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Blended and Flipped Classroom: Backing for Better Academic Success

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Abstract

In recent years, university instructors have increasingly adopted the flipped classroom model, a form of instruction that leverages digital technologies to shift direct teaching outside the traditional group learning space, typically through videos, and emphasizes active learning during in-class time. This review explores the evolution and impact of the flipped and blended learning models, which gained traction through positive student feedback, the author's professional experience, and a thorough review of existing literature. The paper presents a comprehensive framework for designing effective flipped or blended courses, highlighting essential components and providing insights into the types of activities best suited for this model. The framework emphasizes the importance of a structured approach that ensures all voices are heard and integrated into the course delivery cycle, while also fostering collaboration between instructors and students. The study concludes with recommendations for successfully implementing flipped and blended learning, offering guidance to educators seeking to optimize student engagement and academic achievement through this innovative instructional model.

Keywords: Academic success; author; backing; blended learning; flipped classroom; students

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1. INTRODUCTION

For centuries, universities across the globe have played a crucial role in ensuring that students receive an education that facilitates their intellectual growth and enables them to achieve defined learning outcomes. Traditionally, this has been accomplished through lectures delivered by subject-matter experts, with student performance assessed through various evaluation methods. This conventional approach has long been the expected model of university instruction and remains familiar to individuals who have attended higher education institutions.

However, the traditional classroom model presents certain limitations. For example, students often lack opportunities to read and critique each other's written work, despite engaging with the same subject matter. Writing thus becomes an individual task rather than a collaborative effort, even though language is inherently social. As a result, peer review is absent, and teacher feedback is often prescriptive rather than interactive (Sekar, 2019). In contrast, the flipped and blended learning models shift greater responsibility onto students, emphasizing deeper engagement with the subject matter through interactive and participatory classroom activities (Birova et al., 2023).

This pedagogical shift represents a significant departure from traditional university instruction. Many individuals, including students' parents, siblings, and other adults, have not experienced this mode of learning, leaving students with limited guidance on how to navigate these new educational approaches. Consequently, students engaged in blended or flipped learning models can be considered a novel form of "first-in-family" learners—a category that universities have previously recognized as requiring tailored support (Luzeckyj et al., 2011).

Modern students, often referred to as "digital natives," exhibit a strong affinity for technology (Sekar, 2019). Having grown up in a technologically enriched environment, they frequently rely on digital tools such as the Internet, laptops, tablets, smartphones, and social media platforms, integrating technology into nearly all aspects of their lives. This transformation has fundamentally altered how students learn. According to Sekar (2019), contemporary learners acquire knowledge through hands-on experiences rather than by reading instructional manuals or attending traditional lectures.

Moreover, today’s students tend to prefer online resources over printed materials. To enhance pedagogical effectiveness, educational institutions have adopted innovative teaching approaches such as flipped classrooms and blended learning. These models center the learning experience on students, with instructors assuming the role of facilitators who support students in comprehending complex concepts. Unlike traditional classrooms, where students must rely solely on personal notes or observational skills, flipped and blended learning environments provide digital resources that allow for repeated access to instructional materials. Consequently, the conventional lecture-based format is increasingly regarded as less effective for modern students, who are progressively moving away from print-based learning (Sekar, 2019).

The integration of digital resources in flipped and blended learning environments offers students individualized access to instructional materials and multiple opportunities to engage with challenging concepts. Amid the ongoing COVID-19 crisis in Algeria, universities have intensified their efforts to enhance blended and flipped learning experiences. Institutions are restructuring learning spaces to incorporate available educational technologies, ensuring the continuity of instruction. These developments challenge the relevance of the traditional lecture format as the dominant pedagogical model and highlight the potential for reimagining teaching and learning strategies in higher education. Consequently, academic leaders and policymakers are increasingly recognizing flipped and blended learning as viable alternatives for curriculum delivery.

