



Embracing Blended Learning as the Pathway to the Future Education: Students', Teachers', and Experts' Perspectives

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ABSTRACT

This study aimed to determine the efficacy of blended learning in the future of education by uncovering the students' and teachers' Perspectives on blended learning. Qualitative research was applied by interviewing 23 students and 27 teachers from elementary to high school through Microsoft Teams. Data was then managed, organized, encoded, and classified using NVivo to interpret the results. Students and teachers attended a group meeting to encourage them to examine their perceptions of adopting blended learning, and motivating techniques were utilized at the beginning of the interview to clarify the study's goal. Then, an individual interview for each participant with open-ended questions to record their perspective. Results showed that students reported that blended learning allows them to review and discuss the lesson with their teachers, especially those who used flipped classrooms. Also, teachers stated they had difficulty motivating their students in online classes. However, blended learning prevented our students from losing during the classes because they could attend the classroom and discuss all their concerns with them. Blended learning is becoming increasingly popular in education. There are several reasons why it will be the future of education, such as its flexibility, personalization, engagement, cost-effective, and advances in technology, which allow students to learn at their own pace and on their schedule, receive personalized instruction tailored to their needs and learning styles, combines the best of both worlds-traditional classroom learning and online learning, more cost-effective than traditional classroom teaching, and become even more effective and efficient with the technological inventions. Experts reported that following instructional design procedures will create an effective blended learning experience.

Keywords: Blended learning, Future of education, Shifting education, Students' Perspectives, Teachers' Perspectives, Experts' Perspectives.



Introduction

The world faced a learning challenge during COVID-19; all the education systems have been closed. Some countries had infrastructures that helped to shift to online education quickly; students faced issues focusing and understanding the lesson online because they needed more time to be ready for remote learning. Due to the reduced pandemic impact, schools started reopening by allowing students to attend face-to-face (F2F) and online classes called blended learning (AlNajdi, 2022).

Blended learning combines traditional face-to-face (F2F) classroom teaching with online or digital learning activities. Also, it is called hybrid learning, which uses F2F and online learning to achieve learning outcomes.

In blended learning, students typically attend F2F and online classes; they use digital tools such as online resources, video lectures, discussion forums, and other digital learning platforms to supplement their learning. The online components can be synchronous or asynchronous. Blended learning increases flexibility in attending classes and communicating with teachers and peers online; for those who may be uneasy about fully online or face-to-face classes, blended learning provides an opportunity to reap the benefits of both face-to-face and online learning. It is an excellent option for those who want to benefit from online and face-to-face classes and others who cannot always attend F2F classes (Copp, 2007).

This learning method allows students to access course materials and assignments online while attending traditional classroom sessions for discussion, collaboration, and hands-on activities. It will enable students to learn independently while still receiving a teacher's or instructor's support and guidance.

Blended learning can be used in various educational settings, including K-12 schools, universities, and corporate training programs. Blended learning aims to create a more engaging and personalized learning experience for students by utilizing technology to enhance traditional teaching methods (Li & Wang, 2022).

According to AlNajdi (2014), "[blended] learning terminates the conventional start-to-end notion of acquiring education, and in return, it introduces the concept of lifelong learning endeavor that can be acquired" (p. 216).

In particular, a blended learning experience could combine F2F learning time, which will allow all who do not have free time to attend the fixed time in the F2F classes to attend the online class by attending the available online course even if it was synchronous or asynchronous, facilitating meetings between students and professors to clarify murky topics (Visage & Crole, 2023). Universities use blended learning with some courses to offer their students flexibility to attend some classes, which is an additional choice. However, when the coronavirus pandemic appeared, it became a solution to deliver learning to all students (Megahed & Hassan, 2022).

Overall, blended learning is designed to provide students with the benefits of both traditional and online classroom instruction and to create a more effective and engaging learning experience that can enhance student achievement and success.



Research Problem

The world faced a challenge with learning during the coronavirus pandemic; this challenge forced all the education systems to close schools and universities. Educational institutions adopted Blended learning initiatives worldwide due to COVID-19, significantly altering the teaching process and ensuring continuity amidst the spread of the infectious disease (Megahed & Hassan, 2022).

Some countries had infrastructures that helped to shift to online education—during that and with the length of the pandemic. The Saudi Ministry of Education (MOE) continues to offer courses by designing a learning management system (LMS) called Madrasiti that offers online learning, and it is used as blended learning after the effects of the pandemic (MOE, 2020).

