Implementing A Diversified Group of Learners Through Flipped Classroom

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Abstract

Recent developments in technology and ideology have opened up completely new fields of study for education experiments. Pressurization of rising tuition classes expenses and the availability of non-fee online courses is provoking debate and igniting change in traditional classroom settings. The focus of this debate is the flipped classroom. The flipped classroom is a revolutionary teaching strategy that combines active, group-based critical thinking exercises in the classroom with asynchronous video lectures and practice problems for homework. It combines an active, problem-based learning process based on constructivist philosophy with instructional lectures drawn from direct instructional strategies based on behaviorist principles, which were long regarded to be incompatible.

Keywords: Flipped classroom, learners, higher education.

Introduction

The higher education system has seen an increase in the use of the flipped classroom model, and more conventional courses will probably use it as a way to augment outside-of-class work with video lectures. Students will have access to rich educational resources at any time and location thanks, especially in light of the quick growth of smartphones. To support the flipped classroom curriculum, certain additional tools might become available. In light of this circumstance, it is clear that the flipped model coexists with both advantages and disadvantages. In addition to evaluating the flipped classroom, the article offers advice for colleges and institutions on how they might scrutinize their classroom layouts and encourage students' cooperative and collaborative work.

In recent years, the flipped classroom has become a well-liked teaching strategy in both K–12 and higher education. Information- and communication- (ICT)-based novel teaching methods are required by students of the twenty-first century (ICT). For students in many engineering fields, the flipped classroom is considered an excellent teaching strategy. The typical method is turned on its head by the flipped classroom, which encourages students to actively engage in class activities. Before the class lecture sessions, often one or two days prior to the lecture, the course instructors submit the learning materials in any format, such as PowerPoint presentations, Word documents, video and audio files, etc. To engage the students, these online resources can also be used in conjunction with interactive tests.

Relevance of Flipped classroom

The flipped learning approach is the main focus of the classroom setting (Anja et al. 2015) rather than traditional classroom instruction. The face-to-face instruction in class enables students to actively

participate in a group or individual activity, collaborate with a peer, and advance their cognitive abilities. The flipped classroom model requires active participation from students both during in-class and outside-of-class activities, which helps students become more self-motivated.

A range of classroom activities based on the courses are used in the flipped classroom method (Stylianos et al. 2018). The course instructor chooses the flipped classroom's elements and activities while taking the students' cognitive abilities into account. The faculty plans the instructional material for the extracurricular activities based on the subject matter and their preferred teaching methods. The course materials may consist of audio, video, or simulation-based materials, each lasting 10 to 15 minutes. Other learning approaches, such as problem-based learning, collaborative learning, blended learning, and game-based learning, can be implemented using the flipped classroom strategy. These techniques will provide the course instructor an edge when it comes to instructing and grading the students depending on their conduct.

Objectives of the study

The goal of Flipping Classroom for Students is a strategy to implement a more student-centered pedagogy and include the students in active learning. In the flipped classroom model, teachers set up six active learning settings that serve as a roadmap and a point of support for students as they engage in both solitary and group study.

Different views on Flipped classrooms for learners

With the emergence of many Academies, the use of flipped classroom philosophy has developed into among the greatest divisive issues in the field of education. In general, experts believe that educational advances like distance learning are beneficial. The flipped educational environment still has advantages and disadvantages amid all the hype.

Review of Literature

The flipped classroom is a type of educational technology that turns the conventional classroom into a place where students actively participate in learning activities. 2013 (Kate & Rachel). A chart was used to show the student interest as well as their feedback on the various learning contents. The classroom exercises and lectures are changed in response to the survey results. The final result of this task showed the learners' grades for implementing the inverted classroom strategy in the computer science curriculum. The inverted classroom improved student performance and cognitive ability and steered the learning process in the direction of in-depth understanding.

Stenigra (2019) studied that for the benefit of learners to thrive in their teaching strategies and behaviors, the flipped classroom also enables them to learn in a variety of methods. The flipped classroom and learning style integration enhances student learning. Despite the varied pedagogical approaches being used, the learning styles of the students and the educator's training methods should be coordinated.

Zacaria (2018) Researcher focuses on ways to alter student behavior to put new learning strategies into practice. Although they are adept at the learning process, the students lack interest in the subject matter. Therefore, employing appropriate outside-of-class activities and inside-of-class activities, reflection is prioritized. The pupils have been helped to better manage their cognitive load thanks to the

flipped statistics classroom. Therefore, adequate planning and design are needed for both in-class and out-of-class activities, and an organized process can result in a large level of motivation for the students.

In order to evaluate the learners' performance, the author (Mamatha et al. 2012) suggested a methodology.

This evaluation takes advantage of fuzzy logic. A few factors that are taken into account that have an impact on student performance are pupil attendance, lecturer effectiveness, and environmental limits. The author offered additional indicators that might affect students' performances. For this research's scope, standard methodologies are not adaptable, and the author anticipates benefits from fuzzy logic.