The adoption of these instructional models necessitates substantial modifications to course design and delivery, as traditional formats do not seamlessly align with flipped or blended learning frameworks. Implementing flipped learning entails structuring course activities into three phases: pre-class preparation, in-class engagement, and post-class reinforcement. While technological advancements enhance the instructional design and delivery of these models, they also introduce

challenges. However, viable solutions and strategies are available to address these difficulties. Notably, the COVID-19 pandemic has accelerated the integration of flipped and blended learning approaches within Algerian universities over the past five years. According to Divjak et al. (2022), the pandemic has profoundly disrupted higher education, prompting an urgent transformation in instructional practices.

It is essential to note that both flipped and blended learning models incorporate online and offline interactions. While these approaches share commonalities—such as combining in-class and online learning—they differ in their structuring of activities. Flipped learning is distinguished by its inverted instructional sequence, requiring students to engage with learning materials before attending class. This evolving instructional landscape underscores the importance of adopting study habits that extend beyond the traditional classroom setting and encourage online learning.

The primary objective of online learning is to enhance students' academic performance while improving accessibility to formal education and reducing costs and time constraints (Hamzaoui, 2024). To facilitate the transition from conventional instruction to flipped and blended classrooms, Algerian higher education institutions are prioritizing the professional development of educators, equipping them with the necessary skills and resources to effectively implement these teaching models. The design and execution of flipped and blended courses involve three key stakeholders: instructors and their teaching teams, students enrolled in the courses, and instructional designers responsible for developing learning materials and assisting with course structure and assessment.

1.1. Purpose of study

This paper examines a blended learning model developed through an analysis of student feedback, the author's professional experiences, and a comprehensive review of existing literature. Additionally, it introduces a framework that identifies key components of a successful flipped or blended course while detailing activities that align with these instructional models.

2. METHOD AND MATERIALS

This study employs a literature review method to analyze the implementation and effectiveness of flipped and blended learning models in Algerian universities, especially in light of the challenges posed by the COVID-19 pandemic. A comprehensive search of academic databases was conducted using keywords such as "flipped learning," "blended learning," and "higher education." Relevant studies were selected based on their focus on student engagement, academic performance, and the role of technology in higher education. Key themes were identified, including the pedagogical shifts these models create, the integration of digital tools, and the challenges faced by students and instructors. The studies were analyzed through a thematic approach to extract common patterns and insights, particularly in the context of Algerian higher education. This literature review highlights the impact of flipped and blended learning on student learning outcomes and provides a critical understanding of the factors that influence their success.

3. RESULTS

3.1. The flipped classroom model

Flipping the classroom integrates collaborative coursework with online activities and instructional materials, enabling educators to better understand students' needs, design lessons that address those needs, and provide timely feedback (Novak et al., 1998). In this instructional model, students engage with content through brief online video lectures before class, allowing classroom sessions to focus on analysis, application, and problem-solving, thereby enhancing their learning strategies. The flipped classroom approach combines electronic learning with traditional in-person instruction, which classifies it as a component of blended learning (Mikek, 2023).

According to Sekar (2019), the flipped classroom model offers several advantages, including the promotion of active learning, increased interaction between educators and students, and the development of critical thinking skills. Additionally, this approach improves learning outcomes by

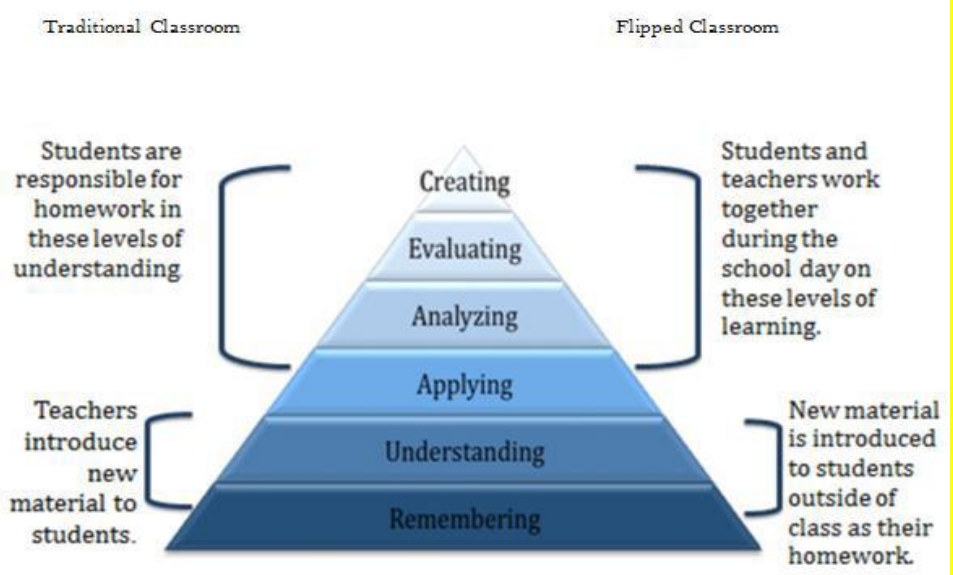
bridging the gap between the highest and lowest-performing students, leading to overall enhanced academic achievement. It further supports the development of analytical and problem-solving abilities.

