Eurasian Journal of Educational Research 113 (2024) 95-120

Eurasian Journal of Educational Research
www.ejer.com.tr

Integrating Hybrid Classroom Models Based on Academic Management to Enhance Student Success: A Systematic Literature Review

Lin Mei[1], Nithipattara Balsiri[2]*

ARTICLE INFO

Article History:
Received: 14 May 2024
Received in revised form: 16 October 2024
Accepted: 12 November 2024
DOI: 10.14689/ejer.2024.113.06

Keywords
Hybrid Learning Models, Student Engagement, Digital Equity, Hybrid Integration, Technological Infrastructure; Self-Regulation.

ABSTRACT

Purpose. Hybrid learning models are often used in enhancing student success and addressing the challenges that come with their academic achievement. Focusing on higher education settings, the study examined key aspects of enhancing student success including the role of academic management, student autonomy, student engagement, and the impact of technological infrastructure on learning outcomes. **Methodology**. Through a systematic literature review, this research analyzed relevant studies that explored hybrid integration models, academic management strategies, and student performance. The study made use of qualitative research design and conducted an in-depth analysis of academic papers, trends, and areas that require further exploration. Findings. The findings highlight that hybrid learning models offer significant benefits in terms of flexibility and personalized learning, which positively impact student success. However, challenges like digital equity, instructor readiness, and the need for robust technological infrastructure must be addressed to ensure the success of these models. The findings emphasize the role of academic management in aligning curriculum and supporting both students and faculty is pivotal, as is the need for effective engagement strategies to enhance student autonomy. **Implication for research** and practice. Hybrid learning models hold great potential, but their success is dependent on thoughtful design, continuous institutional support, and investment in infrastructure. Addressing the challenges identified in this study can lead to improved student performance and better preparedness for future learning environments.

Introduction

Most educational institutions, including schools and colleges, wish to enhance teaching practices and students' experience through innovative strategies. Scientific and technological advancement have offered hybrid learning systems as innovation to redefine the global education system resulting in an increased concern towards academic management and learning outcomes. In China, there has been a growing interest in

[1] Educational Administration and Leadership Graduate School, Dhonburi Rajabhat University, Thailand.
Email: linxiaoke6665@126.com
[2] Educational Administration and Leadership Graduate School, Dhonburi Rajabhat University, Thailand.
Email: nithipat798@yahoo.com
*Correspondence: nithipat798@yahoo.com

adopting hybrid or blended learning models that combine traditional face-to-face teaching with the use of digital technologies (Song & Agnawa Jr, 2023). The idea of combining online and face-to-face learning is not revolutionary, however, it gained more attention in recent years because of the COVID-19 global pandemic, which witnessed digital transformation reaching a higher level in the field of education (Kang, 2021). It is widely accepted that online learning offers great advantages in terms of flexibility, convenience and accommodation of individual differences in learners' preferences (Zheng, Chu, & Wu, 2018). This makes learning materials easily accessible to the students and makes it easier for the instructors to teach using multimedia devices (Picciano, 2017). Despite these advantages, online education also comes with some drawbacks especially in the attraction and maintenance of the students as well as issues of accountability. This is contrary to conventional face-to-face classes which allow a rich flow of mutual communication as well as the exchange of immediate feedback; however, both these methods of learning are critical for meaningful learning and the development of rapport between teachers and learners (Najib & Mursidi, 2021). There is a need to combine these two modes of learning into some hybrid or integrated form and exploit the benefits of the two approaches, hence improving the learning experiences and achievements of students.

The integrated hybrid models that entail the use of online learning along with face-to-face training have been shown to enhance the ability to reason and promote collaborative learning (Ningjing, 2022). These models integrate with academic management principles to achieve effective academic management. Academic management affords organizational principles towards management and development of courses which warrant that learning outcomes are stated out and well aligned with the activities to be taught (Khoso et al., 2022). These are important in enhancing learning outcome because they bring into parity the stated objective of learning and the assessment conducted on the students. In addition, the academic management is also confined to the delivery of curriculum and assessment, the timely tracking of students' performance, and the giving of feedback are critical factors which are imperative for effective learning environment (Khoso, Khurram, & Chachar, 2024). The integration of hybrid classroom models, particularly in the context of academic management for higher education, can provide transformative opportunity for both students and institutions alike. By blending both learning methods, these hybrid models can offer a flexible and personalized approach that can greatly enhance student productivity and motivation towards their academic success. Additionally, the assimilation of academic management in a structured and well supportive learning environment can help understand the diverse learners' needs.

However, there are certain important issues that must be addressed if this is to be successful, such as enhancing technology, ensuring that educators have the necessary training, and providing learners the robust support they require. This concept can completely transform education standards at NanHang, JinCheng College, located in Nanjing City, China, where this study took place. The purpose of this research was, therefore, to establish an elective-integrated hybrid classroom model under the academic management approach to increase the learning accomplishments of students in this research setting. It was envisaged that how an elective hybrid classroom model can put emphasis on student-centered learning and establish a more flexible and successful framework of academic management and student success.

The study, therefore, aimed to analyze the effectiveness of hybrid classroom models in enhancing student success compared to traditional learning approaches; and to investigate the challenges and benefits of integrating hybrid classroom models in education. To achieve these objectives, the study framed these two research questions (1) How effective are hybrid classroom models in improving student success compared to traditional learning approaches? (2) What are the key challenges and benefits of integrating hybrid classroom models in education? To answer these research questions, it was necessary to synthesize the existing research and identify various trends, gaps, and critical insights regarding the development of integrated hybrid classroom models and their impact on learning achievement. Therefore, a systematic literature review (SLR) technique was adopted to methodically collect and analyze scholarly articles from multiple databases, focusing on the intersection of hybrid learning models, academic management, and student success. The primary aim of this review was to identify the key factors that contribute to the effectiveness of hybrid learning environments and the role of academic management in enhancing students' learning outcomes. By systematically reviewing the literature, this study seeks to build a comprehensive understanding of the current state of research, highlight critical gaps, and provide recommendations for future studies.

Problem Statement

Taking into consideration that the introduction of an elective-integrated hybrid dual-mode classroom model has its potential benefits, its implementation is fraught with several difficulties, specifically from the technological and faculty perspective. For the model to work, there is need for the college to invest in strong digital environments that can support online learning besides making sure that students have necessary gadgets and connectivity (Graham, 2006). There should also be qualifying faculty training to provide material for online and offline learning, which alters faculty's teaching approach and their use of education technologies. In addition, Qie, Kassim and Ebrahimi (2021) opine that the efficiency of the model is anchored on the capacity of the institution to offer sufficient student-centered support services including academic, technical and mental health support services. Even while hybrid classroom models are becoming more and more common in education, many schools still have trouble putting them into practice successfully. The full potential of these models is limited by issues such as low student engagement, inconsistent instructor preparation, and faulty technology. These obstacles lead to uneven learning outcomes in addition to influencing student performance. To find insightful information that can enhance student achievement, this study aims to investigate the benefits and drawbacks of implementing hybrid models in higher education.

The current literature shows a clear gap since previous studies paid no heed to hybrid classroom models through the lens of academic management to improve student success. This research offers a fresh perspective in this domain. Adopting the construction of an elective-integrated hybrid classroom model grounded in academic management has the potential of increasing the learning achievement of students in NanHang JinCheng College, located in Nanjing City, China. This blend of online delivery and face-to-face interaction gives students a robust experience that can satisfy the range of learning styles and modalities that are characteristic of today's college classrooms (Bernard et al., 2014; Guibang, Dong, & Anqi, 2023). For that, successful implementation of the model needs advance planning, expenditures on information technology, and constant assistance to the

students and faculty members. It is with this virtue of academic management in the present study that the framework for enhancing student learning, engagement, motivation and academic performance was established so as to enhance the sustainability of higher education in China (Castro, 2019).

