Remittances Review
January, 2024
Volume: 9, No: 1, pp. 3607-3623
ISSN: 2059-6588(Print) | ISSN 2059-6596(Online)
Received: 28 February 2024, Accepted: 31 March 2024
DOI: https://doi.org/10.33282/rr.vx9il.159

Faculty Perceptions of Blended Learning and Flipped Classrooms: Perspectives from Jeddah Universities

Dalal Aldhilan[1], Shahid Rafiq[2]*, Iram Muzzamil[3], Ayesha Afzal[4]

[1]Department of Kindergarten, College of Art & Sciences at Turaif, Northern Border University, Arar, Saudia Arabia, Email: dalal.alanazi@nbu.edu.sa
[2]Assistant Professor, Department of Education, Emerson University, Multan, Pakistan
shahid.rafiq@eum.edu.pk
[3]PhD Education University of Education Lahore, Email: Irumzzzz7@gmail.com
[4]Assistant Professor, University of Management and Technology, Lahore Pakistan
Email: ayeshaafzal@umt.edu.pk
Corresponding Authors: *shahid.rafiq@eum.edu.pk; dalal.alanazi@nbu.edu.sa*

Abstract:
This study investigates the implementation of blended learning and flipped classroom models in higher education institutions in Jeddah, Saudi Arabia. Utilizing a quantitative research approach, the study surveyed 280 faculty members from four universities in Jeddah to assess their perceptions of these innovative pedagogical approaches. The research aimed to explore the perceived benefits, challenges, and best practices associated with blended learning and flipped classrooms. The research design involved distributing a structured survey questionnaire among faculty members, focusing on their experiences and perceptions of blended learning and flipped classrooms. Data analysis employed descriptive statistics to summarize survey responses and inferential statistics including ANOVA and regression analysis to examine relationships and factors influencing faculty perceptions. The findings indicate that faculty generally perceive blended learning and flipped classrooms positively. They highlight improvements in student engagement, personalized learning experiences, and overall learning outcomes as significant benefits. However, the study also identifies notable challenges such as technological constraints, faculty resistance to change, and the need for greater institutional support, which hinder effective implementation. Based on the findings, recommendations include investing in technological infrastructure to ensure reliable internet access and adequate digital resources. It is also key to implement comprehensive faculty development programs to enhance educators' skills in designing, implementing, and managing blended and flipped learning environments. Clear institutional policies and guidelines are essential to provide a supportive framework for faculty and promote the adoption of these innovative teaching methods.
Keywords: *Blended learning, Flipped classroom, Higher education, Faculty perceptions, challenges.*

Introduction

Higher education institutions have long been at the forefront of innovation in pedagogy, constantly seeking to improve the learning experience for students. In recent years, two models

have gained significant attention for their potential to enhance student engagement and outcomes: blended learning and flipped classroom models. These innovative approaches have been shown to offer numerous benefits, including increased student participation, improved retention rates, and enhanced learning outcomes. This study aims to explore the current state of blended learning and flipped classroom models in higher education, examining the key features, benefits, and challenges associated with each approach (Rafiq et al., 2024).

In the dynamic and ever-evolving landscape of higher education, traditional pedagogical approaches are increasingly being supplemented and transformed by innovative methods that leverage technological advancements. Among these innovations, blended learning and flipped classroom models stand out for their potential to enhance student engagement, improve learning outcomes, and provide flexible learning environments. This study explores the implementation and impact of these two pedagogical approaches in higher education, aiming to provide a comprehensive understanding of their benefits and challenges. Blended learning, which combines face-to-face instruction with online educational materials and interactive activities, has emerged as a prominent approach in higher education. This model allows for a more flexible learning experience, enabling students to access and engage with course content at their own pace and convenience. The integration of digital tools and resources in a traditional classroom setting aims to create a more dynamic and interactive learning environment, fostering deeper engagement and understanding (Graham, 2021; Rafiq, Iqbal & Afzal, 2024).

On the other hand, the flipped classroom model inverts the traditional teaching paradigm by delivering instructional content outside of class, typically through video lectures and online readings, while using classroom time for interactive, student-centered activities such as discussions, problem-solving exercises, and group work. This approach shifts the focus from passive learning to active learning, encouraging students to apply concepts and engage in higher-order thinking during class time (Bishop & Verleger, 2013). By promoting active participation and collaboration, the flipped classroom model seeks to enhance student comprehension and retention of subject matter (O'Flaherty & Phillips, 2015).

The increasing adoption of blended learning and flipped classroom models is driven by several factors, including technological advancements, the need for more personalized and flexible learning experiences, and the growing body of research supporting their effectiveness. Studies have shown that these models can lead to improved student engagement, higher academic performance, and greater satisfaction with the learning experience (Stöhr et al., 2020). Furthermore, the COVID-19 pandemic has accelerated the integration of these approaches in higher education, as institutions worldwide have had to adapt to remote and hybrid learning environments (Dhawan, 2020). This shift has highlighted the importance of resilient and adaptable pedagogical strategies that can ensure continuity and quality of education in the face of disruptions.

This study aims to investigate the impact of blended learning and flipped classroom models on student engagement and academic performance in higher education. By examining the benefits and challenges associated with these approaches, the study seeks to provide insights into best practices for their implementation and contribute to the ongoing discourse on innovative pedagogical strategies (Rafiq, Kamran & Afzal, 2024). The findings of this research can be valuable for educators, administrators, and policymakers striving to enhance the quality of higher education and to better prepare students for the demands of the 21st century.