The Flipped Classroom Model (FCM) is structured to facilitate the acquisition of fundamental and theoretical knowledge outside the classroom with the support of educational technologies, while classroom time is dedicated to more advanced learning activities (Bergmann, 2012). This model represents a transformation of the conventional teaching paradigm. Traditionally, instructors deliver lectures in class and assign homework afterward; however, in the FCM, lectures are moved to an out-of-class setting, enabling instructors to dedicate more class time to student engagement and interactive learning. This approach has been shown to offer numerous advantages, particularly in improving both the teaching environment and students' learning experiences (Aidinopoulou and Sampson, 2017).

The FCM enhances the effectiveness of learning and increases students' motivation to actively engage with course content (Chen et al., 2017). This instructional method fulfills students' motivational requirements for participating in the learning process, encourages collaborative learning, and cultivates critical thinking skills. Additionally, it contributes to the improvement of cognitive learning outcomes (Tanner and Scott, 2015; Li et al., 2024). Bloom's taxonomy illustrates the distinctions between traditional and flipped learning methodologies, as outlined in Figure 1.

Figure 1

Bloom's taxonomy about flipped and traditional learning approaches



The flipped classroom model is increasingly gaining recognition in educational practices, particularly within higher education (Toppo, 2011). In this approach, the conventional lecture-based teaching method is reversed, allowing students to engage with foundational learning materials at home while class time is allocated for collaborative and interactive learning. Various technological tools support the implementation of the flipped classroom model, including learning management systems, WhatsApp, and YouTube (Pohl et al., 2018).

This model has the potential to significantly impact students' learning experiences by addressing both their overall satisfaction with the learning process and their intrinsic motivational needs. These needs include relatedness, autonomy, and competence, which are essential for meaningful engagement in academic activities (Abeysekera and Dawson, 2015; Kwong et al., 2024).

3.2. Flipped classroom learning vs. traditional classroom learning

Graham et al. (2013) suggested that blended learning integrates both face-to-face instruction and computer-based teaching methods. The flipped classroom is a pedagogical approach in which students

engage with video lessons outside the classroom through online learning, while in-class sessions focus on hands-on activities.

More specifically, the flipped classroom model is structured around online video and audio lectures delivered outside the classroom setting, with problem-solving discussions and interactive sessions taking place within the classroom environment (Buhl-Wiggers et al., 2023). Blended learning, which combines traditional teaching methods with information technology, provides students with a diverse instructional experience. Consequently, blended learning is often associated with the flipped classroom model (Staker and Horn, 2012).

The relationship between the traditional classroom and the flipped classroom in fostering higher-order thinking skills, as outlined in Bloom's Taxonomy, is illustrated in Table 1. According to this taxonomy, learning follows a hierarchical cognitive process: individuals must first remember information before they can understand it, and they must understand concepts before they can apply them.

Both traditional and flipped classrooms encompass three levels of learning. At the remembering stage, face-to-face instruction is the primary mode of delivery in traditional classrooms, whereas flipped classrooms utilize pre-recorded lectures and videos. At the understanding stage, traditional classrooms employ debate tools, while flipped classrooms emphasize peer-to-peer discussions to facilitate comprehension. For the analyzing stage, traditional classrooms rely on homework assignments, whereas flipped classrooms incorporate projects and presentations. Finally, at the evaluating and creating stages, traditional classrooms typically assign homework or provide no structured activities, whereas flipped classrooms actively engage learners through projects, presentations, and instructor evaluations.