Literature Review

The concept of academic management is crucial for any hybrid or integrated model, as it defines how educational materials should be organized and delivered. According to Zhang and Li (2021), effective academic management requires the ability to coordinate and implement various elements of the curriculum, including teaching and learning strategies, assessment techniques, and student support services, all of which contribute to building a learning environment. The authors added that academic management helps in establishing a hybrid classroom model that allows learners to select courses aligned with their interests, thereby satisfying their individual learning pathways. This choice fosters student engagement by promoting self-determination in their learning experiences (Liu, 2023). Blended learning, which combines online and face-to-face instruction, has been recognized for its positive impact on learner performance, as it provides a more personalized learning environment (Liu et al., 2023b). This model encourages active participation, enabling students to engage with both technology and traditional classroom lectures, thus accommodating various learning styles.

Elective courses are one of the components of the proposed hybrid classroom model because they enable students to select subjects that they are interested in and subjects relevant to their academic and career pathways (Means et al., 2009). Studies have also revealed that when learners are allowed to choose which classes they wish to take, chances are that they will show increased interest in their work and therefore perform better (Darazi, Khoso, & Mahesar, 2023). This increased engagement is one of the reasons for improving learning achievement since students with such motivation will dedicate time and efforts to achieve the intended goals. By choosing the learning model, it also provides an added advantage of flexibility in curriculum delivery that can encompass various topics and approaches to the teaching learning process that suit the learning styles and preferences of the learners (Picciano, 2017). The elective courses also enhance self-regulated learning skills that are crucial in both learning systems. Students who know how to regulate their learning effectively can monitor the goals and learning processes and adapt the strategies used accordingly, which leads to the desired result – better grades (Meteshkin, Pomortseva, & Kobzan, 2021). This allows students to acquire learning skills while benefiting from the integrated hybrid elective model that offers a variety of learning experiences.

During the COVID-19 epidemic, educational systems around the world were compelled to switch to online instruction. Every facet of civilization was severely impacted by the pandemic. In an effort to stop its spread, educational institutions globally had temporarily halted their activities, severely disrupting the educational system. In due course, due to the cancellation of in-person classes and their relocation online, online learning grew in popularity, enabling students to continue their education (Heng & Sol, 2021), which helped create a parallel E-learning system which not only aimed to continue active learning in educational institutions but also devise methods to enhance learning levels (Almaiah, Al-Khasawneh, & Althunibat, 2020). Many learners found online learning

more flexible than in-person learning, and more useful and effective in achieving learning outcomes. In a study on quality models for open, flexible, and online learning, Ossiannilsson (2020) argues that online learning is open, adaptable, and successful, allowing anyone to start from any point. It also generates fresh concepts and can increase pupils' self-esteem and motivation. Additionally, during COVID-19, Zoom and Google Meet were extensively utilized for educational purposes, which provided students with new learning opportunities and enhanced teachers' proficiency in online teaching (Ulanday et al., 2021).

The abrupt shift from in-person to virtual instruction methods presented a number of difficulties for educators, administrators, students, and leaders in the field of education (Du et al., 2020). This shift presented challenges particularly in developing nations that continue to employ conventional teaching methods with little or no integrated technology (Al-Hunaiyyan et al., 2021). Truly speaking, online learning opened doors for students, making education more accessible and flexible, which led to a lot of students to turn to online learning. However, many still longed for the connection and engagement that comes with face-to-face education. For them, traditional classrooms provided a more effective and leading way to learn (Gherheş et al., 2021). These students often share that in-person classes allow for more frequent interactions with their teachers, which helps them stay engaged and motivated. On the flip side, online classes can sometimes feel isolating, leading to less participation and connection. Many students believe that being in a classroom not only boosts their confidence but also helps them form stronger relationships with their instructors (Johnson, Aragon, & Shaik, 2000). Walker and Koralesky (2021) observed that, after the pandemic, in-person interactions between students and teachers had considerably decreased. This is in line with another study, Heng and Sol (2021), which also argued that both students and teachers found it difficult to completely re-engage in the post-pandemic environment, highlighting the influence of the extended period of remote learning on traditional classroom participation.

Despite any types of challenges and constraints, engagement encompasses students' involvement in educational activities as well as interconnected behavioral, affective, and cognitive (mental effort) elements. It is therefore necessary to highlight the interrelated components of engagement between student and instructor during, after and throughout the duration of challenges and make a smooth transition to online platforms (Heng & Sol, 2021). This means that engagement requires integrating online learning with the traditional face to face learning for a continued and better academic performance. The success of any online learning truly hinges on this hybrid and integrated learning model as it can help learners achieve desired learning outcomes and significantly enrich their learning experience (Ulanday et al., 2021).

Pachisia (2022) highlighted the advantages of integrated or blended learning, calling it a teaching strategy that mixes online learning with conventional in-person classroom learning. Students can learn more freely and individually in a blended learning environment, which combines digital content with in-person instruction. Haque (2024) argues that it is not just a mixture of face-to-face and online modes; it is a well-planned structure for modern education that surely gives students meaningful insights into their learning and education. This method not only gives teachers a new perspective for gaining knowledge, but it also turns them from teachers into mentors. Students also get benefits

from this dual-mode learning perspective, which enhances their interest in learning and provides a boost to their productivity. Namyssova et al. (2019) explored the challenges and benefits of blended learning in higher education, and highlights how effective blended education can be for today's students, making them more engaged and productive in their learning experiences. However, the study also sheds light on the challenges that come with this approach. Many students still struggle with blended learning due to a lack of knowledge about technology, which can hinder their ability to fully benefit from these innovative educational methods.

Methodology

Research design: Systematic Literature Review

Table 1

Steps And Description of the Search Strategy

Steps	Description
1. Database Selection	Academic databases: Web of Science, Scopus, Google Scholar, IEEE Xplore Digital Library
2. Keyword Selection	Key terms: 'online-offline classroom integration,' 'blended learning,' 'academic management,' 'student success,' 'hybrid learning,' 'e-learning,' 'learning outcomes'
3. Search Parameters	Studies focused on hybrid learning models, academic management, and student achievement
4. Boolean Operators	Combination of keywords using AND, OR, NOT to refine the search
5. Timeframe	Studies published between January 2000 and December 2024
6. Manual Search	Manual search of references from key studies to identify additional relevant publications

A systematic literature review (SLR) technique was employed to synthesize existing research and identify trends, gaps, and critical insights regarding the development of integrated hybrid classroom models and their impact on learning achievement. The SLR approach is recognized for its methodological rigor, as it minimizes biases and ensures that the review is exhaustive, transparent, and replicable (Kitchenham et al., 2009). Following the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Moher et al., 2015), this review methodically collected and analyzed scholarly articles from multiple databases, focusing on the intersection of hybrid learning models, academic management, and student success. A search strategy, to ensure the identification of all relevant studies, was developed and implemented across several academic databases, including Web of Science, Scopus, Google Scholar, and the IEEE Xplore Digital Library. The search strategy was designed to capture a broad range of publications related to hybrid learning models, online-offline integration, academic management, and student success. The search was conducted using a combination of keywords and Boolean operators to maximize the relevance and accuracy of the results. These key terms included but were not limited to: "hybrid classroom integration," "blended learning," "academic management," "student achievement," "hybrid learning," "e-learning," and "learning

outcomes." Variations of these terms, as well as synonyms, were used to ensure a comprehensive search. The search covered studies published between 2000 and 2024 to capture both historical and contemporary research trends. Table 1 explains the steps and description of the search strategy used in this research. In addition to database searches, a manual search of references from key studies was also conducted to identify any additional relevant publications that may have been missed during the initial search. This snowballing technique further ensured the comprehensiveness of the review.