Students, especially in Kindergarten to 12th grade, with this kind of teaching were unfamiliar to them and, when forced to switch, did not have the training; they faced issues focusing and understanding the lesson online because they needed more time to shift to online education. Based on that, and with the reduced pandemic impact, schools started to reopen by allowing some students to attend traditional face-to-face (F2F) classes and others online; this kind of teaching is one of the blended learning models (Li & Wang, 2022).

According to Dahmash (2020), blended learning positively impacted students by enhancing their abilities and motivating them to conduct online research. This approach was also cost-effective and tailored to the situation. However, students encountered a few obstacles, such as technical issues, subpar teaching methods, online assessment struggles, e-learning reservations, and insufficient resources.

This study aimed to determine the efficacy of Blended learning as a new phase of education and teachers' and students' perceptions of utilizing blended learning to make students more engaged and participate.

Research Limitations

- 1.This research was applied during the first academic semester of 2023.
- 2.Study samples were limited to students and teachers in Tabuk, Saudi Arabia.
- 3.The research focuses on Students' and Teachers' Perspectives on using blended learning.

Term Definition

Blended learning: “blended learning is a formal education [approach] in which a student learns at least in part through online learning with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home” (Christensen et al., 2013, p7).

Procedural definition of Blended learning: A learning approach implemented to deliver synchronous and asynchronous online classes and face-to-face teaching in the classroom, and it has several models to use.



Literature Review

What is Blended Learning

Blended learning refers to a learning approach that combines traditional classroom instruction with online or digital learning activities. It involves integrating technology into the learning process to create a more flexible and personalized student learning experience.

Blended learning can take many forms, and the balance between F2F and online learning can vary depending on the specific course or program. Sometimes, students may attend F2F classes and use online resources to supplement their learning. In other cases, most learning may occur online, with occasional F2F meetings or discussions (Buzzetto-More & Sweat-Guy, 2006).

Blended learning is an approach to education that combines traditional classroom instruction with online learning activities. It is sometimes called hybrid learning or mixed-mode learning. Blended learning aims to create a more flexible and personalized learning experience tailored to individual students' needs. Blended learning aims to create a more dynamic and engaging learning experience for students by combining the benefits of F2F interaction with the flexibility and convenience of online learning (AlNajdi, 2018).

By incorporating various learning activities, blended learning can help students develop a deeper understanding of the material while allowing them to work at their own pace and on their schedule. In a blended learning environment, students typically spend time in a physical classroom with a teacher and sometimes engage with online resources such as videos, interactive quizzes, and discussion forums to complete assignments, access course materials, and communicate with their instructors and peers. Online learning resources include videos, interactive modules, digital textbooks, and discussion forums. The online component of blended learning can be synchronous or asynchronous, and it can take many forms and be tailored to specific learners' needs or educational contexts. Some blended learning models involve students rotating between F2F and online learning, while others involve more seamless integration of online and F2F instruction. The primary goal of blended learning is to optimize learning outcomes by combining the best features of online and traditional learning. This approach allows students to benefit from the flexibility and convenience of online learning while also receiving the support and guidance of a traditional classroom setting. Blended learning has become increasingly popular recently, especially as more schools and institutions have embraced online learning technologies. This approach has been shown to enhance student engagement, increase retention rates, and improve learning outcomes, making it an effective strategy for educators and learners (AlNajdi, 2014; Vallée et al., 2020; Dakhi et al., 2020; Li & Wang, 2022).

Overall, blended learning is a practical and engaging learning experience that combines the benefits of traditional classroom learning with the flexibility and convenience of online learning, creating a more personalized and valuable educational experience for students.



In addition, Lin (2008) noted three advantages of using blended learning:

1. Various forms of distribution.
2. Interactivity and connection.
3. Emphasis and a clear structure.

Blended learning offers flexibility for students and teachers, such as allowing students to evaluate and amend their comments and conversations as well as those of their classmates and not forcing meetings for all of them to occur in the classroom at all times based on their time and abilities. At the same time, students could meet with their teachers to discuss what they do not understand and do their presentations as offered by F2F learning (Lin, 2008). Also, blended learning “provides flexibility to incorporate various curricular and institutional needs, goals, and priorities. The way it has been implemented across various institutions is highly context-dependent” (Kumar, 2012, p. 350).

Blended Learning in the COVID-19 Pandemic

Blended learning is a teaching approach that combines online learning and traditional classroom instruction. The COVID-19 pandemic has dramatically impacted education worldwide, and blended learning has become a popular way to facilitate learning during the pandemic. Blended learning has been used to address the challenges posed by the pandemic, including social distancing, travel restrictions, and school closures. During the pandemic, many schools had to quickly adapt to remote learning to ensure that students continued to receive an education. Blended learning has allowed teachers to provide students with online and F2F instruction. This approach has enabled teachers to maintain regular communication with their students and provide them with regular feedback on their progress (Li & Wang, 2022).