Table 1

The juxtaposition of the traditional and flipped classroom in Bloom's taxonomy

Level of Learning	***Traditional Classroom Tools***	***Flipped Classroom Tools***
Remembering	Traditional lecture	Pre-recorded lectures, reading material, and watching video lectures personally
Understanding	Debate	Observation, peer-to-peer discussion, and collaboration
Analyzing	Homework	Classroom activities like group work and discussion
Applying, Evaluating, Creating	Homework or nothing	Learners' projects, presentations and instructors' evaluation

Source: Adapted from Ajmal and Hafeez (2021).

3.3. Review of the students' feedback

The increasing integration of learning technologies will require students to fundamentally change their approaches to organizing both their academic studies and overall student life. Their critical perspectives can drive progress that might otherwise be overlooked, and their feedback has the potential to offer more valuable insights than the conventional input typically sought. While feedback is frequently collected, it is rarely used as a catalyst for meaningful change.

Across universities in Algeria, an increasing number of courses are being designed for delivery in flipped and blended formats. Some of these courses were piloted and implemented shortly after the onset of the COVID-19 pandemic, with student feedback playing a crucial role in the trial process. Beginning in the 2019-2020 academic year, Algerian universities launched an initiative to transition courses to flipped or blended modes of delivery. A recent review of student feedback on these courses provided several insights and suggestions for curriculum improvement.

Students' feedback primarily addressed course satisfaction and organization. Many of the comments related to teaching quality, cannot be overlooked when evaluating the effectiveness of course delivery. Other feedback was more focused on the organization of the course and the delivery methods, offering broader insights into course development.

The feedback from students reflected a range of opinions, with some expressing a preference for traditional course formats, while others favored more interactive, classroom-based engagement. Many students, however, noted that they were surprised by the flipped model, feeling unprepared to "learn the material on their own." Additionally, some students expressed concerns about the delivery being developed by instructors who were inexperienced with these teaching formats. These factors are likely to have influenced students' perceptions and opinions of the model.

Student comments also suggested that Master's students were generally more comfortable with engaging in activities that fostered independent learning, compared to first, second, and third-year undergraduate students. This was largely due to Master's students' prior experience with university studies, which had enabled them to develop the skills necessary to independently engage with learning materials and construct their knowledge. Examples of comments regarding the flipped model included statements such as:

-We were not prepared for this sudden change and felt overwhelmed and completely at a loss.

-The flipped classroom was not effectively stated, explained, and implemented in most of the courses we attended.

-The course we took was the only course that made the flipped classroom layout organized and engaging.

-The teachers went over what had to be done online, instead of leaving it up to the students to learn everything.

When the learners ignore that a course in which they have registered requires blended activities, they may be immediately discontented and discouraged. This can be discerned in comments like:

-Learners would have welcomed a more direct email from the part of their instructors explaining what was requested of them before each course registration.

-Learners would also have welcomed some support and pieces of advice on how to be prepared and deal with flipped classrooms.

Learners reported that they could not follow, add, and contribute to the interactive course if they were not sufficiently ready for such a task.

-We learned that we need to prepare ourselves and rely on ourselves. We were disappointed and fell flat on our faces during the second course.

Additionally, when watching videos at their own pace and place of choice, the students emphasized better on the course content and displayed less distraction. They felt more comfortable than in normal course settings:

-Most of us are easily disturbed, and upset and do not want to sit here. We just prefer working at ease and in peace at home.

-Home is the better place to focus and comprehend the course.

The students expressed dissatisfaction with the level of engagement in the course, perceiving the quality of education as 'poor.' This sentiment was particularly influenced by the limited contact hours, which were restricted to one hour and a half or less per week. However, students who had access to these sessions considered them highly beneficial, especially given the limited time available for in-person learning. Comments indicated that students found it extremely helpful when the teaching staff provided encouragement and support whenever they encountered difficulties. Instructors who

organized comprehensive revision sessions to ensure students felt confident with the course content were held in high regard.