Inclusion and Exclusion Criteria

The criteria for the selection of the studies for this review was based on inclusion and exclusion measures to provide only the most relevant and useful articles for analysis. The given criteria were designed to correspond with the range of the study and address the methodological foundation and main issues related to the integration of the hybrid models of education, academic management, and student success. The inclusion criteria comprised: only the peer-reviewed articles published between the years 2000 and 2024, to get the wide sample of perspectives from both pre-present and the present time. These studies had to be conducted only on the aspect of the seamless integration of both conventional and web-based learning systems, offering information on the forms of the latter known as the blended learning. In addition, findings that explored the effects of these learning models in students' performance were given higher importance levels. Furthermore, only articles and research articles that provided adequate methodological information or qualitative/quantitative evidence were included. The exclusion criteria eliminated any study which did not meet the criteria of relevance and quality for inclusion in this review. These criteria included eliminating any published documents that were not in English language or that that did not include learning models at educational context or any other form of contextual relevance to the integration of learning models. Journal articles, conference proceedings, dissertations, and opinion pieces were also excluded unless these papers contained the empirical evidence on the subject matter of interest. Table 2 summarizes the inclusion and exclusion criteria.

Table 2

Inclusion and Exclusion Criteria for the Study

Criteria	Inclusion	Exclusion
Language	English	Non-English
Publication Date	January 2000 - December 2024	Before January 2000
Focus	Integration of online and offline learning models, academic management, and student achievement	Focus outside of online-offline integration, academic management, or unrelated educational contexts
Study Type	Empirical studies, literature reviews, meta-analyses, and case studies	Opinion pieces, theoretical discussions without empirical data
Publication Type	Peer-reviewed journal articles, conference papers, significant institutional reports	Grey literature, unpublished theses, dissertations, non-peer-reviewed papers

Data Extraction Procedure

Data extraction for this review was conducted using a systematic and structured approach to ensure consistency, accuracy, and thoroughness across all included studies. For each study, essential information was carefully recorded to provide a comprehensive understanding of the research contributions in the field of hybrid learning models and academic management. The extracted data included details about the authors and the year of publication, which helped establish a timeline of research developments and allowed for tracking the contributions of specific researchers. Additionally, the study objectives were summarized, focusing on the key aims and hypotheses of each research paper. The methodology of each study was critically examined, including the research design, sample size, and data collection methods. This step ensured that the review captured the variety of approaches employed in exploring the integration of hybrid learning models. Key findings were noted, particularly those related to the effectiveness of such models in enhancing student achievement and the role of academic management in improving learning outcomes. Any limitations identified in the studies were also recorded, offering insight into potential constraints that may have affected the interpretation of the results. This structured data extraction was facilitated by the use of a standardized form, which ensured that all relevant information was systematically captured. To maintain objectivity and reliability, discrepancies between reviewers were resolved through discussions and consensus, allowing for a more robust extraction process. Table 3 summarizes the data extraction procedure.

Table 3

Data Extraction Summary

Category	Description
Author(s) and Year of Study	Identified the timeline of research and key contributors.
Objectives	Summarized to capture the aims and hypotheses of each study.
Methodology	Details of research design, sample size, and data collection methods.
Key Findings	Outcomes related to online-offline integration, student achievement, and academic management.
Limitations	Constraints identified within the study that may affect the interpretation of results.

Thematic Analysis

Following data extraction, the thematic analysis was conducted to determine themes, patterns, and gaps in the literature. This qualitative method, acknowledged universally, enabled the author to categorize the comprehensive information into meaningful categories that would otherwise remain beyond the capacity of comprehensive understanding of the trends in the specified areas of academic management and hybrid learning advancement. In the first step of the data analysis process, the research team introduced themselves to the extracted data by going through narratives, concepts, and

findings from each study to get an overall view of the studies. After becoming familiar with the differentials, it was possible to code them for the first time to structurally identify the important words, phrases and themes. After the coding process, researchers attempted to look for broader themes by categorizing the codes into themes which the research team felt captured commonalities across the studies. The following themes were deemed relevant: Success of hybrid learning context, Issues in integrating on–line and off–line learning, Effects of academic management on learning. These were then discussed and fine-tuned to capture the findings as well as come up with good themes. While doing this refinement, some themes that were deemed useless were dropped and several themes were merged to form better sounding themes. Last of all, the themes were specified and labelled with references to their relevance in understanding the study's goals. This thematic analysis provided a structured framework for synthesizing the literature, enabling the identification of key trends and research gaps that may guide future studies on integrated online-offline classroom models. Figure 1 illustrates core of the research highlighted.

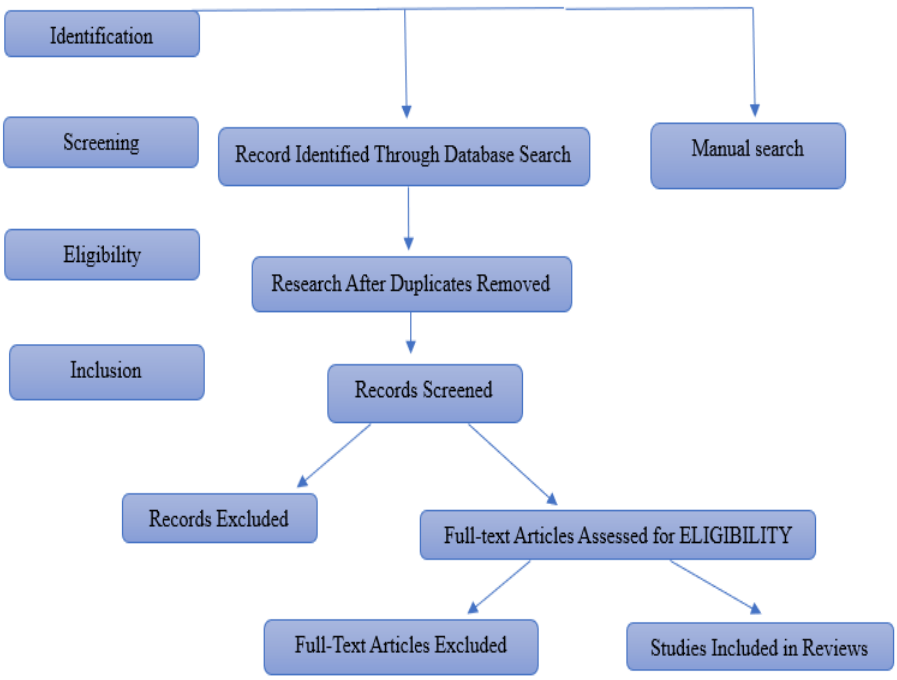

Figure 1: *PRISMA Diagram.*

By categorizing the findings into distinct themes, the review offered valuable insights into how academic management and hybrid learning environments contribute to enhancing student success. This methodical approach ensured that the analysis of both was comprehensive and insightful, providing a clear understanding of the current research in this evolving field, whose steps are shown in Table 4.

Table 4

Thematic Analysis Process Steps

Steps		Description
1.	Familiarization with Data	Review of extracted data to gain a comprehensive understanding of the findings.
2.	Generating Initial Codes	Identification of key terms, phrases, and concepts related to online-offline learning and academic management.
3.	Searching for Themes	Grouping of initial codes into broader themes reflecting commonalities across the studies.
4.	Reviewing and Refining	Refinement of themes to ensure accuracy and relevance.
5.	Defining and Naming Themes	Clear definitions and names assigned to each theme based on its significance.

Results

Overview of Themes

Based on the findings of this review, several important issues concerning synchronization between online and face-to-face learning activities, the function of academic management, and the overall learning achievement of NanHang, JinCheng College Students were pointed out. These themes, which are formulated based on the findings of a more general thematic analysis, offer a valuable perspective on how hybrid integration, backed by academic management, improves students' performance. A key area highlighted is the effectiveness of hybrid learning strategies and approaches. This theme includes advantages of free access to the materials, possibility to combine the online and offline learning modes as it is more convenient for students, and individual approach. By giving specific examples from academic literature, the review shows that hybrid models allow student to engage with course materials in a self-paced fashion yet still facilitate face-to-face interactions in the traditional classroom. This is also evident in the fact that increased flexibility enables more diversity in the learning activities, which enhance the learners' attention, interest, and performance. This theme continues to highlight the benefit of implementing the hybrid approach in creating a more effective learning environment.

