Flipped classroom: A pedagogical strategy for making learning an authentic experience

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Abstract
The advancement and use of ICT in teaching learning activities have greatly affected the learning environment of the students. Computer technologies and other aspects of digital culture have changed the ways people live, work, play, and learn, impacting the construction and distribution of knowledge and power around the world. Digital literacy such as the skills of searching for, discerning, and producing information, as well as the critical use of new media for full participation in society has thus become an important consideration for curriculum frameworks. Unlike the traditional classroom model, a Flipped Classroom puts students in charge of their own learning by providing lectures online, educators give students the opportunity to learn at their own pace.

Keywords: Flipped Classroom, Pedagogical Strategy, Digital literacy

1. Introduction
In 1993, Alison King published "From Sage on the Stage to Guide on the Side," in which she focuses on the importance of the use of class time for the construction of meaning rather than information transmission. While not directly illustrating the concept of "flipping" a classroom, King's work is often cited as an impetus for an inversion to allow for the educational space for active learning. Harvard Professor Eric Mazur played a significant role in the development of concepts influencing flipped teaching through the development of an instructional strategy he called peer instruction. Mazur published a book in 1997 outlining the strategy, entitled Peer Instruction: A User's Manual. He found that his approach, which moved information transfer out of the classroom and information assimilation into the classroom, allowed him to coach students in their learning instead of lecture. The concept of Flipped classroom learning is spreading widely in the world, but is not well-recognized in our country. This strategy is generally used in science stream but due to its unique characteristics, it is attracting educators and researchers of different streams and disciplines. Flipped classroom strategy has always showed significant results in the field of teaching and learning. Hence, the awareness of flipped classroom technique is very much needed for the learners and also for the teachers. In Flipped classroom, “students gain first exposure to new material outside of class, usually via reading or lecture videos, and then use class time to do the harder work of assimilating that knowledge, perhaps through problem-solving, discussion, or debates” (Brame, 2013, p. 1). Flipping a classroom accounts for this problem by allowing students to learn new material at their own pace: they can pause the video to take notes and process information; they can rewind and review the video if there is something they do not understand (Edudcause, 2012; Bergmann & Sams, 2012) [2]. Flipped classroom is a “pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter” (The Flipped Learning Network, 2014).
2. Difference between traditional flipped classroom activities

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**Traditional flipped**

3. What Does a Flipped Classroom Look Like?


A Flipped Classroom is different from a traditional classroom. Instead of students sitting in individual desks facing the front while their teacher lectures, students sit at tables or desks pushed together or are off by themselves doing work. Students are out of their seats, accessing books, computers and others students for information. Although a Flipped Classroom may appear chaotic, loud, or even messy at first glance, the action and collaboration taking place in this non-traditional classroom is a direct result of student learning.

4. Fitting with the Revised Bloom’s Taxonomy

In traditional learning, lower level of learning such as remembering and understanding is happening in class, while students are usually left to work on activities that involve higher level of learning outside of classroom. However, in the flipped classroom model, learning is flipped. As you can see from the pyramid, students can finish the lower level of cognitive work before class. And when they come to class, they can engage in higher cognitive levels of learning with peers and teacher present.

5. How to implement a flipped classroom?

Jeff Dunn (2014) has suggested 6 easy steps for implementing flipped classroom.

**1. Plan**

Figure out which lesson in particular you want to flip. Outline the key learning outcomes and a lesson plan.

**2. Record**

Instead of teaching this lesson in-person, make a video. A screen cast works. Make sure it contains all the key elements mentioned in the classroom. Bergmann and Sams (2012) [2], they also pointed out that do not make a video just for the sake of making a video. Only do so when you feel these are appropriate and necessary. It all depends on the educational goal of your lesson. If making videos better facilitate your instructional goal, and then go ahead.

**3. Share**

Send the video to the students. Make it engaging and clear. Explain that the video’s content will be fully discussed in class.

**4. Change**

Now that the students have viewed your lesson, they’re prepared to actually go more in-depth than ever before.

**5. Group**

An effective way to discuss the topic is to separate into groups where students are given a task to perform. Write a poem, a play, make a video, etc.

**6. Regroup**

Get the class back together to share the individual group’s work with everyone. Ask questions, dive deeper than ever before. After the six steps, Review, Revise, and Repeat! Some other strategies that can be used in in-class activities include:

- **Active Learning:** Allow students to apply concepts in class where they can ask peers or instructors for feedback and clarification.
- **Peer Instruction:** Students can teach each other by explaining concepts or working on small problems.
- **Collaborative Learning:** Collaborative learning activities could increase student engagement, enhance student understanding, and promote collective intelligence.
- **Problem-based Learning:** Class time can be spent working on problems that can last for the duration of a semester.
- **Discussions or Debate:** Give students the opportunity to articulate their thoughts on the spot and to develop their arguments in support of their opinions or claims.

7. Recommendations

- Flipped classroom approach should be practiced more from lower to higher level of classes in India.
- Flipped classroom approach can be used for various subjects Sciences, Environmental Education, Mathematics and languages etc.
- The students should be provided deep knowledge and proper training to use the latest technologies

6. Conclusion

Globalization and technological change have created a new global economy “powered by technology, fueled by information and driven by knowledge”. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. National Science and Technology Development Agency considers online lessons as an education technology which utilizes the
advantages of computer technology and computer network to support instruction. This is called “Computer Mediated Communication”. Online lessons could use online tools to communicate between learner and learner, between learner and instructor via e-mail or web board. In the recent era of globalization, technological advancement has increased dramatically in every sphere including mainstream education. Especially in developing countries like India, effective use of ICT for the purpose of education has the potential to bridge the digital divide and helps in effective educational policymaking, planning, management, supervision and implementation of various schemes and programmes in various sectors of education. These steps would ensure that accountability, quality assurance and accreditation in ICT based education. The flipped classroom model, grounded in active learning pedagogy, transforms the face-to-face classroom. Students prepare for the flipped classroom in their own time by watching short online videos and completing readings. Face-to-face time is used to apply learning through problem-solving with peers.

7. References
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