Blended learning has also helped to ensure that students can continue their education despite school closures. Students can access online resources, including recorded lectures, videos, and educational software, to continue learning outside the classroom. Additionally, blended learning has enabled students to learn at their own pace, as they can review the online content as often as needed before progressing to the next topic. Moreover, blended learning has helped mitigate the impact of COVID-19 on education by allowing teachers to use various teaching methods to keep students engaged. Teachers can use online platforms to conduct discussions, group activities, and collaborative projects. Despite their physical distance, this has helped maintain a sense of community among students. The pandemic has forced educational institutions to rapidly adopt and implement blended learning to ensure the continuity of education. This has increased the use of technology and digital resources for teaching and learning, with virtual classrooms and online learning platforms becoming the norm. Blended learning has been implemented in various ways during the pandemic. Some schools have adopted a hybrid model where students attend F2F classes on certain days of the week and learn remotely on other days. Others have opted for a fully online model with occasional in-person meetings or activities (Lee et al., 2021; Mali & Lim, 2021; Megahed & Hassan, 2022).



According to Widjaja & Aslan (2022), during the COVID-19 pandemic, Blended learning has become the new normal for many students, teachers, and educational institutions with the closure of schools and universities worldwide. However, blended learning has also presented challenges for both students and teachers. Not all students can access reliable internet connections, computers, or other necessary technologies. Moreover, some students have found adapting to the new learning environment challenging, as they miss the social interaction and hands-on learning experiences possible in traditional classrooms. On the other hand, Blended learning has allowed for flexibility, as students can attend classes online and in person, depending on their preferences and circumstances. Also, it allowed for flexibility in how students accessed course material and completed assignments. This has also enabled students to access a broader range of educational resources and learning opportunities, including access to courses and materials from institutions worldwide. In addition, Blended learning allowed schools and universities to continue delivering education to their students while ensuring their safety. This approach allowed for a mix of synchronous and asynchronous learning, with some classes taking place online while others were held in person, following social distancing guidelines (Megahed & Ghoneim, 2022).

One of the main effects of blended learning during the pandemic has been the need for educators to adapt to new teaching methods and technologies quickly. This has required training and upskilling of teachers to ensure they are equipped to teach in a blended environment.

The spread of the pandemic has led to profound global changes everywhere, even in the education system. Schools and universities have closed, and physical contact between people has been generally banned to contain COVID-19's spread.

Due to the pandemic, in-person teaching has been generally banned, and educational activities have been transferred to virtual platforms. Numerous academic institutions have canceled all face-to-face education, including laboratories and other hands-on learning experiences, and have mandated that faculty members switch to online teaching courses. This shift affected the learning system negatively, especially in K-12, because it was not adopted to this level. However, the educational system in most countries was forced to use it to keep students safe; with the reduced and decreased affection of COVID-19's dangers, the educational systems switched to using BL to decrease learning and allow students to meet their teachers and peers (Megahed & Ghoneim, 2022; Widjaja & Aslan, 2022).

Another effect of blended learning during the pandemic has been the need for increased student engagement and interaction in virtual learning environments. This has led to the development of new tools and techniques to foster engagement and ensure that students remain motivated and invested in their learning.

Blended learning has provided a flexible and adaptive approach to education during the pandemic. It has allowed schools to continue providing education while prioritizing the safety and well-being of students and teachers. As the pandemic evolves, blended learning will likely remain an essential tool for teaching (Mali & Lim, 2021; Li & Wang, 2022).



In conclusion, while the pandemic has posed significant educational challenges, it has accelerated the adoption of blended learning models worldwide, with many institutions transitioning from traditional F2F instruction to a mix of F2F and online learning. This has been facilitated by the availability of online learning tools and platforms, enabling educators to deliver lessons and engage with students remotely; adopting blended learning has provided a means for institutions to continue delivering quality education while keeping students and teachers safe. Blended learning has played a significant role in mitigating the impact of the COVID-19 pandemic on education. It has allowed teachers to provide students with a mix of online and F2F instruction, helped to ensure that students can continue their education despite school closures, and enabled teachers to use various teaching methods to keep students engaged. Also, offered flexibility and access to new learning opportunities, it has presented challenges, particularly for those with limited resources and needing help adapting to the new learning environment.

Blended Learning is the Future of Education

According to (King, 2008; Zhonggen, 2016; AlNajdi, 2014; Rasmitadila et al., 2020; Li & Wan, 2022; Megahed & Ghoneim, 2022; Visage & Crole, 2023), Blended learning has been gaining popularity in recent years, and many experts believe it represents the future of education because it has multiple benefits and the most benefits, which are:

Flexibility: Blended learning allows for greater flexibility regarding when and where learning occurs. Students can access digital resources and materials at their own pace and on their schedule, which can be particularly helpful for learners who need to balance their studies with other responsibilities.