Nevertheless, it becomes a challenge when attempting to transition between the hybrid platforms, which is another major theme that was identified during the analysis. Challenges arising from inadequate technological provisions and control affording issues concerning information technologies or IT known as the digital divide militate against successful implementation of hybrid learning systems. There is always a question of willingness with both teachers and students concerning this model that has not been fully solved. Certain research shows that if an integration of online and offline learning is carried out without proper preparation and support measures, students' activity decreases, and learning outcomes differ. These challenges need to be addressed through planning, adequate investment in technology, and training educators to fit in the hybrid teaching learning model.

One of the most important themes which was revealed in course of the study was the delegation of responsibility and participation of students in the context of hybrid learning arrangements. Elective courses are discussed as one of the important areas in which students need to have control to be able to reach their academic goals and satisfy their interests. The level of freedom was seen to boost students' interest and passion towards learning for the simple reason that a student would not get bored if he or she had control over the courses to be taken. Moreover, the applied structure of the hybrid models provided students with the opportunities to self-regulate their learning – a crucial factor in students' performance, whether in traditional and/or technology-enhanced learning context. Another theme that emerged in this study was the concept of academic management as an integral characteristic that defines the effectiveness of the presented types of the blended learning environments. This promotes academic management as the formulation of sound academic frameworks, curriculum development as well as the constant tracking of students' achievements which are crucial for hybrids to run efficiently. The thematic overview of hybrid learning models is shown in Table 5.

Table 5

Thematic Overview of Hybrid Learning Models

Themes	Description
Effectiveness of Hybrid Learning Models	Examines the benefits of flexibility, accessibility, and personalized learning experiences in improving student performance and engagement.
Challenges in Implementing Online-Offline Integration	Highlights the technological and organizational barriers that hinder the successful adoption of hybrid learning environments.
Role of Academic Management in Hybrid Models	Focuses on the importance of academic policies, curriculum design, and student progress monitoring in facilitating seamless integration.
Student Autonomy and Engagement in Hybrid Learning	Discusses the impact of elective courses and personalized learning paths on student motivation, engagement, and academic success.
Impact on Student Achievement	Explores how hybrid models contribute to enhanced learning outcomes through a balanced combination of asynchronous and synchronous learning experiences.
Technological Infrastructure and Support Systems	Addresses the critical need for reliable digital platforms, student access to resources, and technical support for educators in hybrid learning settings.

Effectiveness of Hybrid Learning Models

The success of hybrid learning approaches has therefore been identified as another important area of research, especially with the increasing application of information technology in tertiary education. When critically examining this theme, it is evident that hybrid learning models are valued for their flexibility, accessibility, and adaptability to various learning preferences. However, their use cannot be defined solely within these commonly apparent benefits to also investigate their pedagogical

and organizational potential. Studies have shown that blended classroom and online learning enhances student participation and performance by creating a flexible learning environment through both online and face-to-face interactions (Hew & Cheung, 2014). This makes it easier for the students to understand their learning environment and effectively manage their time to suit their preferred learning capability, hence making the learning process to be more effective in terms of retention. For instance, Means et al. (2009) studied the use of blended learning environments and concluded that students in these environments achieve higher academic status than those in traditional face-to-face settings. The asynchronous nature of hybrid models allows students to revisit the material in question, which for tasks that require higher order thinking, may be a very useful feature.

However, flexibility is a definite quality of Hybrid models in terms of job design, though the practical use in the organization is sometimes not as effective as planned and may depend on many factors. Graham (2006) reported that one potential and prospective challenge concerning the use of technology for learning is the so-called 'digital divide,' which is the unequal distribution of technology and, more specifically, digital resources available in context of learning to the students. Further, the efficiency of the hybrid learning models largely depends upon the modality of the online and face-to-face sections. Such an arrangement of these elements without proper integration leads to disconnected learning experiences that only complicate students' learning process. Hew and Cheung (2014) have also stressed the importance of the proper curriculum alignment – the hybrid components of the course should be designed as the proper set that supports the defined learning outcomes. Table 6 explains how key factors influence hybrid learning models.

Table 6

Key Factors Influencing Hybrid Learning Models

Key Factors	Findings
Flexibility and Accessibility	Hybrid learning models allow students to manage their own pace and improve comprehension by providing both asynchronous and synchronous learning opportunities.
Digital Divide	Unequal access to technology among students (the digital divide) can limit the effectiveness and equity of hybrid learning models.
Curriculum Design and Alignment	Effective hybrid models require well-aligned online and offline components that complement each other and align with learning objectives.
Student Autonomy and Self-Regulation	Students with high self-regulation skills perform better in hybrid models, while others may struggle with the demands of self-paced learning.
Instructor's Role and Adaptation	Instructors must adapt to hybrid formats, manage both online and offline components, and provide timely feedback to enhance effectiveness.
Assessment and Evaluation Practices	Assessment methods need to be adapted to comprehensively evaluate both online and offline learning experiences for optimal outcomes.

Challenges in Implementing Hybrid Integration

The issues not only emerged within the full-blown implementation of hybrid integration, but they also expose the inhibition of hybrid learning models that educational institutions must consider and overcome to unlock the potential of these systems. This theme explores the complex factors that can potentially surround the process of implementing and/or employing hybrid learning models, particularly in the context of higher learning institutions, including NanHang JinCheng College. As it will be discussed by critically evaluating these challenges, some of them are technical, while others stem from organizational, pedagogical, and social aspects, calling for a collective solution. By far, one of the most significant issues is the technology gap between students and institutions. Hybrid learning models such as synchronous and asynchronous learning present challenges in the digital divide especially in areas that the students do not have equal access to information technology, reliable connections and advanced digital devices (Liu et al., 2023b; Ru, 2024). This gap leads to a large challenge for students that may not afford to actively engage in the online activities in hybrid learning. Potentially vulnerable learners include those from low-income families or coming from rural regions, since they usually experience connectivity problems or lack appropriate devices. Hence, even within the urban areas, there are gaps in terms of access to technology which throw the students to different levels of learning and hence development of technology may lead to certain students being left behind as opposed to being empowered. These technological disparities should be addressed within the policies of institutions; for example, providing free or affordable equipment and internet access to make the learning models efficient for everyone (Najib & Mursidi, 2021).

Another difficult implication is the infrastructure preparedness of the schools to adopt hybrid instruction set up. Sufficiency of the technological infrastructure in institutions, for example, shared and obsolete learning management system (LMS), weak servers, or low-quality digital tools for the delivery of content can make it difficult for an institution to execute an effective integrative online-offline strategy. A study by Graham (2006) shows that if there is inadequate digital support then certain amount of learning might not proceed effectively online and therefore be comprehensively disjointed. This is where the dependability of these systems plays a critical role especially for blended learning models since technical challenges are known to provoke frustrations among students and faculty hence compromising the learning and teaching process. Instructor readiness and flexibility are also other areas of concern that have been received a lot of attention. It also affects instructors who have been used to face-to-face teaching approach as they will struggle to adopt this one since they have to combine between the online and offline modes.

Research has indicated that many teachers are digitally unexperienced and unaware of how to properly moderate the platforms as well as facilitate the learners in the virtual environment (Zhang & Li, 2021). It shows this lack of preparation can result to inconsistency in the quality of instruction in the blend model. The amount of time and effort used in the creation and dissemination of content in both formats could also prove demanding on educators, thus causing them to be easily burned out. This is the reason why professional development with an emphasis on the continuous training in the use of technology for educational purposes is necessary to avoid many experts to be acquainted

with the existence of the technology but do not know how to apply it into their instruction effectively. Table 7 explains the key challenges in implementing hybrid learning model.

Table 7

Key Challenges in Implementing Hybrid Learning Models

Key Challenges	Findings
Technological Divide	Unequal access to technology limits student participation, creating an educational gap.
Infrastructure Readiness	Outdated or insufficient technological infrastructure hampers effective hybrid learning implementation.
Instructor Readiness and Adaptability	Instructors face difficulties adapting to digital tools and balancing online-offline teaching demands.
Student Engagement and Motivation	Students struggle with self-motivation and engagement in the absence of direct supervision in online settings.
Pedagogical Challenges	Hybrid models require a well-aligned curriculum to avoid confusion and redundancy across learning modes.
Institutional Support and Resources	Lack of technical and instructional support for faculty and students affects the overall effectiveness of hybrid models.
Assessment and Evaluation Practices	Traditional assessment methods need to be adapted to comprehensively evaluate both online and offline learning experiences.

