facilitators need to create space & time in such a way that learners have sufficient flexibility in interacting & reflecting on their learning as needed. At the same time, it should promote different ways to learn the content & develop mastery. The current health professional education always advocates learner centric approach, hence we need to create learning environment in such a way that the 21st century learners develop the desired competencies in a meaningful way, while enjoying the educational process. We need to get away from the 'Sage on the Stage' attitude and adopt 'Guide by the side' culture. Constructive feedback further motivates the learners. The choice of topics going into this approach is basically in facilitator's perspective, where the teacher identifies complex topics that can be better delivered through flipped approach. Hence, the facilitators need to provide clear instructions & strive to optimize the learning in the other end. It is advised that the teachers/facilitators reflect on their own practice, seek improvement, and accept critique. As a professional educator we should embrace

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continuous facilitation, motivation to learners, periodic feedback, and helping students to reflect on their learning.

Advantages of Flipped Classroom Approach

The major advantage of FC approach is the student engagement. They actively participate during classroom apart from more autonomy in exploring facts by themselves. Student teacher interaction is enhanced during classroom activities that add to social value. Moreover, this approach opens an avenue for creativity & critical thinking.

Implementing Flipped Classroom (FC) Sessions

It's always wise to follow a step wise approach in an iterative fashion. That means produce a prototype, test it, tweak it, and repeat the cycle with the goal of getting closer to the solution. Hence the selection of contents, that should go into FC approach comes first. The current evidence suggests that the flipped classroom may be best utilized for teaching procedural or higher-level processing skills, however the fundamental principle in choosing content is to find those which has more applications in learner's perspective of developing competencies in all the domains (Cognitive, psychomotor & affective). Subject experts in collaboration with peers need to identify the contents.

Without learners' enthusiasm and buy-in, the FC process is not likely to be a success, as student motivation and completion of prework remain key. Hence, proper student orientation & engagement prior to initiating the FC session is mandatory.

Next is to investigate available resources & optimizing their use, especially for in-class activities. Nothing wrong in bringing innovations like adjusting students seating in small groups in the gallery set up as well!

Keep it simple by posting limited pre-class resources and tailor according to learner needs and preferences.

Guideline for a Flipped Classroom Session

Every teaching & learning goes by some educational principle. Although facilitators often bring innovations to their respective sessions, the basic principles of flipped classroom session should not be distorted.

Three fundamental steps of Flipped Classroom Session as follows:

1. Pre-Class activities



2. In-Class activities



3. After-Class activities



When we align Bloom's taxonomy to FC approach & the traditional approach, the higher order cognitive skills are processed during the in-class activity of FC approach, hence let's not lecture during the in-class activities.

1. Pre-Class activities

As stated earlier, this would be the most important aspect for a successful outcome from FC approach. As we are engaging students through three different learning activities for a particular topic, the expected outcomes should be in higher order cognitive level as per Bloom's taxonomy shown earlier.

Remember, the setting of the lecture would be outside of classroom. Students should feel like they are in class even if they access your lecture remotely. Prepare a voice over slide of your PowerPoint. You need to tweak your current slides as the recording should not be more than 20-25 minutes in duration. Rest all relevant resources should be less and learners need to go through all before coming for-in-class activities. If you are sharing a video clip, keep the duration 5-6 minutes only. Interactive video is preferable. You can use Edpuzzle App (<https://edpuzzle.com/>) to make any video interactive by putting questions for the students to answer while watching the video. Lastly, prepare a student guideline on how to use shared resources. That will not only motivate students but also help them to conceptualize the fundamental aspect of the topic and make them ready for its application during in-class activities.

Check List for pre-class activity resources:

1. Voiceover PowerPoint of your lecture: 20-25 minutes max.
2. Related reference study material: max 2
3. Video to watch the application aspects: max 5-6 minutes & try to make as interactive video.
4. A guide on how to use the above resources.

