Abstract

Technology plays a vital role particularly in education and the use of technology is quite common. Technology helps to enhance the teaching and learning process. Videos, audios, computers, laptops, internet are the technological sources using in the education. Among different innovative technology methods, blending learning is widely used in many educational institutions for enhancing students learning. Flipped classroom is a form of blended learning. Flipped classroom describes a reversal of traditional teaching where students gain first exposure to new materials outside of class, usually via reading or lecture videos, and then class time is used to do the harder work of assimilating that knowledge through strategies such as problem-solving, discussion or debates. The flipped classroom represents shift from passive to active learning to focus on higher order thinking skills such as analysis, synthesis and evaluation. Hence this paper throws a light on flipped classroom and need of flipping the classroom for present scenario.

1. Introduction

The teachers have filled the role of “sage on the stage” imparting their wisdom during allotted class time then sending work home to reinforce learned concepts with minimal or no added support. As a result, students were left on the receiving end of a one way communication process that did little to promote social interaction or encourage critical thought. Passive by nature, this model of teaching, known as the transmittal model, assumes students as empty vessels into which knowledge is poured, information, once acquired, is stored without relevance and left unchanged overtime. Though common, this model does little to effectively prepare today’s students for the future where success relies on one’s ability to think independently, solve unexpected problems and deal with complex
issues. By contrast, the constructivist model presents learning use existing knowledge and prior experiences to build an individual understanding of new materials. Teachers act as facilitators, guiding students through the learning process while allowing them to shape own understanding of the instruction. By doing so, meaningful manner that allows them to both better understanding and process the learned content. At this juncture flipped classroom approach can improve the quality of the individualized learning experience for all learners, including those who are disadvantaged, disabled, exceptionally gifted, have special curriculum or learning needs, or who are remote, or away from home/work.

1.1 Flipped Classroom

Flipped classroom is a form of blended learning in which students learn content online by watching video lectures. Usually at home and homework is done in class with teachers and student discussing and solving questions teacher interaction with students is more personalized guidance instead of lecturing. This is also known as back words, classroom, inverted classroom, reverse teaching and the Thayer method. Teachers act as facilitators, guiding students through the learning process while allowing them to shape their own understanding of the instruction. By doing so, students are able to actively construct knowledge in a meaningful manner that allows them to both better understand and process the learned content. It moves activities including those that may have traditionally been considered home work into the classroom in a flipped classroom student watch online lectures collaborate in online discussion or carry out research at home and engage in concepts in the class room with the guidance of the instructor.

1.2 Difference Between Tradition And Flipped Classroom

In the traditional model of classroom instruction the teacher is typically the central focus of information during the class period. The teacher reports to questions while student’s refer directly to the teacher for guidance and feedback in a classroom with a radically traditional style of instruction.

Traditional classroom learning

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<th>Classroom</th>
<th>Outside classroom</th>
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<td>Concept</td>
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Flipped classroom learning

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Figure 1: Traditional Classroom Learning Vs Flipped Classroom Learning
Individual lessons may be content oriented as well as student engagement in the traditional model may be limited to activities in which students work independently or in small group on an application task designed by the teacher. Class discussions are typically centered on the teacher who controls the flow of the conversation typically this pattern of teaching also involves giving students the task of reading from a textbook or practicing of concept of working on a problem set for example outside school.

2. How flipped classroom can be beneficial then the traditional?

Flipped classroom are considered as a reversal to traditional learning where student can learn lectures and content from home using videos and other learning tools they are then used inside a classroom of concept exploration meaning making and demonstration or application of knowledge. Initiative and judgement in planning, problem solving, decision making in professional practice and ability to adopt knowledge are some of the key aspects in a flip classroom model where students will be benefited.

The important feature of flipped classroom is not that they are new & they represent a move away from traditional lectures or even that they use technologies rather the issue is that flipped classroom approaches combine pedagogy and learning technologies in ways that extend to large number of student’s opportunities for deep learning through application and consolidation.