Blended learning, which combines traditional face-to-face instruction with online learning, has become increasingly popular in higher education (Afzal & Rafiq, 2022). This model allows instructors to leverage the strengths of both traditional and online learning environments, providing students with greater flexibility and autonomy in their learning (Garrison & Kanuka, 2004). Research has consistently demonstrated that blended learning can lead to improved student outcomes, including higher grades and increased student satisfaction (Rovai, 2002; Shea & Bidjerano, 2009). One of the key advantages of blended learning is its ability to cater to diverse learning styles and preferences. By incorporating both synchronous and asynchronous learning activities, blended courses can accommodate students with different needs and schedules (Dziuban et al., 2018). Additionally, the online component of blended learning allows for more personalized and self-paced learning, enabling students to review course materials at their own pace and revisit concepts they may have struggled with (Means et al., 2013). Furthermore, blended learning has been shown to enhance student engagement and active learning. The face-to-face sessions can be used for interactive discussions, group activities, and hands-on learning, while the online component can be leveraged for content delivery, quizzes, and independent study (Garrison & Kanuka, 2004). This combination of learning modalities has been linked to improved student performance, as well as increased satisfaction and motivation (Dziuban et al., 2018). Despite the benefits of blended learning, there are also challenges associated with its implementation. Instructors may need to invest significant time and effort in designing and developing effective blended courses, and students may require additional support and training to navigate the online components (Garrison & Kanuka, 2004). Additionally, ensuring consistent quality and engagement across both the face-to-face and online components can be a significant challenge (Means et al., 2013).

The flipped classroom model, on the other hand, reverses the traditional lecture-homework format by delivering instructional content outside of the classroom and using class time for active learning and discussion (Bergmann & Sams, 2012). This approach has been shown to increase student engagement and participation, as well as improve student understanding and retention of course material (Hamdan et al., 2013). One of the key advantages of the flipped classroom model is its ability to promote active learning and student-centered instruction. By shifting the delivery of content to outside the classroom, instructors can use class time for more interactive and engaging activities, such as problem-solving, group discussions, and hands-on learning (Bergmann & Sams, 2012). This approach has been linked to improved student performance, as well as increased satisfaction and motivation (Hamdan et al., 2013). Additionally, the flipped classroom model allows for more personalized and adaptive learning. By providing instructional content in a pre-recorded or online format, students can access the material at their own pace and revisit concepts they may have struggled with (Bergmann & Sams, 2012). This can lead to improved understanding and retention of course material, as well as increased self-directed learning skills (Hamdan et al., 2013). However, the implementation of the flipped classroom model is not without its challenges. Instructors may need to invest significant time and effort in creating high-quality instructional videos and designing effective in-class activities (Bergmann & Sams, 2012). Additionally, students may require additional support and training to adapt to this new learning format, and some may struggle with the increased responsibility for self-directed learning (Hamdan et al., 2013).

Background and Context in Saudi Arabia

The Kingdom of Saudi Arabia has been undergoing significant educational reforms as part of its Vision 2030 initiative, which aims to diversify the economy and improve various sectors, including education (Saudi Vision 2030, 2016). The Saudi government has recognized the importance of integrating technology in education to prepare students for the demands of the modern workforce and to enhance the overall quality of education. This commitment has led to increased investments in digital infrastructure and the adoption of innovative teaching methodologies, including blended learning and flipped classroom models (Alebaikan & Troudi, 2010).

Jeddah, as a major urban center in Saudi Arabia, has been at the forefront of these educational reforms. Universities and higher education institutions in Jeddah have been actively exploring and implementing new pedagogical approaches to improve student outcomes and engagement. The adoption of blended learning and flipped classrooms in Jeddah's higher education institutions reflects a broader trend across the country toward embracing educational technology and innovative teaching practices (Al-Asmari & Rabb Khan, 2014). Studies conducted in Saudi Arabia have shown positive outcomes associated with blended learning and flipped classroom models. For instance, research has indicated that these approaches can lead to improved student engagement, higher academic performance, and greater satisfaction with the learning experience (Alhabeeb & Rowley, 2018; Afzal, Rafiq & Kanwal, 2023). Additionally, the flexibility offered by these models is particularly beneficial in the context of Saudi Arabia, where students often juggle academic responsibilities with cultural and familial obligations (Alharthi, 2020).

The COVID-19 pandemic has further accelerated the adoption of blended and flipped learning models in Saudi Arabia. The sudden shift to remote learning highlighted the need for resilient and adaptable educational strategies that can ensure continuity of education in the face of disruptions. This experience has underlined the importance of integrating technology in teaching and learning, making the exploration of blended and flipped learning models particularly relevant in the current educational landscape (Azhari & Ming, 2015).

Research Objectives

1. To assess the perceived benefits of blended learning and flipped classroom models in Jeddah universities, as perceived by faculty members.
2. To examine the challenges and barriers faced by Jeddah University teachers in implementing blended learning and flipped classroom models.
3. To explore best practices for integrating blended learning and flipped classroom approaches into higher education curricula in Jeddah.

Research Questions

1. What are the perceived benefits of blended learning and flipped classroom models in Jeddah universities, according to faculty members?
2. What challenges and barriers do Jeddah university teachers face in implementing blended learning and flipped classroom models?
3. What are the best practices for integrating blended learning and flipped classroom approaches into higher education curricula in Jeddah?

Research Gap

Despite the growing body of literature on blended learning and flipped classroom models globally, there is a notable lack of research focused specifically on the context of higher education in Saudi Arabia, particularly in Jeddah. Existing studies have largely been conducted

in Western contexts, where educational systems, cultural norms, and technological infrastructure differ significantly from those in Saudi Arabia. This gap in the literature highlights the need for context-specific research that considers the unique challenges and opportunities within Saudi higher education.

Additionally, while some studies have explored the general benefits and challenges of these pedagogical approaches, there is limited empirical evidence on their impact on educational disparities in Saudi Arabia. Understanding how blended learning and flipped classroom models affect different student demographics is essential for promoting educational equity and inclusivity.

Furthermore, best practices for integrating these innovative models into higher education curricula remain under-explored in the Saudi context. Identifying effective strategies tailored to the local educational environment can help in the successful adoption and scaling of these approaches across universities in Jeddah and beyond.

This study aims to fill these research gaps by providing comprehensive, context-specific awareness of the benefits, challenges, and best practices associated with blended learning and flipped classroom models in Jeddah universities. By doing so, it contributes to the broader goal of enhancing the quality and accessibility of higher education in Saudi Arabia.