The ideal time to post pre-class resources would be at least a week before the in-class session. Learning management systems like MS Team or MOODLE can be used for sharing the identified resources. The key to the success of optimizing pre-class activities would be the repeated reminders, which can be done by involving class representatives for the task.

2. In-Class activities

The classroom activities mostly focus on application aspect & beyond. Hence, do not lecture again in the class, rather, make the students engaged through many active learning strategies as stated in the figure 2 below. This is the platform where you can show your creativity to make the learners engaged. The large group needs to break into small groups within the class for the activities, however a few activities like think-pair-share, use of online poll, use of flash cards, Kahoot etc. can be done with traditional gallery seating.

Faculty members are encouraged to provide feedback during and after the activities.

<p>Box I IN-CLASS ACTIVITIES FOR FLIPPED CLASSROOM</p> <p><i>Individual activities</i></p> <p>Problem solving exercise</p> <p>Concept map preparation</p> <p>Audience response using Clickers</p> <p>Plickers using smartphone by teachers and cards by students</p> <p>Individual feedback</p> <p>Working with students individually who failed to understand</p> <p>Polling using hands, color papers</p> <p><i>Group activities</i></p> <p>Think-pair-share</p> <p>Reverse brainstorming</p> <p>Prompts and questioning</p> <p>Nominal group activity to set priorities</p> <p>Affinity mapping</p> <p>Modified Fish-bowl, round robin <i>etc.</i></p> <p>Immediate feedback and assessment technique (IFAT) cards.</p>

Figure 2 source: Barkley EF, Cross KP, Major CH 2014

3. *After-Class activities*

Student reflection and their feedback remain vital for any educational intervention. Hence, apart from assigning a few post class quizzes, encourage learners to post vivid reflection on learning. Later the facilitators can analyze these and make modifications accordingly.

CONCLUSION

One of the meta-analyses suggests that the flipped classroom approach in health professions education overall yields a statistically significant improvement in learner performance, compared with traditional teaching methods. It also found that the flipped classroom would be more effective when instructors use quizzes at the start of each in-class session.

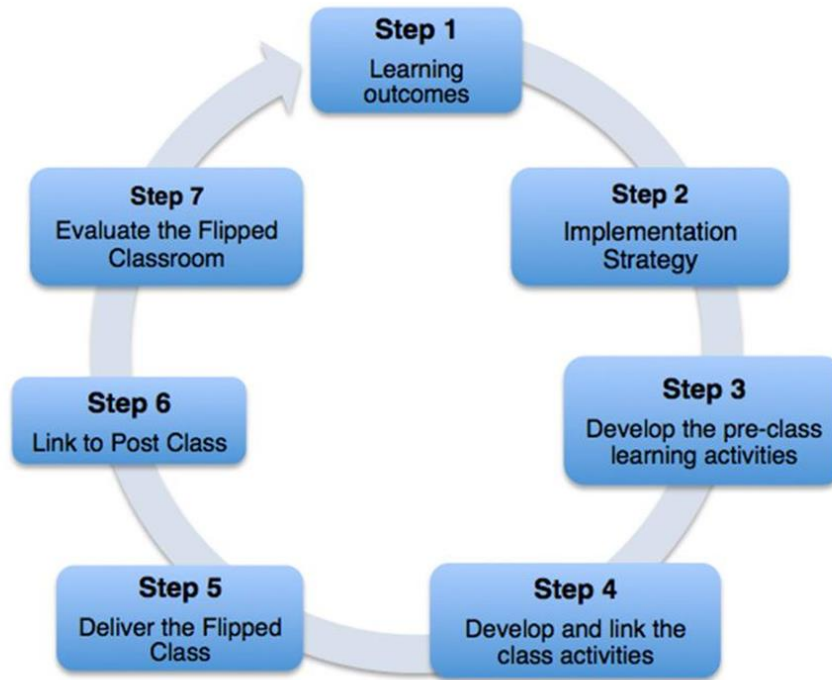


Figure source: Karanicolas, S., Snelling C., and Winning, T., 2015

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