Role of Academic Management in Hybrid Models

Academic management as a factor in enabling the successful outcome of hybrid learning models is another important theme that has implications not only to the architectural and organizational dimensions of education but also in the actual functionality of these models in the achievement of intended learning outcomes. Administration in learning calls for organization in many areas such as curriculum, methods of teaching, students learning, and policies. In the case of an effective program having a hybrid form, it is crucial to check for interconnection between online and traditional components of the program so that both components offer the students as supportive environment as possible. An important function of the management of academic activity in the hybrid models is the creation of an effective academic curriculum that will coordinate the achievement of the learning outcomes with the strengths of online and offline models. Effective curriculum information architecture guarantees that even components delivered online make a positive impact towards learning. The studies show that if the online content does not replicate the offline content and the academic management makes certain that the online mode presents opportunities for students to study that is only possible in the online mode then the use of hybrid mode is most effective (Liu, 2023). For instance, online discussions in a delayed manner can encourage students to learn through the forum and learn from their peers and, on the other hand, face-to-face, one may conduct practical or engage in discussions that need instant feedback from the teachers.

Another huge aspect of management of academic programs is the need to match teaching approaches with the requirements of blended learning models. The participants highlighted one of the common problems of instructors where it is challenging to teach a course that has a balance between fully online and face to face. Leadership at the academic level need to support through staff development and training in the use of these digital tools and to develop lessons that help learning and growth of the students in both face-to-face and online (Thai, 2019). Lack of such support can lead to variation in the approach taken with some teachers overloading one mode of delivery, usually the face-to-face with limited ability of addressing the potential of online learning Spaces. This imbalance can cause the loss of the learning in the formal setting that the hybrid implementation models are intended to offer. The role of academic management also means overseeing and checking the student achievements and performance as well as students support for both forms of learning. The general application of hybrid learning environments entails resulting in a less rigorous and rigid monitoring of learning than in normal models. Previous studies show that there is a need for academic management in order to include formative assessment, feedback and tracking of students' participation, so that the students do not get left behind in the online and offline learning (Means et al., 2009). This can often prove to be quite complex since some learners may need kind of help in terms of their interaction with the online component, access to technology or handling of self-mastery learning. Education administrative practices have an integral responsibility of diagnosing such needs at an embryonic stage and ensure the child receive appropriate assistance such as tutoring or other learning aids. Table 8 explains the key responsibilities in implanting hybrid learning models.

Table 8

Key Responsibilities in Implementing Hybrid Learning Models

Key Responsibilities	Findings
Cohesive Curriculum Development	Curriculum must align online and offline components to ensure a complementary learning experience.
Alignment of Teaching Strategies	Instructors need support and training to adapt their teaching strategies to both online and offline formats.
Monitoring Student Progress	Academic management must ensure continuous assessment, feedback, and student engagement monitoring.
Development of Administrative Policies	Flexible policies are required to accommodate the unique demands of hybrid learning, such as attendance and technology use.
Provision of Resources and Infrastructure	Institutions must provide adequate technological infrastructure and resources to support hybrid models effectively.
Facilitation of Collaboration and Communication	Clear communication systems are essential to maintain engagement and ensure smooth integration of online and offline components.

Student Autonomy and Engagement in Hybrid Learning

The idea of learning autonomy and activity of learners in the context of hybrid learning environments is one of the key concepts that need to be addressed when analyzing the discussed models. Hybrid learning combines technology with face-to-face instruction, fundamentally changing the way students learn. In this model, students take on more

responsibility for their own education, which means they need to be self-motivated, self-directed, and actively involved in their studies. This kind of freedom is beneficial because it allows students to learn in ways that fit their individual needs and preferences. However, it also comes with challenges that can impact how effective hybrid learning is. Research shows that a crucial factor for success in these models is how well students can direct their own learning. The hybrid learning setting enable students to go through contents in their own preferred pace especially in the online mode where time-bound learning is not frequently used. This flexibility supports personalized learning experiences, enabling students to revisit difficult concepts or dive into material they already know (Thai, 2019). This is achieved through giving the student the flexibility to choose elective courses or modules to enable him/her to make more personal effort in learning due to passion and directed goals.

However, it is emphasized that autonomy is a two-edged sword with regards to hybrid learning, since flexibility for students is freedom from high requirements for personal responsibility and planning skills on their part. Johnson et al. (2000) emphasized that not all students can manage the time on their own, or study without supervision by the teacher. In normal classroom instructions students have timetables and direct interactions with the tutor as compared to online classes. However, the online part of the blended models often enables that sort of the immediate feedback which, in case, students do not have personal skills for self-motivation and self-organization, might let them procrastinate and lose interest (Graham, 2006). This implies that there is more self-directedness in hybrid learning models, if exercised by the student can lead to more efficiency in learning depending on how the freedom will be used. Another imperative area affected by the design of hybrid learning models is the engagement of the students. Motivation, on its part, is a student's personal interest or passion as well as willingness to be an active participant in the learning process. Zheng et al. (2018) confirmed that blended designs could improve followers' participation levels when more form of interaction is available to them in an online course such as online discussions, multimedia and assessment. Table 9 shows how key factors affect student engagement in hybrid learning.

Table 9
Key Factors Affecting Student Engagement in Hybrid Learning Models

Key Factors	Findings
Student Autonomy	Increased autonomy allows personalized learning and boosts intrinsic motivation.
Self-Regulation and Time Management	Not all students possess strong self-regulation skills, leading to potential disengagement.
Engagement in Learning Process	Engagement can be enhanced through diverse modes of interaction and multimedia content.
Design of Online Components	Poorly designed online components can decrease engagement, while interactive elements sustain it.
Support Mechanisms	Regular feedback and structured support are necessary to maintain student engagement.
Social Presence	Social presence enhances student satisfaction and connectedness in the online environment.
Peer Interaction and Collaborative Learning	Collaborative learning fosters active participation and deeper engagement among students.

Impact on Student Achievement

Hybrid learning environments affect students' performance in educational development. As more and more people begin to realize the potential of shifting toward hybrid models, it is critically revealed that although hybrid learning can positively impact learners' performance, implementing this type of learning environment depends on several interrelated factors, such as quality instruction, student engagement, and institutions' ability to facilitate both online and face-to-face learning. Surmounting all these factors is flexibility and customization provided by the hybrid learning models, which squarely form the essence of the observed positive changes in student achievement. Hybrid learning allows students to watch the lectures and complete the assignments on their own time, which is convenient as they can review the material multiple times. This degree of flexibility has been associated with such factors as enhanced storage and understanding of knowledge, especially for those students who poorly learn in classes (Ningjing, 2022). As it provides the students with the overall control of their learning timetable, the hybrid models first and foremost can enhance the students' needs and learning styles, which ultimately contribute to the students' success.

Table 10

Key Factors Influencing Academic Success in Hybrid Learning Models

Key Factors	Findings
Flexibility and Personalization	Hybrid models allow students to learn at their own pace, improving retention and comprehension.
Self-Regulation and Learning Autonomy	Students with strong self-regulation skills benefit more, while others may struggle without support.
Design and Alignment of Hybrid Components	Well-aligned online and offline components lead to better academic outcomes.
Assessment Practices	Formative assessments in online environments and summative assessments in offline spaces enhance learning.
Role of Instructors	Instructors play a crucial role in engaging students and ensuring consistency across both learning environments.
Institutional Support	Adequate technological infrastructure and student support services are essential for academic success in hybrid models.
Long-Term Skill Development	Hybrid learning fosters critical long-term skills such as digital literacy and adaptability, important for future success.

