

Higher flipped classroom or inverted classroom. the

[Education](#), [Teaching](#)



Higher education institutions are facing increased scrutiny to improve student learning and demonstrate programme effectiveness. One of the primary components of effective teaching is student engagement and that engagement is critical for learning (O’Flaherty and Philips, 2015). In recent years, many instructors have moved away from a so-called diet of traditional lecture, with the occasional short-answer question to the class in which students listen, repeat, and occasionally apply, toward a modified menu of pedagogical platforms in which, much of the time, students are active participants in the learning process. This includes blended learning; where students may receive a combination of traditional face-to-face (F2F) instruction in class and are also required to complete activities outside of the class, facilitated through a range of technological resources. This has promoted the rise of the flipped classroom or inverted classroom. The flipped classroom is an innovative pedagogical approach that focuses on learner-centered instruction. This approach suggests that multimedia lectures be recorded so that students can view them out of class and at their own pace (homework).

This asynchronous approach frees up in-class time for student-centred synchronous learning activities. Each student is responsible for coming to class with a basic understanding of the material, so that she or he can fully participate and engage in class discussion. Content acquisition then is self-paced and self-guided, enabling students to control when and how much content they view. This fosters student ownership of learning through the completion of preparatory work and being more interactive during actual class time.

Instructors will guide students to the content, challenge students to think creatively, and provide expert insight and feedback. The flipped learning approach is significant as it has the potential to fully equip students, and those already in the work force, with skills to address 21st Century science discipline-related problems. Therefore, this study aimed to examine students' satisfaction and engagement and to enhance teaching and learning experiences through interactive teaching and learning process based on flipped classroom approach.