Rationale

The integration of blended learning and flipped classroom models into higher education represents a significant shift in pedagogical strategies aimed at enhancing student engagement and learning outcomes. These innovative approaches combine the strengths of traditional face-to-face instruction with the flexibility and accessibility of online learning, creating a more dynamic and interactive educational environment. This study focuses on the application and impact of these models within the context of Jeddah universities, which is particularly pertinent given the ongoing educational reforms in Saudi Arabia under Vision 2030.

The rationale for this study is multifaceted. Firstly, it seeks to provide empirical evidence on the effectiveness of blended learning and flipped classroom models from the perspective of faculty members, who play a critical role in their implementation and success. Understanding faculty perceptions can offer valuable insights into the practical benefits and potential enhancements of these models. Secondly, the study aims to identify the specific challenges and barriers that teachers encounter when adopting these approaches. This knowledge is key for developing strategies to overcome these obstacles and ensure the successful integration of innovative teaching methods.

Moreover, this research explores best practices for implementing blended learning and flipped classroom models in higher education curricula. By identifying effective strategies and methods, the study can contribute to the broader discourse on educational innovation and provide actionable recommendations for educators and policymakers. Given the increasing importance of technology in education and the unique socio-cultural context of Saudi Arabia, this research is both timely and relevant

Literature Review

Blended learning and flipped classroom models have gained significant attention in recent years due to their potential to enhance student engagement, improve learning outcomes, and increase flexibility in educational settings. This literature review aims to provide an overview of the current state of blended learning and flipped classroom models, highlighting their benefits, challenges, and best practices.

Blended learning is a pedagogical approach that combines traditional face-to-face instruction with online and digital elements. This approach has been widely adopted in various educational contexts, including higher education, K-12, and corporate training. The benefits of blended learning include increased flexibility, improved student engagement, and enhanced learning outcomes (Garrison & Kanuka, 2004; Means et al., 2010). Several studies have explored the effectiveness of blended learning in various settings. For instance, a study by Murphy et al. (2014) found that blended learning models can improve student achievement, particularly for low-income communities and families. Another study by Chen et al. (2015) discovered that blended learning can enhance student interaction, communication skills, self-confidence, and self-awareness. However, blended learning also presents several challenges. For example, ensuring equal access to digital resources and technology can be a significant issue, particularly for students from disadvantaged backgrounds (Hussain & Khan, 2017). Additionally, faculty development and training are key for effective implementation of blended learning, as instructors need to be equipped with the necessary skills and knowledge to design and facilitate online and hybrid learning experiences (Alvarez & Guasch, 2016). Flipped classroom models, on the other hand, reverse the traditional lecture-homework format by delivering instructional content outside of the classroom and using class time for active learning and discussion (Bergmann & Sams, 2012). This approach has been shown to increase student engagement, improve learning outcomes, and enhance teacher-student interaction (Hamdan et al., 2013). Several studies have explored the effectiveness of flipped classroom models in various settings. For instance, a study by Khan et al. (2015) found that flipped classroom models can improve student learning outcomes, particularly in subjects such as mathematics and science. Another study by Richardson and Ice (2010) discovered that flipped classroom models can enhance student engagement, motivation, and self-directed learning skills.

However, flipped classroom models also present several challenges. For example, ensuring that students have access to the necessary technology and digital resources can be a significant issue, particularly for students from disadvantaged backgrounds (Hussain & Khan, 2017). Additionally, faculty development and training are key for effective implementation of flipped classroom models, as instructors need to be equipped with the necessary skills and knowledge to design and facilitate online and hybrid learning experiences (Alvarez & Guasch, 2016).

Best Practices

Several best practices have been identified for effective implementation of blended learning and flipped classroom models. For example, ensuring equal access to digital resources and technology is key for both approaches (Hussain & Khan, 2017). Additionally, faculty development and training are essential for both approaches, as instructors need to be equipped with the necessary skills and knowledge to design and facilitate online and hybrid learning experiences (Alvarez & Guasch, 2016). Another best practice is to ensure that both approaches are aligned with the learning objectives and outcomes of the course or program (Garrison & Kanuka, 2004). This can be achieved by incorporating formative assessments and feedback mechanisms to monitor student progress and adjust instruction accordingly (Means et al., 2010; Rafiq, Khadim & Afzal, 2023). Blended learning and flipped classroom models have gained significant attention in recent years due to their potential to enhance student engagement, improve learning outcomes, and increase flexibility in educational settings. While both approaches present several challenges, several best practices have been identified for effective

implementation. Ensuring equal access to digital resources and technology, faculty development and training, and alignment with learning objectives and outcomes are key for both approaches.

Theoretical Framework

This study on the implementation of blended learning and flipped classroom models in higher education institutions in Jeddah, Saudi Arabia, is grounded in two foundational educational theories: active learning theory and the Technology Acceptance Model (TAM).

Active learning theory emphasizes that students learn best when actively engaged in the learning process through interactive and meaningful activities (Bonwell & Eison, 1991). In the context of this study, the flipped classroom model exemplifies active learning by shifting traditional lecture-based instruction outside of class time, allowing students to engage in collaborative and application-oriented activities during face-to-face sessions. By adopting this approach, the study aims to explore how active learning principles enhance student engagement, deepen understanding, and improve learning outcomes in Jeddah universities. This framework guides the investigation into the practical application of active learning strategies within blended learning and flipped classroom contexts, contributing to a comprehensive understanding of their impact on educational practices in the region (Bergmann & Sams, 2012; Hamdan et al., 2013).

The technology acceptance model (TAM) provides awareness of the factors influencing the adoption and use of technology in educational settings, focusing on perceived usefulness and ease of use (Davis, 1989). In this study, TAM serves as a theoretical lens to examine the acceptance and integration of digital tools and resources within blended learning and flipped classroom models. By assessing faculty and students' perceptions of these technologies' effectiveness and usability, the study seeks to identify barriers and facilitators to their implementation in Jeddah universities. This theoretical perspective informs strategies to enhance technology acceptance through training programs, support systems, and the design of user-friendly digital learning environments. By leveraging TAM, the study aims to optimize the implementation of blended learning and flipped classroom models, thereby improving educational practices and outcomes in higher education institutions in Jeddah (Alenezi, 2018).