However, the effect does not translate equitably to achievement results across all students. Studies show that the value of the hybrid models in enhancing academic performance depends on the extent to which the content can be consumable and students able to learn on their own (Bernard et al., 2014). The design of hybrid learning approaches is therefore critical in understanding their influence on students' performance. To elaborate, as a general characteristic, the research experiences always pay considerably attention to the integration of the online and offline learning components which should facilitate rather than collide to offer the stipulated learning outcomes. The issue arises when the components are not well coordinated and integrated so that learning becomes fragmented and less effective. For instance, if the online part is limited to content consumption, for example, video classes where students cannot participate in discussions or apply the knowledge gained, the performance deteriorates. On the other hand, in cases

where the online and the face-to-face components are integrated in a complementary fashion, that is, where online support is used for knowledge creation while face-to-face sessions are used for building on this knowledge through practical activities and interactions, students' academic performance improves (Liu et al., 2023a). Table 10 explains how key factors influence academic success in hybrid learning models.

Technological Infrastructure and Support Systems

Technological support infrastructure and application necessary to ensure effectiveness of hybrid learning models are equally important. While structures of hybrid learning involve both face-to-face and online modes of learning, technology assumes the framework as the combined infrastructure that facilitate delivery of the learning content on one hand and the learning process of teaching and learning interactions between the professor and the learners on the other. An evaluation of this theme has shown that the ease of access, responsiveness, and availability of these resources may have an impact on students' participation, satisfaction or performance. Hybrid learning provides a significant amount of information through Learning Management Systems (LMS) and digital means of communication with multimedia aids. Another negative impact of infrastructure is that if the infrastructure is weak and unreliable it will hinder the students' ability to access to materials and content, participate in discussions, and submit assignments, all of which affects their learning (Chen & Davey, 2008). Research findings specify that when technological breakthroughs happen like platforms' breakdown or connection problems, students' motivation is highly disturbed.

Accessibility is still an issue when it comes to undertaking e-learning in a high partial transmission teaching and learning system. This adversely impacts technology usage in education and deepens the digital divide between those who are privileged to own gadgets and access the internet as compared to those who are not privileged to own gadgets or access the internet. Students from low-income families or rural areas may not have the means or resources to access the necessary tools; hence, they will be at a disadvantage. A lack of adequate structures not only reduces participation but also leads to poor performance. According to the studies, the over-implementation of hybrid models is regarded as effective only when the students have the similar access to the technological tools that enable them to actively participate in the online and face-to-face classes (Picciano & Seaman, 2007). In this regard, academic institutions need to set polices that allow students to have equal access to technology for instance, by providing students with an opportunity to borrow gadgets or providing them with financial support in a bid to access internet services.

Another issue that can significantly affect the effectiveness of the hybrid learning models offered is the usability of the digital platforms utilized in these models. Even when students have access to the necessary technology, the hybrid model may risk being ineffective if the chosen digital platforms are not user-friendly or if the students and instructors are not technically proficient. Lack of attractive LMS interfaces, shorter and cumbersome submission procedures or confusing communication tools can demotivate both students and the faculty and consequently affect their performances. Table 11 shows the key factors that influence effectiveness of hybrid learning models.

Table 11

Key Factors Influencing the Effectiveness of Hybrid Learning Infrastructure

Key Factors	Findings
Reliability and Accessibility of Infrastructure	Robust, reliable infrastructure is crucial for seamless hybrid learning; technical disruptions can affect engagement and achievement.
Digital Equity	Unequal access to technology can exacerbate educational inequalities, requiring institutional interventions to ensure inclusivity.
Usability of Digital Platforms	User-friendly platforms enhance engagement; poorly designed systems lead to frustration and disengagement.
Technical Support Systems	Comprehensive technical support is essential to resolve issues quickly, improving student satisfaction and retention.
Professional Development for Instructors	Instructors need ongoing training in digital tools and pedagogy to effectively manage hybrid environments.
Scalability and Sustainability	Scalable and sustainable infrastructure is necessary to support the growing demand for hybrid learning over time.
Learning Analytics Integration	Learning analytics provide valuable insights into student engagement and performance, enabling data-driven improvements.

Discussion

The findings of this study reveal the detailed processes of the improvement of hybrid learning models and the key factors affecting the process as well as the related difficulties. The themes identified in the study included the efficiency of hybrid learning approaches, the implementation challenges, the function of academic management, students' agency and motivation, changes in achievement, and crucial enabler of technology. This discussion seeks to integrate the insights so as to propose an effective model of hybrid learning incorporation into higher education settings. An important implication of this research is the factors and outcomes of the use of hybrid learning approaches to improve students' learning. Hybrid learning environments enable the learning process to be diverse and individualized, this is because students are able to progress as per their understanding. This is aligned with earlier studies that shows the characterize one on one teaching as having a positive influence on students' academic achievement (Picciano & Seaman, 2007). But this flexibility depends on the quality of the interactions implemented and the well-coordinated synchronization of online and offline resources. According to Chen and Davey (2008), it is more meaningful to have the online content act as the initial instruction and the face-to-face sessions as follow-up to which the content is reinforced by a series of practical tasks.

It is pertinent to mention difficulties of managing the implementation of the hybrid models of education. Accessibility and the divide between those with and without adequate digital technology or connectivity continues to pose a problem especially for students across societies. This can further widen existing gaps in education hence the need for institutions to put resources and policies towards ensuring that all students are provided with digital tools. Moreover, difficulties encountered by instructors when transitioning into hybrid modes are factors highlighting the importance of professional

development for instructors. A large number of teachers and mentors are not ready to work in the multi-layered environment of hybrid learning; they have restricted digital skills and knowledge of how to foster students in an online class (Castro, 2019). To solve these issues, it is necessary to develop an integrated approach that will mean not only investments in technology but also infrastructures for students and faculty support in respective institutions.

This study revealed that the role of the academic management section in the effectiveness of the hybrid academic management models is significant. The findings conclude that academic management is instrumental in curriculum mapping, teaching support, and monitoring student progress. Better academic management helps in co-ordination between the hybrid activities for the course delivery as well as it is effective for providing feedback or additional support to the students (Castro, 2019). The theme of student self-organized and activity presents a paradox of the self-regulation and success in learning in blended activities. The autonomy that is afforded by hybrid learning is beneficial to students in one way because they are able to set their own pace but on the other hand, self-regimentation is even stricter. The research points out that hybrid models are supportive for students with well-developed self-regulation abilities, while students who face difficulties with self-regulation of learning flexibility of the online model may experience some concerns. This points to the need for faculty to infuse students with the requisite tools and instructions on how to cultivate these skills as well as come up with online settings that effectively engage the students through cooperative, learner-centered activities (Graham, 2006). Hybrid learning is not automatic; it has to be promoted by adoption of good strategies and consistent encouragement. Responsible education outcomes include the results of students absorbed to hierarchical linear modeling (HLM) and the influence of hybrid learning on students' achievements is another important aspect in this research. The study proves that both models help to increase academic results by giving students an equal amount of self- study and group activities. But the positive influence on achievement is rather contingent upon the quality of the learning experience, and the amount of support from the institution.

Lastly, the significance of technological support structures in the findings is also stressed. Stable and open educational technologies form the foundation of effective blended learning designs. These technologies help minimize disruptions in students' interactions with content, their peers, and professors. While these ideas demonstrate how a technology-supported educational model can function, the success of such models depends on support systems, including technical assistance and instructor training (Moher et al., 2009). It also shows how practical hybrid learning models are, and how more efficient infrastructure is needed to support them, especially as institutions consider making these models more permanent. As mentioned earlier, learning analytics can support the assessment of students' performance and activity levels by analyzing data gathered during their learning. These insights can help enhance hybrid learning by identifying early signs of inefficiency and enabling timely intervention (Lame, 2019).