Nic kulze (2014)The same faculty member designed the poll for two flipped classroom sessions. Students were enthusiastic about the "Bring Your Own Device" approach. 60% of students agree with the flipped classroom concept, while 39% of students say it hasn't lived up to their expectations. The state of readiness for flipping the classroom is average. The preparation for the flipped classroom can be predicted by looking at the rating, self-directed learning, and cooperative group activities. The use of numerous internet tools allows for greater flipped classroom experimentation and helps educate students about the pupil approach. Therefore, using a flipped classroom is no longer controversial in light of current development. The researcher studied that there will be a digital mode of material (Rahman et al. 2015) that will serve as a guide and resource. The first way that the students use technology is through audio, video, and an educational portal that they find helpful in their study. To guarantee that students are effectively engaged, it focuses on various group work as in-class projects and other combinations of inquiry-based learning. The flipped classroom is an approach that helps develop educational knowledge as well as skills in order to meet the demands of 21st-century learning. The student might not be active during the gathering exam periods. In this way, the flipped classroom's implementation can influence the conventional class's present direction in a way that is effective for students' learning. The developers believe that learners should continue to be encouraged in their learning after their teaching days.

The author used four case studies to demonstrate how various flipped classroom strategies could be used in university courses with the help of ICT and online learning resources. This style emphasizes the importance of course teachers, who serve as facilitators who encourage and direct students during the learning process (Michael & Lynne 2013). The ramifications of using the flipped classroom for the courses are also shown in these case studies. The goal of this study is to review the many flipped classroom methodologies, summarise the results, and provide suggestions for future research (Michail, 2014). Computer science courses went over the 32 research articles. The merits and difficulties of the flipped method of the classroom were underlined in the review papers. The author also discussed future research standards.

A Multi-disciplinary Cooperation Learning Ecology is Required for the Development of the Flipped Classroom

In contrast to the traditional classroom, the flipped classroom requires supplemental skills from people with other backgrounds, including skilled photographers, filmmakers, designers of instruction, business managers, computer scientists, network specialists, and others. Technical, social, and instructional environments together make up a multidisciplinary collaboration learning ecosystem. The flipped classroom can be developed on the basis of science and technology. To support the curriculum's outside-of-class component, new tools are developed. Students will have access to a broader variety of educational resources at any time and anywhere thanks to the quick development of portable electronic devices. The widespread use of the internet and information technology has increased the availability of audio and video educational tools. A better learning environment is provided by developed social networks, which significantly lowers the entry barrier for online education.

According to Professor Daphne Kohler, video costs are going down, making online instruction and

learning more convenient and affordable."Recent history shows us that the Internet is a great destroyer of any commercial store that depends on the sale of information," warned Nathan Harden menacingly. In a flipped classroom, mistakes are simple to make. Although the concept is simple, considerable planning is necessary for a good flip. Faculty must put forth more effort while creating movies, and extracurricular and curricular components must be properly incorporated for students to grasp. As a result, implementing a flipped classroom requires the instructor to do more work and learn new skills.

Conclusion

A role of change in the traditional method of learning occurs for educators may choose an additional participatory and collaborating approach to lecturing instead of standing in position to address students. The flipped classroom offers new methods of learning and modules for a system of education. Students' roles also shift from being passive observers to actively participating. The flipped classroom gives students more control over their studying and gives them more motivation to do so. Early patterns allow us to predict that the flipped classroom may have a significant impact on traditional schools and universities, even though it is uncertain how it will develop in the years to come. Using both traditional and online teaching strategies will undoubtedly be crucial to giving students a top-notch education.

References

1. T. Bill, The flipped classroom online instruction at home frees class time for learning, Education next, (2012)82-83.
2. M. Prince, Does active learning work? a review of the research, J. of Eng. Educ. 93 (2004) 223-231.
3. S. Zappe, R. Leicht, J. Messner, T. Litzinger, and L.H. Woo, "Flipping" the classroom to explore active learning in a large undergraduate course, in Proceedings of 2009 ASEE Conference, Austin, TX. (2009)
4. A. Dollar, ASEE annual conference 2011, main plenary, URL: http: // www.it.uu.se / research/group/ upcerg_new/events/ASEE2011_resources/plenary_slides.pdf, accessed on May 3, 2012.
5. A. Yadav, D. Subedi, M.A. Lundeberg, and C.F. Bunting, Problem-based learning in electrical engineering, J. of Eng. Educ.100 (2011) 253-280.
6. A.H. Charles, The benefits of flipping your classroom, http://www.facultyfocus.com/articles/instructional-design/the-benefits-of-flipping-your-classroom/#sthash.TicT2ie8.dpuf.(2013)
7. J. Krueger, Five reasons against the flipped classroom, http://www.stratostar.net/blog/2012/07/02/educate/five-reasons-against-the-flipped-classroom/
8. Information on http://www.ftchinese.com/story/001047178
9. H. Nathan, The end of the university as we know it, The American Interest, (2013)

Websites

1. www.shodhganga.inflibnet.ac.in
2. https://www.mendeley.com/search/?query=Flipped+classroom&dgcid