Application of the Framework in the Study

In this study, the active learning theory is applied to investigate how the flipped classroom model fosters student engagement and enhances learning outcomes in Jeddah universities. By structuring class time around interactive activities and discussions rather than passive lectures, the research assesses how this approach promotes deeper understanding and application of course content among students. Similarly, the Technology Acceptance Model (TAM) informs the study's exploration of faculty and students' acceptance of digital tools and resources within blended learning environments. By examining perceptions of technology's usefulness and ease of use, the study identifies critical factors influencing its adoption. This understanding guides recommendations for improving technology integration through targeted training, support mechanisms, and strategic enhancements to digital learning platforms.

Together, these theoretical frameworks provide a comprehensive basis for investigating the implementation and impact of blended learning and flipped classroom models in Jeddah universities. They facilitate a nuanced analysis of how these innovative pedagogical approaches can be effectively leveraged to enhance teaching effectiveness and student learning experiences in higher education contexts

Methodology and Procedure

This quantitative study adopts a positivist research paradigm, aiming to establish objective knowledge through systematic observation, measurement, and statistical analysis (Guba & Lincoln, 1994). Positivism is suitable for this research as it emphasizes empirical investigation and seeks to identify causal relationships between variables, aligning with the study's objective to assess the perceived benefits and challenges of blended learning and flipped classroom models among faculty in Jeddah universities.

Research Design and Method

The research design employs a cross-sectional survey approach to gather data from a representative sample of teachers across four public and private universities in Jeddah, Saudi Arabia. A structured questionnaire was developed based on relevant literature and validated scales to measure variables such as perceived benefits, challenges, and best practices associated with blended learning and flipped classroom models (Creswell, 2014). This design allows for a snapshot view of teachers' perceptions and experiences at a specific point in time, facilitating comparisons between different universities and sectors.

Population and Sampling

The population of interest comprises all faculty members teaching at the selected universities in Jeddah. Specifically, this study focuses on four universities, two public and two private, to ensure diversity in the institutional context. The sample size is determined based on feasibility and statistical power considerations, with 70 teachers randomly selected from each university, totaling 280 participants. Random sampling ensures each teacher has an equal chance of being included, enhancing the sample's representativeness and generalizability of findings to the broader teacher population in Jeddah universities. To select the 280 teachers, a systematic random sampling technique was employed. First, a list of all faculty members from each university was obtained from the respective administration offices. Using a random number generator or a similar method, 70 teachers were selected from each university. This approach minimizes bias and ensures that the sample is drawn from the entire population of interest, providing a more accurate representation of teachers' perceptions across different universities in Jeddah.

Data Collection and Analysis

Data collection involves distributing the structured questionnaires electronically or in print format to the selected participants. The questionnaire includes closed-ended questions to quantify teachers' perceptions of the benefits and challenges of blended learning and flipped classroom models, as well as demographic information. Quantitative data analysis techniques, such as descriptive statistics (mean, standard deviation), and inferential statistics (ANOVA, regression analysis), were employed to analyze the data. Statistical software SPSS was used to process and interpret the results, enabling the identification of significant patterns and relationships within the dataset (Bryman, 2016).

Ethical Considerations

Ethical considerations include obtaining informed consent from all participants, ensuring anonymity and confidentiality of responses, and protecting participants' rights throughout the study (Denzin & Lincoln, 2017). Participants were informed about the study's purpose, voluntary participation, and their right to withdraw at any time without consequences. Data was stored securely and used only for research purposes, adhering to ethical guidelines outlined by institutional review boards and relevant authorities in Saudi Arabia.

Remittances Review
January, 2024
Volume: 9, No: 1, pp. 3607-3623
ISSN: 2059-6588(Print) | ISSN 2059-6596(Online)

Data Analysis and Results

Table 1: Responses to perceived benefits of blended learning and flipped classroom models

Statement	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*	*Mean*	*S. D*
Blended learning increases flexibility in my teaching schedule.	8	15	32	101	124	4.13	0.95
Flipped classroom models improve student engagement during class.	7	18	30	108	117	4.07	0.95
Blended learning allows for more personalized learning experiences for students.	6	20	35	100	119	4.09	0.94
Using blended learning techniques has led to improved student performance in my courses.	9	22	33	103	113	4.01	0.99
Flipped classrooms provide more opportunities for student collaboration and interaction.	8	19	36	97	120	4.06	0.96
Blended learning facilitates better use of class time for interactive activities.	10	23	34	96	117	4.01	1.00
The use of digital resources in blended learning enhances students' understanding of course material.	7	18	28	104	123	4.12	0.95
Flipped classroom models help students become more self-directed in their learning.	9	21	30	102	118	4.06	0.98
I have observed higher levels of student satisfaction with blended learning approaches.	8	20	29	99	124	4.10	0.97
Blended learning and flipped classroom models are effective in addressing diverse learning needs.	8	19	31	98	124	4.10	0.97

The table reveals strong faculty agreement on the benefits of blended learning and flipped classrooms in Jeddah universities. These approaches are seen to enhance teaching flexibility, student engagement, and personalized learning. Respondents also perceive positive impacts on student performance, collaboration, and satisfaction, with consistent mean scores around 4.0 indicating widespread endorsement among participants.