Conclusion

In this study, the efficacy of hybrid classroom models in higher education, based on academic management, especially in NanHang, JinCheng College located in Nanjing City, China was investigated. This study examined the effectiveness of integrating hybrid classroom models on academic management to boost student success on the level of higher education. The key aspects of this research are to boost student's creativity and motivation

through dual-mode learning. It also emphasized how academic management affects students' performance and accomplishments and how it helps them become more productive. The study discusses the challenges that arise from the blended learning approach, such as teachers' lack of training, students' inability to comprehend modern technology, and their lack of participation in class. Additionally, it also emphasized the advantages of hybrid learning and how students can improve their performance by utilizing both methods in their learning. By using a qualitative systematic literature review (SLR) method, this study examined academic papers, new trends, and topics that required additional investigation. Information was collected from several studies using thematic analysis, which allowed us to identify important themes including the efficiency of hybrid learning models, difficulties in integrating them, functions of academic management in hybrid models, autonomy and engagement of students in hybrid learning, effects on student achievement, and the significance of support systems and technology infrastructure. The SLR methodology also ensured a comprehensive, objective, and replicable examination of relevant studies. This process involved the identification, selection, and critical analysis of peer-reviewed articles and academic resources related to the construction of an integrated hybrid classroom model.

The findings from thematic analysis emphasized the potential for increasing student accomplishment through the mix of online and in-person training. According to the findings, hybrid learning provides a special fusion of individualized instruction and flexibility, enabling students to gain critical abilities like self-control and technological competence that improve academic achievement. The findings also reveal that hybrid learning is more beneficial for students that they have choice of both learning methods. This method also highlights their interest towards their studies and by this method they take more interest in learning. Students do not just need to attend classes and listen to teachers; they are able to interact with the content that is being delivered in a different way and that make a huge difference when it comes to understanding the knowledge that is being passed to such students. Through this study, the identification of the factors that could impact the success of hybrid learning models in higher learning institutions has been well captured.

To fully utilize hybrid learning, however, a number of obstacles must be overcome. This study also revealed that there are challenges that can make it difficult for student to adopt hybrid learning, like the digital gap, lack knowledge of technology, belongs to middle-class and area of the technology gap between students and institutions. For instructors to successfully use the digital tools and incorporate them into their teaching techniques, they also require continual assistance and training. To curb these challenges, the institutions must make efforts to support students in terms of having access to the devices, the internet connection as well as digital resources needed for the effective engagement in hybrid learning. The instructors also need to be trained continuously for digital tools as well as their integration in the teaching practice so that the components of the teaching-learning process will be adequately administered both online and offline.

This study also established that academic management has a very important function when it comes to the realization of hybrid learning. Ideal academic management guarantees that the programs of studies are well-coordinated, methodologies adopted teaching are compatible with the hybrid mode, and the student gets feedback and assistance on time. Additionally, this study highlighted policies needed in asynchronous learning environment, like attendance policies for discussion or other activities, should be

flexible enough to adapt to the new hybrid learning environment. It is therefore clear that the institutions that have put effort in adopting good academic management practices stand better chances in dealing with the logistical/pedagogical issues brought about by a hybrid model of learning. Despite these challenges, the study highlights the enormous potential of hybrid learning models with proper implementation. Despite the fact that the study was specific to a region the implications are universal: schools that adopt this strategy and make significant investments in academic management systems expect to gain substantial improvement in student performance.

Future Recommendations and Implications

It is obvious that hybrid learning has a lot of potential to transform education in the future, but more work has to be done to properly harvest its benefits. Future studies should examine the ways in which hybrid learning models can be adapted to various educational settings, especially those with different levels of technological access. This model's broader use and effectiveness will become clearer when it is extended to other regions and educational environments. Future research will also focus on the obstacles that developing countries face in implementing hybrid learning, since it should be noted that those countries do not have easy access to implementing hybrid learning. By guaranteeing that every student has access to the devices they require, dependable internet connections, and digital resources, educational institutions can make closing the digital divide a top priority. The advantages of hybrid learning will remain unattainable for many if this disparity is not addressed, especially in low- and middle-income nations where these disparities are most noticeable. The study also highlights a lack of flexibility in educational policies, particularly in addressing the unique challenges of hybrid learning. Participation regulations, for instance, should be adapted for asynchronous learning to reflect its effectiveness. Assessment methods should align with the skills and knowledge gained in both online and traditional formats. Additionally, institutions should implement real-time monitoring systems to identify students who may struggle with the hybrid model.

The findings of this study are significant for higher education institutions seeking to refine their hybrid learning models. As such, having proper strategic plans for implementing these models is crucial to enhance their positive impacts on students. Key practical implications include: First, institutions need to address the digital divide by ensuring students have adequate technology and connectivity. This could involve providing allowances for internet purchases or lending devices to students in need. Institutions may also collaborate with local governments or organizations to improve technology access in remote areas, thereby reducing the digital divide. Second, accrediting instructors and staff for professional development is essential for the success of hybrid learning. Teachers should possess both technical and academic expertise to effectively integrate online and offline modules. This involves developing engaging Web 2.0 content, using communication tools, and providing regular feedback to maintain student interest. Continuous professional development programs focused on digital education are also crucial for teachers in hybrid settings. Finally, learning analytics can play a key role in improving hybrid learning strategies by providing data on student performance and engagement. This data can guide academic management in making informed decisions and offering timely support to students at risk of falling behind.

References

Al-Hunaiyyan, A., Alhajri, R., Al-Sharhan, S., & AlGhannam, B. A. (2021). Factors Influencing the Acceptance and Adoption of Online Learning in Response to the COVID-19 Pandemic. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT), 16*(6), 1-16. https://doi.org/10.4018/IJWLTT.20211101.oa5

Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and Information Technologies, 25*(6), 5261-5280. https://doi.org/10.1007/s10639-020-10219-y

Bernard, R. M., Borokhovski, E., Schmid, R. F., Tamim, R. M., & Abrami, P. C. (2014). A meta-analysis of blended learning and technology use in higher education: from the general to the applied. *Journal of Computing in Higher Education, 26*(1), 87-122. https://doi.org/10.1007/s12528-013-9077-3

Castro, R. (2019). Blended learning in higher education: Trends and capabilities. *Education and Information Technologies, 24*(4), 2523-2546. https://doi.org/10.1007/s10639-019-09886-3

Chen, X., & Davey, G. (2008). The Emergence of Continuing Education in China. *Australian Journal of Adult Learning, 48*(1), 145-161. https://search.informit.org/doi/abs/10.3316/ielapa.149113390002405

Darazi, M. A., Khoso, A. K., & Mahesar, K. A. (2023). Investigating the Effects of ESL Teachers' Feedback on ESL Undergraduate Students' Level of Motivation, Academic Performance, and Satisfaction: Mediating Role of Students' Motivation. *Pakistan Journal of Educational Research, 6*(2), 342-364. https://doi.org/10.52337/pjer.v6i2.807

Du, Y., Arkesteijn, M. H., den Heijer, A. C., & Song, K. (2020). Sustainable Assessment Tools for Higher Education Institutions: Guidelines for Developing a Tool for China. *Sustainability, 12*(16), 6501. https://doi.org/10.3390/su12166501

Gherheş, V., Stoian, C. E., Fărcaşiu, M. A., & Stanici, M. (2021). E-Learning vs. Face-To-Face Learning: Analyzing Students' Preferences and Behaviors. *Sustainability, 13*(8), 4381. https://doi.org/10.3390/su13084381

Graham, C. R. (2006). Blended Learning Systems: Definition, Current Trends, and Future Directions. In C. J. Bonk & C. R. Graham (Eds.), *Handbook of Blended Learning: Global Perspectives, Local Designs* (pp. 3-21). Pfeiffer Publishing. https://learningwiki.unitar.org/images/a/a8/Graham.pdf

Guibang, L., Dong, Y., & Anqi, L. (2023). Ideological and Political Education from the Marxist Perspectives on Marriage and Love: A Case Study of Guizhou Qiannan College of Economics. *Journal of Advances in Humanities Research, 2*(3), 170-201. https://doi.org/10.56868/jadhur.v2i3.183

Haque, S. I. (2024). Investigating The Impact Of Blended Learning On Student Outcomes In Modern Education. *Educational Administration: Theory and Practice, 30*(5), 5155-5165. https://doi.org/10.53555/kuey.v30i5.3758