4. DISCUSSION

To facilitate the transition to flipped and blended learning models, Algerian universities are allocating significant resources toward course redesign and the professional development of faculty members to effectively manage and implement these courses. The primary aim of this paper is to examine the impact of the flipped classroom model on students' academic performance, drawing from the author's personal and professional experience.

Based on the author's observations and her role in teaching Master's level classes (Master 1 and Master 2), where video lectures were predominantly used for flipped classroom instruction, she concluded that students in the flipped classroom model achieved lower grades and engaged passively in the learning process compared to those in traditional learning environments.

This outcome contrasts with previous studies, which indicated that the majority of students expressed positive feedback about the flipped classroom model and that its implementation significantly enhanced student engagement and academic achievement (Morgan et al., 2015; Nouri, 2016; Olakanmi, 2017; Nielsen et al., 2018).

While the flipped classroom model is typically associated with active learning, group discussions, collaboration, and problem-solving techniques, the author's own experience proved unsatisfactory due to various technological challenges. These included poor internet connectivity, insufficient training for instructors, students' disinterest in the new learning format, and a lack of access to necessary resources such as laptops and smartphones. Some students, particularly those in rural areas, did not even own a smartphone.

Furthermore, students' lack of motivation may stem from an inadequate level of readiness for e-learning. In a study by Yilmaz (2017), the relationship between motivation and readiness for e-learning was examined, revealing that learners' e-learning readiness was a significant predictor of both motivation and satisfaction. Students' readiness positively influenced their academic performance. Algerian universities, however, assumed that students possessed adequate organizational and study skills to easily adapt to these changes in learning.

Students who enrolled in what they believed to be traditional, face-to-face university programs did not anticipate the extensive use of self-directed learning or educational technologies (Calderon et al., 2015). Therefore, it is essential to assess how prepared students are for e-learning to ensure its success. However, online learning presents numerous challenges, including isolation, distraction, and disengagement.

Most students were not adequately prepared or informed by university stakeholders, particularly instructors, about the requirements for success in this type of learning environment. Furthermore, these students were unaware of the need to develop an entirely new set of skills that would allow them to be effective learners in this 'new normal.' A key change they needed to embrace was the ability to independently manage their learning process and construct their knowledge.

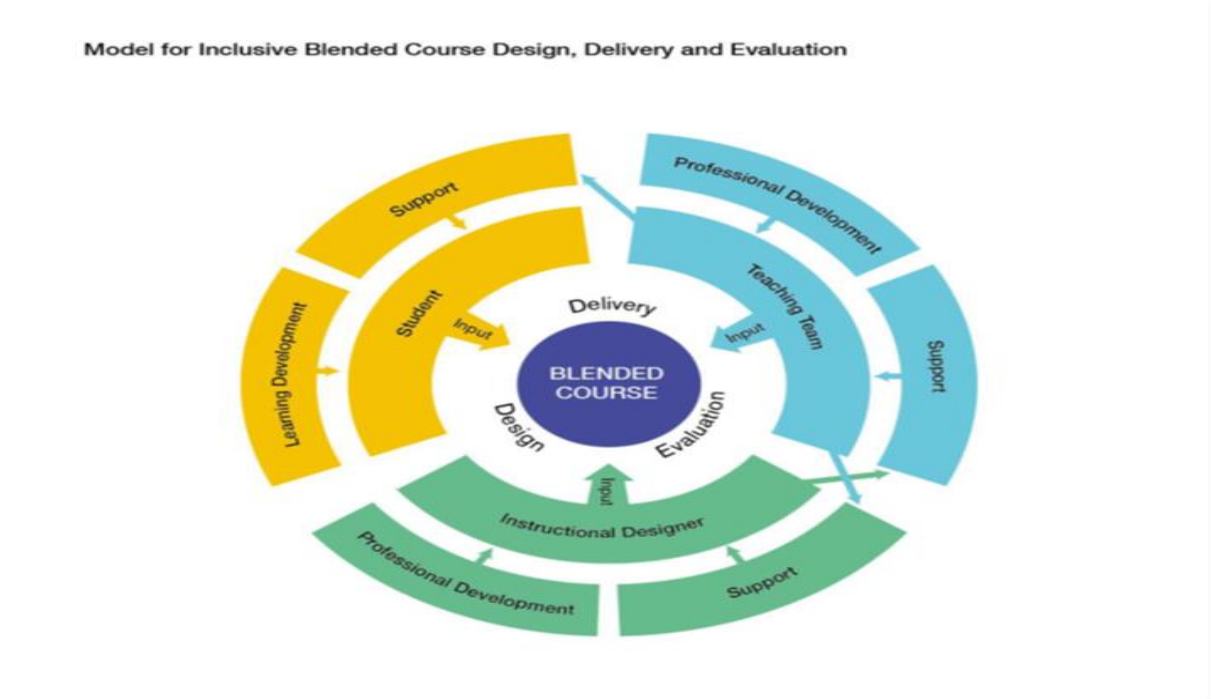
The design and delivery of blended and flipped courses rely on three key collaborators: the academics teaching the course (and their teaching teams, including lecturers and mentors), the instructional designers responsible for creating the course materials and often assisting with course assessment, structure, and design, and the students enrolled in the course. Any successful blended course design must incorporate input from all three groups.