3. Types of Flipped classroom

i.) The standard inverted classroom: Students are assigned the homework of watching video lectures and reading any materials relevant to the next day’s class during class time students practice what they’ve learned through traditional schoolwork, with their teacher freed up for additional one-on-one-time

ii.) The discussion-oriented flipped classroom: Teachers assign lecture videos as well as any other video or reading related to the days subject like YouTube videos and other resources. Class time is then devoted to discussion and exploration of the subject this can be an especially useful approach in subjects where context is everything-think history art or English.

iii.) The demonstration-focused flipped classroom: Especially for those subjects that require students to remember and repeat activities exactly think chemistry physics and just about every math class it is most helpful to have a video demonstration to be able to reviewing and rematch in this model, the teacher uses screen recording software to demonstrate the activity in a way that allows students to follow along at their own pace.

iv.) The faux flipped classroom: one great idea education drive uncovered is perfect for younger students for whom actual homework might not yet be appropriate. This flipped classroom model instead has those students watch lectures video in class giving them the opportunity to review materials at their own pace, with the teacher able to move from student to offer whatever individual support each young learner needs,

v.) The group based flipped classroom: This model adds a new wrinkle to helping students learn each other. The class starts the same way other do, with lectures videos and other resources shared before class. The shift happens when students come to class, where they team up to work together on that day’s assignment. This format encourages students to learn from one another, and helps student to not only learn what the right answers are but also how to actually explain to a peer why those answers are right.
vi. The virtual flipped classroom: For older students and in some courses, the flipped classroom can eliminate the need for classroom time at all. Some college and university professors now share lecture video for students viewing, assign and collect work via online learning management systems, and simply require students to attend office hours or other regularly scheduled time for brief one-on-one instruction based on that individual students need.

vii. Flipping the teacher: all the video created for a flipped classroom doesn’t have to begin and end with the teacher. Students too can make use of video to better demonstrate proficiency. Assign students to their record practice role-play activities to show competency or ask each to film themselves presenting a new subject or skill as a means to ‘teach the teacher’.

4. What are the key elements of the flipped classroom?

i.) Provide an opportunity for students to gain first exposure prior to class: The mechanism used for first exposure can vary from simple textbook readings to lecture videos to podcast or screen casts. The pre-class exposure doesn’t have to be only high-tech study of using technology but students can simply complete pre-class reading assignments.

ii.) Provide an incentive for students to prepare for class: The students complete a task associated with their preparation and that task usually would be associated with points. The assignment can vary: the student can be given with tasks that range from online quizzes to worksheets to short writing assignments, but in each case that task provided an incentive for students to come to class prepared.

iii.) Provide a mechanism to assess student understanding: The pre-class assignments that students complete as evidence of their preparation can also help both the instructor and the student assess understanding. Pre-class online quizzes can allow the instructor to practice Just-in-Time Teaching (JiTT; Novak et al., 1999), which basically means that the instructor tailors class activities to focus on the elements with which students are struggling. If automatically graded, the quizzes can also help students pinpoint areas where they need help. Pre-class worksheets can also help focus student attention on areas with which they’re struggling, and can be a departure point for class activities, while pre-class writing assignments help students clarify their thinking about a subject, thereby producing richer in-class discussions. Importantly, much of the feedback students need is provided in class, reducing the need for instructors to provide extensive commentary outside of class (Walvoord and Anderson, 1998). In addition, many of the activities used during class time (e.g., clicker questions or debates) can serve as informal checks of student understanding.

iv.) Provide in-class activities that focus on higher level cognitive activities: If the students gained basic knowledge outside of class. Then they need to spend class time to promote deeper learning. Again the activity will depend on the learning goals of the class and the culture of the discipline. The students may spend time in class engaged in debates, data analysis or synthesis activities. The key is that students are using class time to deepen their understanding and increase their skills at using their new knowledge.

5. Why should we flip the classroom?

- Flipping speaks the language of today's students
  Today's students grew up with Internet access, YouTube, Facebook, MySpace, and a host of other digital resources. They can typically be found doing their math homework while texting their friends and listening to music all at the same time. They use much of their leisure time in...
front of computer with social media networks as their hobby, hence the same time what they spend for their recreation can be embraced as digital learning and used it to help students learn.

- **Flipping helps busy students**
  Students today are busy. Many are over-programmed, going from one event to the next. Students appreciate the flexibility of the flipped classroom. Because the main content is delivered via online videos, students can choose to work ahead. We have students that travel very far to get to school and this allows them to work on condition whenever they want. Many of students those who are working, missed the classes due to personal reason and some of them who participate in multiple sports, so athletes will not miss any class if it is through flipped classroom.

- **Flipping helps struggling students**
  When students are taught in the traditional manner, those who tended to get most of teachers’ attention learn better. In the meantime, the rest of the students would passively listen to the conversation we had with the inquisitive students. But in the flipped model, the role teacher as has changed; they spend most of their class walking around helping the students who struggle most. This may be the single most important reason students thrive in the flipped model. This is not to say that teachers ignore top students. But the majority of their attention no longer goes to them. Now it is directed to the students who need the most help.