Heng, K., & Sol, K. (2021). Online learning during COVID-19: Key challenges and suggestions to enhance effectiveness. *Cambodian Journal of Educational Research, 1*(1), 3-16. https://cjerjournal.com/index.php/cjer/article/view/8

Hew, K. F., & Cheung, W. S. (2014). Students' and instructors' use of massive open online courses (MOOCs): Motivations and challenges. *Educational Research Review, 12*, 45-58. https://doi.org/10.1016/j.edurev.2014.05.001

Johnson, S. D., Aragon, S. R., & Shaik, N. (2000). Comparative Analysis of Learner Satisfaction and Learning Outcomes in Online and Face-to-Face Learning Environments. *Journal of Interactive Learning Research, 11*(1), 29-49. https://www.learntechlib.org/p/8371

Kang, B. (2021). How the COVID-19 Pandemic Is Reshaping the Education Service. In J. Lee & S. H. Han (Eds.), *The Future of Service Post-COVID-19 Pandemic, Volume 1: Rapid Adoption of Digital Service Technology* (pp. 15-36). Springer Singapore. https://doi.org/10.1007/978-981-33-4126-5_2

Khoso, A. K., Darazi, M. A., Mahesar, K. A., Memon, M. A., & Nawaz, F. (2022). The Impact of ESL Teachers' Emotional Intelligence on ESL Students' Academic Engagement, Reading and Writing Proficiency: Mediating role of ESL Students' Motivation. *International Journal of Early Childhood Special Education, 14*(1), 3267-3280. https://doi.org/10.9756/INT-JECSE/V14I1.393

Khoso, A. K., Khurram, S., & Chachar, Z. A. (2024). Exploring the Effects of Embeddedness-Emanation Feminist Identity on Language Learning Anxiety: A Case Study of Female English as A Foreign Language (EFL) Learners in Higher Education Institutions of Karachi. *International Journal of Contemporary Issues in Social Sciences, 3*(1), 1277-1290. https://ijciss.org/index.php/ijciss/article/view/441

Kitchenham, B., Pearl Brereton, O., Budgen, D., Turner, M., Bailey, J., & Linkman, S. (2009). Systematic literature reviews in software engineering – A systematic literature review. *Information and Software Technology, 51*(1), 7-15. https://doi.org/10.1016/j.infsof.2008.09.009

Lame, G. (2019). Systematic Literature Reviews: An Introduction. *Proceedings of the Design Society: International Conference on Engineering Design, 1*(1), 1633-1642. https://doi.org/10.1017/dsi.2019.169

Liu, H., Zhu, Q., Muhammad Khoso, W., & Khalique Khoso, A. (2023a). Spatial pattern and the development of green finance trends in China. *Renewable Energy, 211*, 370-378. https://doi.org/10.1016/j.renene.2023.05.014

Liu, Q. (2023). The Current Situation and Optimization of Ideological and Political Teaching in Economics Courses in Ethnic Ethnic Universities. *International Journal of Education and Humanities, 7*(2), 139-143. https://doi.org/10.54097/ijeh.v7i2.5563

Liu, Y., Xiong, M., Mo, R., Song, L., & Liu, J. (2023b). Parental Involvement and Children's Positive and Negative Emotion: The Mediating Role of Academic Stress. *Journal of Advances in Humanities Research, 2*(2), 86-97. https://doi.org/10.56868/jadhur.v2i2.146

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies* (Project Report). Centre for Learning Technology. http://repository.alt.ac.uk/id/eprint/629

Meteshkin, K. O., Pomortseva, O. Y., & Kobzan, S. M. (2021). Integration Of Traditional And Distance Learning Methods In High School. *Information Technologies and Learning Tools, 83*(3), 226-236. https://doi.org/10.33407/itlt.v83i3.4221

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Annals of Internal Medicine, 151*(4), 264-269. https://doi.org/10.7326/0003-4819-151-4-200908180-00135

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., et al. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews, 4*(1), 1. https://doi.org/10.1186/2046-4053-4-1

Najib, M., & Mursidi, A. (2021). Effectiveness of offline and online learning during COVID-19 pandemic: Two-factor analysis of variant approach in S-1 Students of FKIP University PGRI Banyuwangi, Indonesia. *Linguistics and Culture Review, 6*(S3), 1-11. https://doi.org/10.21744/lingcure.v6nS3.1890

Namyssova, G., Tussupbekova, G., Helmer, J., Malone, K., Afzal, M., & Jonbekova, D. (2019). Challenges and Benefits of Blended Learning in Higher Education. *International Journal of Technology in Education, 2*(1), 22-31. https://ijte.net/index.php/ijte/article/view/6

Ningjing, W. (2022). Influence Factors and Prediction of ICT Application Ability in Post-Epidemic Era in China. *Research and Advances in Education, 1*(6), 23-27. https://www.paradigmpress.org/rae/article/view/354

Ossiannilsson, E. (2020). Quality Models for Open, Flexible, and Online Learning. *Journal of Computer Science Research, 2*(4), 19-31. https://doi.org/10.30564/jcsr.v2i4.2357

Pachisia, J. (2022). The Concept of Blended Learning Mode. *International Journal of Home Science, 8*(1), 74-81. https://www.homesciencejournal.com/archives/2022/vol8issue1/PartB/8-1-21-295.pdf

Picciano, A. G. (2017). Theories and Frameworks for Blended Learning. In A. G. Madden, L. Margulieux, R. S. Kadel, & A. K. Goel (Eds.), *Blended Learning in Practice: A Guide for Practitioners and Researchers* (pp. 76-87). MIT Press.

Picciano, A. G., & Seaman, J. (2007). K–12 Online Learning: a Survey of U.S. School District Administrators. *Online Learning, 11*(3), 11-37. https://doi.org/10.24059/olj.v11i3.1719

Qie, X., Kassim, M. S., & Ebrahimi, M. (2021). Measuring The Efficacy of Combining Online and Offline Teaching Methods: A Case Study of University Students in China. *Innovative Teaching and Learning Journal, 5*(2), 49-58. https://itlj.utm.my/index.php/itlj/article/view/74

Ru, C. (2024). Research on the design and application of smart classroom teaching models for promoting deep learning. *MATEC Web of Conferences, 395*, 01025. https://doi.org/10.1051/matecconf/202439501025

Song, Q., & Agnawa Jr, M. M. (2023). Strategies for Enhancing the Impact of Blended Instruction in Chinese Colleges and Universities. *International Journal of Information and Education Technology, 13*(8), 1323-1327. https://doi.org/10.18178/ijiet.2023.13.8.1934

Thai, N. T. T. (2019). *Design and Implementation of Blended Learning in Higher Education* [Doctoral Dissertation, Ghent University]. http://hdl.handle.net/1854/LU-8630941

Ulanday, M. L., Centeno, Z. J., Bayla, M. C., & Callanta, J. (2021). Flexible Learning Adaptabilities in the New Normal: E-Learning Resources, Digital Meeting Platforms, Online Learning Systems and Learning Engagement. *Asian Journal of Distance Education, 16*(2), 38-56. https://asianjde.com/ojs/index.php/AsianJDE/article/view/580

Walker, K. A., & Koralesky, K. E. (2021). Student and instructor perceptions of engagement after the rapid online transition of teaching due to COVID-19. *Natural Sciences Education, 50*(1), e20038. https://doi.org/10.1002/nse2.20038

Zhang, M., & Li, X. (2021). Design of Smart Classroom System Based on Internet of Things Technology and Smart Classroom. *Mobile Information Systems, 2021*(1), 5438878. https://doi.org/10.1155/2021/5438878

Zheng, M., Chu, C.-C., & Wu, Y. J. (2018). Online-to-Offline Teaching Reform in China: Outcomes-based Education. In A. Visvizi, M. D. Lytras, & L. Daniela (Eds.), *The Future of Innovation and Technology in Education: Policies and Practices for Teaching and Learning Excellence* (pp. 237-252). Emerald Publishing Limited. https://doi.org/10.1108/978-1-78756-555-520181018