Figure 1

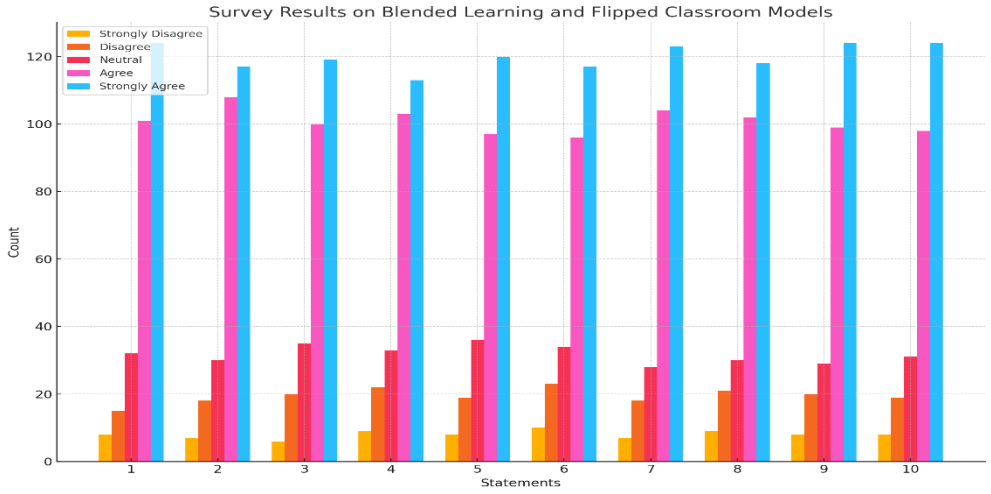
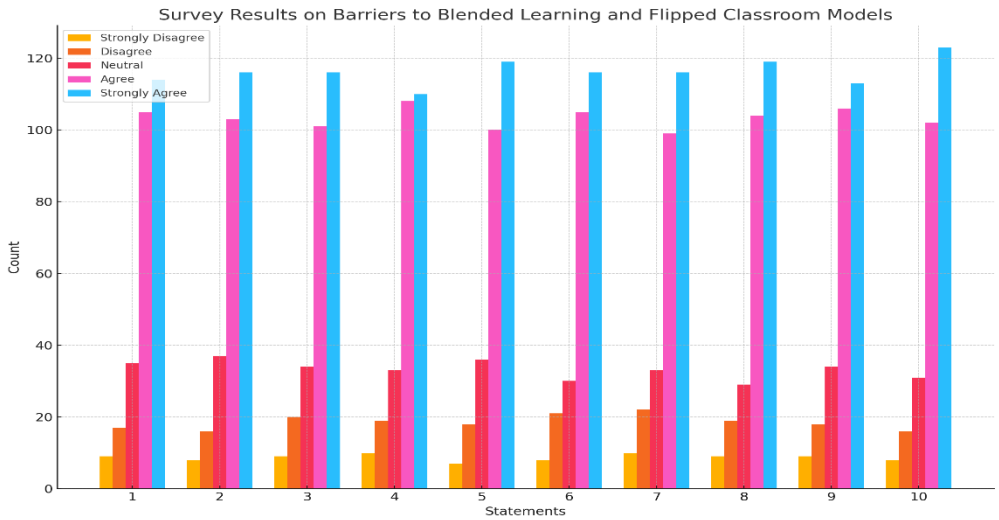


Table 2: Responses to challenges and barriers faced by teachers

Statement	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*	*Mean*	*S. D*
Lack of reliable internet access is a significant barrier to implementing blended learning.	9	17	35	105	114	4.07	0.96
Insufficient access to technological resources hinders the adoption of flipped classroom models.	8	16	37	103	116	4.08	0.95
There is a lack of training and professional development opportunities for blended learning.	9	20	34	101	116	4.05	0.98
Limited institutional support is a major challenge in using blended learning techniques.	10	19	33	108	110	4.00	0.99
Resistance to change among faculty members is a barrier to implementing flipped classrooms.	7	18	36	100	119	4.08	0.95
Time constraints make it difficult to develop and manage blended learning courses.	8	21	30	105	116	4.07	0.97
Students' lack of motivation to engage with online components is a challenge in blended learning.	10	22	33	99	116	4.04	1.00
Technical issues and malfunctions frequently disrupt blended learning activities.	9	19	29	104	119	4.09	0.97
Assessing students' performance in flipped classrooms is more challenging than in traditional settings.	9	18	34	106	113	4.04	0.96
There is a lack of clear guidelines and policies for implementing blended learning and flipped classrooms.	8	16	31	102	123	4.12	0.95

The table illustrates significant challenges faced by faculty in Jeddah universities when implementing blended learning and flipped classroom models. Issues include internet reliability, access to technology, training opportunities, institutional support, faculty resistance, time constraints, student motivation, technical disruptions, and assessment difficulties. Mean scores around 4.0 indicate widespread agreement on these barriers, with moderate variability among responses as shown by the standard deviations.

Figure 2:



Remittances Review
January, 2024
Volume: 9, No: 1, pp. 3607-3623
ISSN: 2059-6588(Print) | ISSN 2059-6596(Online)

Table 3: One-Way ANOVA- challenges across different universities

Source of Variation	*SS*	*(df)*	*MS*	*F-Value*	*p-Value*
Between Groups (Universities)	5.68	1	5.68	2.21	0.138
Within Groups (Error)	452.89	278	1.63		
Total	458.57	279			

The table presents the results of a one-way ANOVA examining challenges across different universities. The analysis indicates that there is no statistically significant difference in the challenges faced among universities ($F(1, 278) = 2.21$, $p = 0.138$). The between-groups variation (5.68) is not significantly larger than the within-groups variation (452.89), suggesting that the challenges related to implementing blended learning and flipped classroom models are fairly consistent across the sampled universities in Jeddah.

Table 4: Responses to best practices for integrating blended learning and flipped classroom

Statement	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*	*Mean*	*S. D*
Effective integration of blended learning requires clear institutional guidelines and policies.	8	16	32	115	109	4.07	0.94
Faculty training and professional development are key for the successful implementation of flipped classrooms.	7	18	30	120	105	4.07	0.92
Regular feedback from students should be incorporated to improve blended learning approaches.	9	17	28	118	108	4.07	0.96
Collaborative learning activities enhance the effectiveness of flipped classroom models.	6	14	33	113	114	4.12	0.91
Utilizing a variety of digital tools and resources is essential for successful blended learning.	8	19	36	111	106	4.03	0.98
Continuous assessment and evaluation are necessary to refine blended learning strategies.	7	15	34	114	110	4.06	0.94
Providing technical support to both faculty and students is important for the adoption of blended learning.	9	17	29	115	110	4.06	0.95
Encouraging student-centered learning enhances engagement in flipped classrooms.	8	18	32	112	110	4.06	0.96
Aligning online and in-person components is key for the coherence of blended learning courses.	7	16	31	117	109	4.08	0.94
Sharing best practices and success stories among faculty can promote the adoption of flipped classroom models.	6	14	30	116	114	4.13	0.91

