Flipped Learning in Higher Education

Dr.MOUSUMI CHAUDHARI

HOD: B.Ed.Department

MDDM COLLEGE

MUzaffarpur

RAJ LAKSHMI

ASSISTANT PROFESSOR

PARWATI SCIENCE COLLEGE,

MADHEPURA

Abstract: In most academic fields there is constant evolution and change in order to improve and further each field. Although that is also the case in education, we still find the method of lecturing the material that has evolved very slowly and often seems to be stuck on an evolutionary track that has little to do with the possibilities and the times we live in. Still to this day we find educators that are stuck lecturing material in a 18th century lecture room style to a group of differently motivated student who then assimilate the knowledge to a large extent away for the classroom In higher education, teaching faculty has a history of moving the course content to outside the class. Think of the science class where students read about the theory and then use lab time to practice the techniques, or the English course in which the professor gave instant feedback on writing exercises during the class time. It is not surprising to see that a growing number of teaching faculty are leveraging new technologies and are embracing the flipped model. A growing number of higher education individual faculty have begun using the flipped model in their courses. To engage in Flipped Learning, teachers must incorporate the following four pillars into their practice.

Key word:- Academic fields, Flipped Learning, Technology

Introduction

In most academic fields there is constant evolution and change in order to improve and further each field. Although that is also the case in education, we still find the method of lecturing the material that has evolved very slowly and often seems to be stuck on an evolutionary track that has little to do with the possibilities and the times we live in. Still to this day we find educators that are stuck lecturing material in a 18th century lecture room style to a group of differently motivated student who then assimilate the knowledge to a large extent away for the classroom. However, over the past decades the thirst for new ways of communicating knowledge has been growing and the role of the educator has in many ways evolved from being "sage of the stage" to being "guide on the side" .The information-sharing world of today's students has changed significantly from what the lecturing form was built upon and educators have to evolve teaching methods to cater to today's students. It is therefore that we find that in higher education there exists a growing interest in the potential value of the student-centred learning environment. There, students are more actively engaged in higher-order tasks and take charge of their own learning .This requires more involved student presentations, small group problem solving, self and peer evaluation, and group discussions.The student-centered learning environment is taking advantage of the potential new technology brings and the mindset of a new generation of students. A number of student-centered learning methods have been developing over the last decades and the ideology of flipped learning is one of those. The purpose of this presentation in to introduce research that was done in the autumn of 2014 at the University of Iceland

in which flipped learning was used, specifically the experience of todays students being taught using flipped learning.

Virtually unknown a few years ago, the Flipped Learning model of instruction is gaining attention and adherents among instructors and professors at the college and university levels. In this model, some or most of the direct instruction is delivered outside the group learning space using video or other modes of delivery. Class time is used for students to engage in hands-on learning, collaborate with their peers and evaluate their progress rather than traditional direct instruction delivery. Instructors can provide one-on-one assistance, guidance and inspiration. This facilitates a shift is from an instructor-centered classroom to a studentcentered learning environment. Flipped Learning is particularly well-suited to higher education settings for a variety of reasons. The in-class discussion and enrichment activities allowed by moving content delivery outside of class time provide opportunities for students to develop vital skills needed in the 21st century, including critical thinking, creativity, communications, and collaboration. The model can also be especially useful in large lecture courses where student engagement and interaction is usually minimal. When students receive the lecture outside of class they can use time in class with their peers more effectively by breaking up into smaller discussion groups or engage in other in-class activities. Instructors also make more effective use of their time by reviewing content that students actually need help with and guiding student discussions. The Flipped Learning model also allows for differentiated learning in classes of all sizes, since students can review the lecture content at their own pace and ask questions on their own time.

In recent years, advancements in technology have been resulting in significant changes in teaching paradigms, in which blended learning is becoming an emerging trend thanks to its productive benefits. According to Shih (2011), blended learning that integrates online and face-to-face instruction could create an effective teaching and learning experience for both instructors and students. One of the prominent methods of blended learning is the flipped model also known as the inverted classroom or reversed instruction which follows the learner-centered and active learning approach. With this method, the students can access learning materials and complete a certain assignments a few days before the class meetings via a specific platform so that they will have plenty of time for practices and teacher feedback in face-to-face classes. Consequently, the flipped model brings about a great deal of educational value such as the enhancement of class preparation, classroom interactivity, and academic performance (Hung, 2015). Besides, flipped teaching provides students with opportunities to develop higher order thinking under teacher guidance and with peer support. The methodology of flipped learning can be looked at as encompassing two phases. First, there are short recordings that are about well-defined subjects, which are accessible to students on the internet. Students use the recordings to guide them through the material, replacing traditional lectures. Students are able to allocate their time better and pace their (online) learning to meet their individual levels of comprehension. Students have more flexibility in selecting when and where to view the lectures and classroom time becomes more collaborative, active and engaging compared to typical lectures.The other phase of flipped learning is classroom work. Classwork consists of wellstructured assignments aimed at furthering the students' understanding of the material, helping them overcome any hurdles and being able to apply the knowledge they are working with [6]. The model of flipped learning attempts to address challenges by allocating more class time for active learning as well as to leverage accessibility to advanced technologies to support a flipped learning approach.

 By providing students with the material to gain a basic level of knowledge and understanding before class, classroom time can be used to deepen learning and develop higher-level cognitive skills. One of the core objectives of flipped learning is to move students away from passive learning and towards active learning

where students engage in collaborative activity, peer learning and problem-based learning. Within this context, the role of the teacher shifts towards that of facilitator and coach by empowering students to take control of their own learning. The use of technology further enriches the flipped learning process and promotes skills that are essential for 21st-century learning .