There are two distinct stages in the design and delivery of a blended course: First, the preparation of the three groups; second, the integration of essential feedback from all parties. Given the critical role that academics and instructional designers play in shaping students' learning experiences, and the fundamental role of students in the process, both instructors and designers must receive comprehensive professional development, and that tailored learning support is provided to students.

The significance of the blended learning model presented below (Figure 2) lies in its identification of the three primary contributors to the flipped and blended course design and delivery cycle. As previously mentioned, the model suggests that three key inputs are required before and during the design, delivery, and evaluation of a flipped or blended course: the students taking the course, the academics teaching the course, and the instructional designers creating the course. This model underscores the importance of all three components in fostering active individual and collaborative learning.

Figure 2

Model for inclusive blended course design, delivery, and evaluation



Source: Adapted from Ajmal and Hafeez (2021).

Achieving success in blended learning courses requires substantial support from the three primary stakeholders (Figure 2). Academics need ongoing and comprehensive assistance in developing courses for blended and online learning environments. Instructional designers must continuously update their skills to keep pace with the rapidly changing tools available to them while maintaining a strong foundation in pedagogical principles. Students, in turn, require significant, formal training on how their attitudes affect their success, along with clear professional development in the use of technology and essential study skills.

Proficiency in effectively utilizing key university technologies is essential. However, many students, particularly those entering university for the first time, lack the self-discipline and organizational skills needed for academic success (Fyfe et al., 2014). To address these challenges, university Learning Development departments must create comprehensive and varied support mechanisms offered through multiple modes (online, in-person, and flipped) to assist students in reshaping their study approaches.

5. CONCLUSIONS

Algerian universities have quickly adopted flipped and blended teaching methods, fundamentally changing students' university experiences, especially in terms of content delivery. However, these changes have occurred without adequate support to help students navigate the sudden shift. This conceptual paper has highlighted a blended learning model developed through an analysis of student feedback, the author's professional experience, and a review of existing literature. It has proposed a

blueprint identifying key components for a successful flipped or blended course and provided suggestions for effective activities.

For quality learning opportunities to be successfully delivered, stakeholders, especially academics, must assess the support students are receiving and design structures that equip them with the necessary skills to succeed in this evolving educational landscape. It is crucial for educators to consult extensively, engage students in discussions, and listen to their needs and preferences. In-depth research and student involvement are essential to determine the institutional and course-based support required as students transition to a university experience that is far different from the pre-COVID-19 model.

Students need guidance on how to use the technologies and learning resources available to them, as well as how specific self-management and study techniques can help them achieve academic success. The model and blueprint outlined in this paper promote a structured approach to ensure all voices are heard and integrated into the flipped and blended course design and delivery cycle. This will ensure that all parties—students, course coordinators, and instructional designers—receive the support necessary for effective learning and teaching in this format. By following this or a similar blueprint, the needs, learning goals, and feedback of students will be effectively aligned with the objectives of course coordinators and instructional designers, resulting in a successful strategy for designing or converting university courses into flipped and blended formats.

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