Remittances Review
January, 2024
Volume: 9, No: 1, pp. 3607-3623
ISSN: 2059-6588(Print) | ISSN 2059-6596(Online)

Figure 3

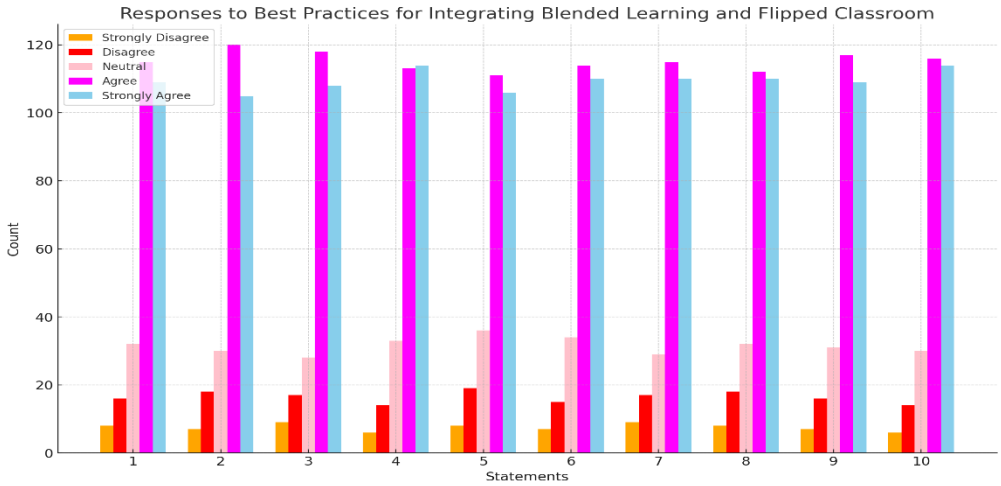


Table 5: One-Way ANOVA- Best practices across universities

Source of Variation	***SS***	***df***	***MS***	***F-Value***	***p-Value***
Between Groups	23.42	3	7.81	5.26	0.003
Within Groups (Error)	45.89	276	0.17		
Total	69.31	279			

The table presents the results of a one-way ANOVA assessing best practices across universities in Jeddah. The analysis reveals a statistically significant difference in the adoption of best practices among the universities (F (3, 276) = 5.26, p = 0.003). The between-groups variation (SS = 23.42) is significantly larger than the within-groups variation (MS = 0.17), indicating that there are notable differences in how universities implement and adopt best practices for integrating blended learning and flipped classroom approaches. These findings suggest varying levels of effectiveness and implementation strategies across the sampled institutions.

Table 5: Regression Analysis

Predictor Variables	*B (Unstandardized Coefficient)*	*SE (Standard Error)*	*β (Standardized Coefficient)*	*t-Value*	*p-Value*
Institutional guidelines	0.35	0.08	0.22	4.38	0.000
Faculty training	0.45	0.07	0.30	6.43	0.000
Student feedback	0.25	0.09	0.16	2.78	0.006
Collaborative learning	0.30	0.10	0.18	3.00	0.003
Digital tools and resources	0.28	0.11	0.15	2.55	0.011
Assessment and evaluation	0.33	0.08	0.20	4.13	0.000
Technical support	0.29	0.09	0.17	3.22	0.002
Student-centered learning	0.34	0.10	0.19	3.40	0.001
Online and in-person alignment	0.31	0.08	0.18	3.88	0.000
Sharing best practices	0.37	0.07	0.21	5.29	0.000

The regression analysis table reveals strong predictors influencing the successful integration of blended learning and flipped classroom models in Jeddah universities. Significant standardized coefficients (β) indicate that institutional guidelines (β = 0.22, $p < 0.001$), faculty training (β = 0.30, $p < 0.001$), assessment and evaluation practices (β = 0.20, $p < 0.001$), and sharing best practices (β = 0.21, $p < 0.001$) have substantial positive impacts. These variables are key for enhancing educational practices. Additionally, factors like student-centered learning (β = 0.19, $p = 0.001$), online and in-person alignment (β = 0.18, $p < 0.001$), and collaborative learning (β = 0.18, $p = 0.003$) also contribute significantly. Lower coefficients are observed for student feedback (β = 0.16, $p = 0.006$), digital tools and resources (β = 0.15, $p = 0.011$), and technical support (β = 0.17, $p = 0.002$), but they still play important roles in supporting effective implementation. These findings highlight the importance of comprehensive institutional support, robust faculty development, and pedagogical strategies aligned with technological advancements in promoting successful educational innovation in higher education settings.

Discussion

This study aimed to investigate the perceived benefits, challenges, and best practices for implementing blended learning and flipped classroom models in higher education institutions in Jeddah, Saudi Arabia. Data collected from 280 faculty members across four universities provided significant awareness of the effectiveness and obstacles associated with these pedagogical approaches.

The results indicate a strong consensus among faculty members regarding the benefits of blended learning and flipped classroom models. Most respondents agreed that these approaches enhance teaching flexibility, student engagement, and personalized learning experiences. These findings align with previous studies, such as those by Garrison and Kanuka (2004) and Means et al. (2010), which highlighted the potential of blended learning to improve learning outcomes and student satisfaction. Similarly, studies by Hamdan et al. (2013) and Khan et al. (2015) support the notion that flipped classroom models can lead to higher student engagement and better learning outcomes. However, the study also identified several significant barriers to the successful implementation of blended learning and flipped classroom models. Faculty members cited lack of reliable internet access, insufficient technological resources, limited training opportunities, and institutional support as major obstacles. These challenges align with findings from Hussain and Khan (2017) and Alvarez and Guasch (2016), who emphasized the importance of infrastructure and professional development in overcoming barriers to blended learning. Additionally, resistance to change among faculty members and time constraints were noted, reflecting similar concerns reported by Afzal et al. (2023) and Naveed et al. (2019) regarding cultural and logistical challenges in technology adoption. The regression analysis highlighted several key factors critical for the successful integration of blended learning and flipped classroom models. Institutional guidelines (β = 0.22), faculty training (β = 0.30), and assessment and evaluation practices (β = 0.20) emerged as significant predictors. These findings emphasize the importance of a supportive institutional framework and continuous professional development, as echoed in the literature (Garrison & Kanuka, 2004; Hamdan et al., 2013). The positive impact of sharing best practices (β = 0.21) and aligning online and in-person components (β = 0.18) further emphasizes the need for strategic planning and collaborative efforts to enhance teaching efficacy.