Flipped Learning in Higher Education

In higher education, teaching faculty has a history of moving the course content to outside the class. Think of the science class where students read about the theory and then use lab time to practice the techniques, or the English course in which the professor gave instant feedback on writing exercises during the class time. It is not surprising to see that a growing number of teaching faculty are leveraging new technologies and are embracing the flipped model. A growing number of higher education individual faculty have begun using the flipped model in their courses. To engage in Flipped Learning, teachers must incorporate the following four pillars into their practice.

First pillar: Flipped learning requires flexible environments. Flipped classrooms allow for a variety of learning modes; educators often physically rearrange their learning space to accommodate the lesson or unit, which might involve group work, independent study, research, performance, and evaluation. They create Flexible Environments in which students choose when and where they learn. Flipped educators accept that the in-class time will be somewhat chaotic and noisy, as compared with the quiet typical of a well-behaved class during a lecture. Furthermore, educators who flip their classes are flexible in their expectations of student timelines for learning and how students are assessed. Educators build appropriate assessments systems that objectively measure understanding in a way that is meaningful for students and the teacher.

 Second pillar: Flipped learning requires a shift in learning culture. In the traditional teachercentered model, the teacher is the main source of information, the teacher is the "sage on the stage" (King, 1993), i.e. the sole content expert who provides information to students, generally via direct instruction lecture. In the Flipped Learning model, there is a deliberate shift from a teachercentered classroom to a student-centered approach, where in-class time is meant for exploring topics in greater depth and creating richer learning opportunities. Students move from being the product of teaching to the center of learning, where they are actively involved in knowledge formation through opportunities to participate in and evaluate their learning in a manner that is personally meaningful. Students can theoretically pace their learning by reviewing content outside the group learning space, and teachers can maximize the use of face-to-face classroom interactions to check for and ensure student understanding and synthesis of the material. Flipped educators help students explore topics in greater depth using student-centered pedagogies aimed at their readiness level or zone of proximal development, where they are challenged but not so much so that they are demoralized.

 Third pillar: Flipped learning requires intentional content. Flipped educators evaluate what content they need to teach directly, since lectures are an effective tool for teaching particular skills and concepts, and what materials students should be allowed to explore first on their own outside of the group learning space. They continually think about how they can use the Flipped Learning model to help students gain conceptual understanding, as well as procedural fluency. Educators use Intentional Content to maximize classroom time in order to adopt various methods of instruction such as active learning strategies, peer instruction, problem-based learning, or mastery or Socratic methods, depending on grade level and subject matter. If they continue to teach using a teacher-centered approach, nothing will be gained.

Four pillar: Flipped learning requires professional educators. Some critics of Flipped Learning have suggested that the instructional videos employed in the model will eventually replace educators. That is misguided. In the Flipped

Learning model, skilled, Professional Educators are more important than ever, and often more demanding, than in a traditional one. They must determine when and how to shift direct instruction from the group to the individual learning space, and how to maximize the face-to-face time between teachers and students. During class time, educators continually observe their students, provide them with feedback relevant in the moment, and continuously assess their work. Professional Educators are reflective in their practice, connect with each other to improve their trade, accept constructive criticism, and tolerate controlled classroom chaos. While Professional Educators remain very important, they take on less visibly prominent roles in the flipped classroom.

Challenges

Flipped Learning is a relatively new model for teaching and, as such, there are challenges to its implementation in institutions of higher education.

Course Redesign

Perhaps the most common difficulty that faculty face is simply the extra time and effort required to redesign an existing course. Many instructors teach multiple courses, often at multiple locations, and may have other professional activities making it hard to find the time to flip a course. Instructors who have flipped their course have frequently remarked that it does require additional upfront work and a willingness to experiment with different methods

Faculty Workload

A key to alleviating the pressure of redesigning a course is not working alone. Instructors often find it helpful to work with one or more colleagues to flip a course. Co-teaching is often cited as an advantage; instructors can make the videos together, switch off making the lessons for each unit, or have one make the videos and the other create classroom activities, including assessments. Just as important is for instructors and professors to be properly trained on how to infuse Flipped Learning into their classes; it's not just about a video.

Student Buy-in

Another significant challenge to implementing the Flipped Learning model is achieving student buy-in. While some students struggle with the traditional lecture method, others have become so used to that style that they have a hard time adjusting to something new and innovative. The active learning tasks that are characteristic of a flipped course require students to put in more effort during class and to stay current with the pace of the course.

Student Evaluations

Student evaluations of flipped courses in higher education have varied, with some favoring the hands-on, peer-instruction activities in class and others finding it difficult to follow. One department chair noted his skepticism by pointing to student evaluations that gave the same professor half the the average rating in his flipped course compared to his traditional course. It is unclear if this is caused by student resistance to any form of change, the inexperience of the professor with the new format, a genuine dislike from students, or another factor.

Recommendations

1. The faculty members are advised to adopt applications of flipped learning and the use of elearning tools and educational software in teaching because of its effectiveness in the development of the knowledge and skills of students and their attitudes.

2. More attention should be paid to the preparation of workshops and training courses for the training of faculty members at universities on the use of flipped learning strategies and employing e-learning tools and make use of them in the design of courses.

3. The need to provide the necessary capabilities and material support to universities that are required for teaching through management systems and using e-courses, and to provide the necessary equipment to activate its role in improving the level of performance.

4. Course designers are advised to include the four pillars of flipped learning into their practices in order to provide different types of learning styles to shift the focus from teacher to learner in instruction.

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