

# Efficacy of ADDIE-Integrated Flipped Learning Model: An Intervention Study

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## ABSTRACT

The absence of a universal and useful framework for directing the integration of flipped classrooms is one of the main obstacles inhibiting teachers from implementing flipped learning in their teaching practices. This unclear framework results in the reality that the efficacy of the flipped learning strategy is still unknown. This study presented the “ADDIE Paradigm,” a step-by-step generic model based on learning and teaching research findings. The study involved two cohorts of 60 first-year college students. The experimental group used ADDIE for five weeks, while the control group received instruction using the flipped model. The findings confirmed the viability of the ADDIE integrated flipped learning paradigm, which not only enhanced student engagement and teaching quality but also helped them perform better on exams. Future research topics, as well as instructional ramifications for online learning, are highlighted. Thus, the findings of this study can reinforce the theoretical foundations for flipped learning and aid in their acceptance in actual teaching.

## KEYWORDS

ADDIE Model, Flipped Learning, Higher Education, Intervention Research, Pedagogy, Quantitative Analysis, T-Test

## INTRODUCTION

“Learning theorists believe that flipped classrooms help students learn and retain more than standard lectures. Without the pressure of producing content, educators may teach students how to solve problems and apply knowledge to real-world issues. Flipped classroom proponents believe students will spend less time being diverted and more time using material through critical content-processing activities. Flipped classes are being promoted for various reasons as educators abandon the lecture paradigm. Academic rigour, motivation and student learning are the leading causes for incorporating flipped models”. (Talavera et al., 2022 p.289) Instructors have often complained about pupils arriving to class unprepared. Flipped classrooms encourage student preparation and attendance through active learning. In flipped classrooms and technology-enhanced classrooms, in-class activities based on pre-tasks motivate students to accomplish tasks and join the class to learn more. Flipped classrooms can improve student learning and preclass activities. To be regarded as successful, each educational system must demonstrate that academic achievement is improved. Fructuoso et al. (2022) note numerous examples of learning achievements in other sectors. However, research on flipped classroom approaches in language education is still very much in inception, and most learning studies have been conducted on a limited scale.

DOI: 10.4018/IJEA.316536

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Compared to the number of hours spent studying science, language education is thought to make up a minor fraction of higher education. Students are having a more challenging time learning English due to this condition. Some colleges adopt online instructional approaches as a solution to this problem. A further issue is that classroom strength is high in the Indian context. Effective online and flipped models are required in this situation. Significant adjustments were made due to the current effort to include flipped learning in higher education, which impacted the learning approach in many ways. Contradictory results have been observed in previous research studies spanning over ten decades of studies on flipped learning. A review of the literature on flipped classrooms in a university environment was undertaken to thoroughly understand the implementation of teaching methods in a higher education context. The prior research's extensions of the traditional flipped classroom paradigm served as the basis for this study. This study's results indicate that using flipped classrooms is recommended primarily to improve students' performance, understanding, success and other learning outcomes.

The challenges of designing the multimedia materials and the amount of time needed for instructors to develop the instructional methods and for learners to comprehend them are the main challenges of this approach. Other critical insights for the additional research were highlighted, along with recommendations for policymakers. "Flipped classrooms, often reversed classrooms, have gained popularity in higher education during the past few years. In a regular classroom, a teacher often uses direct instruction to present instructional material to the class. Students are given homework to complete outside of class time after the lesson" (Loizou, & Lee, K. 2020, p.44).

In comparison, in a flipped learning environment, educational material is recorded on video and given to students as homework to watch before class. The remainder of the face-to-face time is devoted to active learning activities like a conversation, peer cooperation, problem-solving, and discovery. As a result, a course's standard lecture and homework components are switched around, according to Yousufi (2020). The basic idea behind the flipped classroom is to provide leverage before instruction and optimise the valuable in-class time available for cooperative learning (p.91).

Sezer & Abay (2019) claim that "there is no one flipped classroom model in use; for instance, educators can use a partial flipped approach rather than a fully flipped technique". (p.854) Readings, discussions, role-plays, educational events, and quizzes are just a few extracurricular and classroom activities that may be found in flipped classrooms. Given the range of flipped classroom models implemented, assessing the efficacy of instructional strategies in enhancing scholarship is challenging. Researchers have addressed the benefits and drawbacks of the flipped paradigm and reported a range of results. Polat & Karabatak (2022) observes that examining which tactics and strategies employed in flipped classrooms support learning is indispensable in determining if the teaching approach is practical. The viability of the instructional design is not assured by simply substituting recorded lectures for in-person lectures and assigning homework during class. (p.142) Guo (2019) echoes a similar view. According to him, "A significant barrier prevents instructors from implementing this instructional approach in their teaching practices because the research on flipped classrooms tends to be context-specific, so there is a lack of a general and practical framework for formulating and executing flipped classrooms" (p.365)

Therefore, the present investigation aims to solve this lacuna by analysing how a flipped paradigm employing the Addie integrated strategy affects students' learning results. To properly plan and implement a flipped classroom, this research intends to provide teachers with a general, practical, and customisable technique. The idea includes step-by-step directions for executing flipped instruction and is based on a robust theoretical framework. The model used in this study not only enhances the body of expertise but also helps academics understand flipped classrooms. To determine whether this methodology is more effective at promoting student learning than a traditional flipped approach, we tested it in an undergraduate course.

Nahar (2019) claims that "The flipped classroom concept calls for students to be in ownership of individual learning before, during, and after class. Students are expected to participate in the training resources provided by the instructor during the pre-class phase. Then, as a follow-up activity to solidify the knowledge they had acquired during the earlier phases, participants are exposed to various assignments

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