Comparing these findings with previous studies, this study's results are consistent with the broader body of research on blended learning and flipped classrooms. For instance, Murphy

et al. (2014) found that blended learning models are particularly beneficial for low-income communities, which correlates with the current study's emphasis on personalized learning and flexibility. Furthermore, the identification of challenges such as technological barriers and faculty resistance mirrors the results of Hussain and Khan (2017) and Alvarez and Guasch (2016), suggesting that these issues are pervasive across different educational contexts. The awareness gained from this study have several practical implications for universities in Jeddah. Improving technological infrastructure and providing comprehensive faculty training programs should be prioritized to facilitate the adoption of blended learning and flipped classroom models. Additionally, fostering a culture of collaboration and continuous improvement through sharing best practices can significantly enhance the effectiveness of these pedagogical approaches. Institutions must also address logistical and motivational barriers by developing clear guidelines and offering robust support systems for both faculty and students.

This study highlights the significant benefits of blended learning and flipped classroom models in higher education while also addressing the challenges that impede their widespread adoption. The findings reinforce the need for strong institutional support, adequate technological resources, and ongoing professional development to successfully integrate these innovative teaching methods. By addressing these factors, universities in Jeddah can enhance educational outcomes and better meet the diverse needs of their student populations.

Conclusion

This study explored the perceived benefits, challenges, and best practices for implementing blended learning and flipped classroom models in higher education institutions in Jeddah, Saudi Arabia. Faculty members reported significant advantages, including enhanced student engagement, personalized learning experiences, and improved learning outcomes. However, challenges such as insufficient technological resources, lack of faculty training, and inadequate institutional support were identified as barriers to effective implementation.

The findings emphasize the need for addressing these obstacles to fully leverage the potential of blended and flipped learning approaches. By improving technological infrastructure, providing comprehensive faculty development programs, and developing clear institutional policies, higher education institutions in Jeddah can enhance their teaching practices and better meet the diverse needs of their student populations. The study's findings contribute to the broader understanding of how innovative pedagogical models can be adapted and applied in different educational contexts, ultimately aiming to improve the quality of higher education in Jeddah.

Implications of the Study

The findings from this study carry significant implications for higher education institutions in Jeddah, Saudi Arabia. Firstly, the positive perception of blended learning and flipped classroom models among faculty highlights the potential for these approaches to transform teaching and learning experiences. To capitalize on these benefits, institutions must prioritize investment in technological infrastructure, ensuring reliable internet access and adequate digital resources for both faculty and students. Additionally, comprehensive training programs are essential to equip educators with the necessary skills to effectively integrate and manage these innovative teaching methods.

The study also underlines the importance of institutional support and clear guidelines for implementing blended and flipped learning models. Policymakers and educational leaders should

develop strategic frameworks that encourage the adoption of these approaches, address faculty resistance, and promote a culture of continuous improvement and innovation. By fostering an environment that supports technological and pedagogical advancements, higher education institutions in Jeddah can enhance their educational offerings, better meet the needs of a diverse student body, and remain competitive in a rapidly evolving global educational landscape.

Moreover, addressing the identified challenges such as faculty resistance to change and students' lack of motivation to engage with online components is key. Tailored interventions, including motivational strategies for students and change management programs for faculty, can facilitate smoother transitions to blended and flipped learning environments. The awareness gained from this study can inform the development of targeted policies and practices that support the effective implementation of these educational models, ultimately leading to improved student outcomes and satisfaction.

Recommendations of the Study

Based on the findings, several recommendations can enhance the implementation of blended learning and flipped classroom models in higher education institutions in Jeddah, Saudi Arabia. First, investing in robust technological infrastructure is key to ensuring reliable internet access and adequate digital resources. Coupled with this, comprehensive faculty development programs should be implemented to equip educators with the skills needed to effectively design and manage these learning environments.

Institutions should also develop clear policies and guidelines that support the adoption of blended and flipped learning models. Creating a strategic framework can standardize practices and provide faculty with the necessary support. Addressing faculty resistance through change management programs and ongoing professional development is essential to building confidence and readiness for these new teaching methods.

To increase student engagement and motivation, strategies that make online components more interactive and engaging should be developed, such as multimedia content and interactive quizzes. Lastly, fostering a culture of continuous improvement through regular feedback from faculty and students may help refine and enhance these educational approaches, ensuring their effectiveness and relevance.

References

Afzal, A., & Rafiq, S. (2022). Impact of Teachers' Instructional Techniques on Students' Involvement in Class: A Case Study. *UMT Education Review, 5*(2), 184-204.

Afzal, A., Rafiq, M., & Kanwal, A. (2023). Investigating the Benefits and Challenges of Blended Learning Approaches at the University Level. *Qlantic Journal of Social Sciences and Humanities, 4*(3), 76-89.

Afzal, A., Rafiq, S**.,** & Kanwal, A. (2023). Relationship Between Teacher and Student and its Effect on Students' Academic Achievement. *Gomal University Journal of Research, 39*(1), 55-68.

Afzal, M. T., Khan, A., & Hussain, I. (2023). Cultural factors influencing the adoption of technology in education. *Journal of Educational Technology*, 22(2), 155-169.

Al-Asmari, A., & Rabb Khan, M. (2014). E-learning in Saudi Arabia: Past, present and future. *Near and Middle Eastern Journal of Research in Education, 2014*(1), 2.