- **Flipping helps students of all abilities to excel**
  The special education teachers love this model very much. Because all the direct instruction is recorded, students with special needs can watch the videos as many times as they need to learn the material. No more frantically trying to copy down notes with the hope that they’ll understand them later. Instead, students can pause their teacher, rewind their teacher, and make sure they actually learn the important concepts.

- **Flipping allows students to pause and rewind their teacher**
  Generally teachers are bound to complete their specific syllabus to be completed in stipulated time. Students are expected to learn a given body of knowledge, and most of the time teachers hope that students understand their presentations. However, even the best presenters and teachers have students who fall behind and don’t understand or learn all that is required. When the flipped classroom implemented, the students are given with control of the remote. Giving students the ability to pause their teachers is truly revolutionary.

- **Flipping increases student–teacher interaction**
  Flipping allows teachers to leverage technology to increase interaction with students. Flipping the classroom creates an ideal merger of online and face-to-face instruction that is becoming known as a "blended" classroom. Teachers can conduct mini lectures with groups of students who are struggling with the same content. The beauty of these mini lectures is that teachers are delivering just-in-time instruction when the students are ready for learning.

- **Flipping allows teachers to know their students better**
  Teachers are at school not only to teach content, but also to inspire, to encourage, to listen, and to provide a vision for their students. This happens in the context of relationships. A good teacher always builds relationships with students. Students need positive adult role models in their lives. Teachers would have developed these relationships before implementing flipped classroom, but flipping allows them to build better relationships with their students. This is due to the increased teacher–student interaction.
• **Flipping increases student–student interaction**
  One of the greatest benefits of flipping is that overall interaction increases: teacher-to-student, and student-to-student. Because the role of the teacher has changed from presenter of content to learning coach, lot of time is spent on talking to students. Teachers are answering questions, working with small groups, and guiding the learning of each student individually. When students are working on an assignment and they notice that several of them are struggling with the same thing, they spontaneously organize these students into a tutorial group. Because the role of the teacher has changed to more of a tutor than a deliverer of content, they have the privilege of observing as students interact with each other. As they roam around the class, they notice the students developing their own collaborative groups. Students are helping each other learn instead of relying on the teacher as the sole disseminator of knowledge. It is truly magical to observe.

• **Flipping allows for real differentiation**
  One of the struggles in today's schools is accommodating a vast range of abilities in each class. Every teacher has students, who excel, to average students, to students who struggle with the content, to students who cannot read. Flipping the class can help them to know how needy many of students and how powerful the flipped classroom is in reaching students all along this broad range of abilities. Because the majority of their time is used to walk around the room and help students, they can personalize the learning of all. For their students who quickly understand the content, they have found that if students can prove to teacher their understanding of a particular objective, then teacher will be able to cut down on the number of problems they need to do.

• **Flipping changes classroom management**
  Under a traditional model of teaching, teachers will have students who consistently do not pay attention in class. Those students become often a distraction to the rest of the class and negatively affected everybody else's learning. They might have often either bored or just simply unruly. When teachers use flipped classroom, the difference can be felt. Because teachers will not just stand and talk to the students, hence many of the classroom management problems can be resolved. Students who needed an audience no longer had one. Because class time is primarily used for students to either do hands-on activities or work in small groups, those students who were typically a distraction become a nonissue. They either did not have an audience or they were no longer bored and were willing to dive into the learning.

• **Flipping makes your class transparent**
  In this age where a segment of our communities distrust the educational establishment, flipping opens the doors to the classrooms and allows the public in. The videos are posted on the Internet, and students' parents and others have free access to them. Instead of wondering what their students are being exposed to in the classroom, parents can find our lessons in just a few clicks.

6. **Conclusion**
The flipped classroom constitutes a role change for instructions, who gave up their front-of-the-class position in favour of a more collaborative and cooperative contribution to the teaching process. There is a concomitant change in the role of students, many of whom are used to being cast as passive participants in the education process, where instruction is served to them. The flipped model puts more of the responsibility for learning on the shoulders of the students while giving them greater impetus to experiment. Activities can be student-led, and communication among students can become the determining dynamic of a session devoted to learning through hands-on work.
7. References


[4] Flipped classroom strategies from the “Turn to your Neighbors – Peer Instruction Blog” and “7 Myths about the Flipped Classroom Debunked”