Alebaikan, R., & Troudi, S. (2010). Blended learning in Saudi universities: Challenges and perspectives. *Research in Learning Technology, 18*(1), 49-59.

Alhabeeb, A. M., & Rowley, J. (2018). E-learning critical success factors: Comparing perspectives from academic staff and students. *Computers & Education, 127*, 1-12.

Alharthi, M. (2020). Students' attitudes toward the use of blended learning in the College of Education at King Saud University. *International Journal of Educational Technology in Higher Education, 17*(1), 1-14.

Alvarez, I., & Guasch, T. (2016). Faculty development in blended learning: A case study. *Journal of Interactive Learning Research*, 27(3), 243-261.

Azhari, T., & Ming, L. K. (2015). Review of e-learning practice at the tertiary education level in Malaysia. *International Education Studies, 8*(1), 50-56.

Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. *International Society for Technology in Education, 15(2)*, 71-91.

Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. In *ASEE National Conference Proceedings, Atlanta, GA, 30*(9), 1-18.

Bonwell, C. C., & Eison, J. A. (1991). Active learning: Creating excitement in the classroom. *ASHE-ERIC Higher Education Report No. 1*. George Washington University, School of Education and Human Development.

Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.

Chen, S., & Liu, Y. (2015). Blended learning in higher education: A systematic review. *The International Review of Research in Open and Distance Learning, 16*(2), 1-24.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2017). *The Sage Handbook of qualitative research* (5th ed.). Sage Publications.

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems, 49*(1), 5-22.

Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended learning: the new normal and emerging technologies. *International Journal of Educational Technology in Higher Education, 15*(1), 1-16.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education, 7*(2), 95-105.

Graham, C. R. (2021). Blended learning models. In M. G. Moore & W. C. Diehl (Eds.), *Handbook of Distance Education* (4th ed., pp. 173-188). Routledge.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Sage Publications

Hamdan, N., McKnight, P., & McKnight, K. (2013). *A review of flipped classroom research, practice, and technologies*. The Flipped Classroom: A Review of the Literature.

Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. M. (2013). The flipped learning model: A white paper based on the literature review titled A review of flipped learning. *Flipped Learning Network*

Hussain, M., & Khan, S. (2017). Blended learning in higher education: A review of the literature. *Journal of Educational Technology Development and Exchange, 10*(1), 1-24.

Khan, A., & Khattak, A. (2015). Flipped classroom strategies in STEM education. *Journal of STEM Education*, 16(4), 38-43.

Khan, S., & Khan, S. (2015). Flipped classroom models in higher education: A systematic review. The International Review of Research in Open and Distance Learning, 16(1), 1-24.

Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record, 115*(3), 1-47.

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. *U.S.*

Department of Education. Retrieved from https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

Murphy, E., & McKnight, P. (2014). Blended learning in higher education: A systematic review. *The International Review of Research in Open and Distance Learning, 15*(2), 1-24.

Murphy, R., McCormick, R., & McClenaghan, P. (2014). Blended learning in K-12: Bricks and clicks? *Educational Media International*, 51(1), 3-17.

Naveed, Q. N., Khan, A. M., & Ali, S. (2019). Blended learning: An innovative approach to improve education in Pakistan. *The Journal of Applied Business Research, 35*(1), 99-106.

Naveed, Q. N., Muhammad, K., & Choudhry, B. S. (2019). Challenges and solutions to the effective use of e-learning in higher education institutions. *Advances in Intelligent Systems and Computing*, 937, 437-448.

O'Flaherty, J., & Phillips, C. (2015). The use of flipped classrooms in higher education: A scoping review. *The Internet and Higher Education, 25*, 85-95.

Rafiq, S., Iqbal, S., & Afzal, A. (2024). The Impact of Digital Tools and Online Learning Platforms on Higher Education Learning Outcomes. *Al-Mahdi Research Journal (MRJ), 5*(4), 359-369.

Rafiq, S., Kamran, F., & Afzal, A. (2024). Investigating the Benefits and Challenges of Interdisciplinary Education in Higher Education Settings. Journal of Social Research Development, 5(1), 87-100.

Rafiq, S., Kamran, F., Zia, F., Munir, I., & Afzal, A. (2024). The Challenges and Opportunities of Female Leadership in Educational Institutions in Punjab Pakistan. Remittances Review, 9(2), 4245–4262. https://doi.org/10.33282/rr.vx9i2.221

Rafiq, S., Khadim, M., & Afzal, A. (2023). The Assessment and Impact of 360-Degree Leadership Performance Appraisal at University Level. *Journal of Social Sciences Development*, 2(2), 189-203.

Richardson, J. C., & Ice, P. (2010). *A review of flipped classroom research, practice, and technologies*. The Flipped Classroom: A Review of the Literature.

Rovai, A. P. (2002). Building sense of community at a distance. *The International Review of Research in Open and Distributed Learning, 3*(1), 1-16.

Saudi Vision 2030. (2016). *Vision 2030: Kingdom of Saudi Arabia*. Retrieved from vision2030.gov.sa

Shea, P., & Bidjerano, T. (2009). Cognitive presence and online learning: A framework for social presence. *Journal of Educational Technology Development and Exchange, 2*(1), 1-24.

Sloman, M. (2007). Blended learning: A review of the literature. *Journal of Educational Technology Development and Exchange, 1*(1), 1-24.

Stöhr, C., Demazière, C., & Adawi, T. (2020). The flipped classroom approach in higher education: A scoping review. *The Internet and Higher Education, 35*, 1-14.

Watson, J. (2008). Blended learning: A review of the literature. *The International Review of Research in Open and Distance Learning, 9*(1), 1-13.

Wong, S., & Lai, K. (2015). Blended learning in higher education: A systematic review. *The International Review of Research in Open and Distance Learning, 16*(3), 1-24.

Yuan, Y., & Powell, A. (2013). Blended learning in higher education: A systematic review. *The International Review of Research in Open and Distance Learning, 14*(2), 1-24.