Personalization: Blended learning enables teachers to personalize the learning experience for each student based on their individual needs and abilities. By combining online and offline activities, teachers can create a more customized learning path considering each student's strengths, weaknesses, and learning styles.

Improved engagement: Blended learning can improve student engagement by incorporating various learning activities and technologies by overcoming some of the limitations of traditional classroom learning. For example, online learning resources allow students to access a broader range of learning materials, including interactive multimedia resources, simulations, and virtual reality experiences. This can make learning more engaging and interactive, allowing students to explore topics more deeply.

Cost-effectiveness: Blended learning can be more cost-effective than traditional classroom instruction because it eliminates the need for physical classrooms and textbooks. This can make education more accessible and affordable for students who may not be able to afford traditional F2F courses.

Accessing: Blended learning can help to increase access to education. By providing online learning resources, institutions can reach students who may not have had access to traditional classroom-based learning, such as students in rural or remote areas or those with disabilities. Also, it can help break down geographical barriers and



enable students worldwide to access high-quality educational resources and materials. This can create a more globally connected and diverse educational community.

Future-proofing: Blended learning prepares students for a future where digital literacy and remote work are becoming increasingly important.

Provides data-driven insights: Blended learning can provide educators with data-driven insights into student performance and engagement, allowing them to adapt and improve their teaching practices to meet student needs better.

Better Outcomes: Blended learning can improve student learning outcomes and is an effective way to improve students' performances compared to traditional F2F learning; a meta-analysis of over 300 studies reported that in blended learning environments, students exceeded their peers in traditional environments.

Overall, blended learning can revolutionize education by providing students with a more flexible, personalized, engaging, and cost-effective learning experience that prepares them for the future. As technology advances and the demand for more accessible and effective education grows, blended learning will likely become an increasingly popular and essential approach to teaching and learning. Blended learning has the potential to be the future of education.

Methodology

Research Methodology

The study utilized qualitative content analysis as its methodology, which involved analyzing texts and documents to understand and interpret both explicit and implicit ideas related to the subject of the study. The objective analysis was deemed appropriate for discovering, understanding, and collecting various aspects and overlapping data for interpretation. The data were analyzed using thematic analysis stages, where responses were unloaded and organized into interrelated categories for each sample according to three themes (Alhojailan, 2012):

- The first theme involved the phrase mentioned by participants.
- The second theme extracted the main idea related to the question from theme one.
- The third wrote the code according to the interpretation in topic two, which is the main factor of topic one.

Students and teachers were interviewed as part of the process. After that, entering the data for the interviews—which totaled 23 interviews students and 27 teachers—into the program (NVivo), they were organized in the form of codes, which were read several times and reviewed to arrive at the main topics (themes), where they were limited to 10 main topics for students and seven main topics for teachers. In addition, to answer the third question, a focus group of faculty members in education technology and instructional design to review students' and teachers' perceptions and find methods to make blended learning more effective.

Research Questions

This research focuses on three research questions:



1. What are the students' perceptions of shifting to blended learning during the pandemic?
2. What are the teachers' perceptions of shifting to blended learning during the pandemic?
3. How can blended learning be more effective and provide additional value?

Research Participants

Based on the agreement to attend the study, 23 students and 27 teachers have participated in the research on the educational system in Tabuk; more details are listed in Table 1 and Table 2.

Table 1. Students participated in the study.

Education levels	N. of students
Elementary school	5
Middle school	6
High school	12

Table 2. Teachers participated in the study.

Education levels	N. of Teachers
Elementary school	7
Middle school	9
High school	11

In addition, five experts met virtually in a focus group to discuss and answer the third question. These experts are faculty members of the education technology department; two are professors of Instructional Design, and three are e-learning associate professors.

Data Collection

Participants were interviewed, which is one of the most common ways to gather accurate information in qualitative research on the participants' perceptions of using blended learning during the pandemic.

Procedures

Initially, this study applied to education administration in the Tabuk Region. A stratified sample was used to divide the study's community into three groups: elementary school, middle school, and high school, and then random samples were chosen in each stratify. Students and teachers attended a group meeting to encourage them to examine their perceptions of adopting blended learning, and motivating techniques were utilized at the beginning of the interview to clarify the study's goal. Then, a second interview was conducted, each participant receiving 15 to 20 minutes individually.

Notes were collected through the interview and after finishing. All interviews were examined and reviewed to ensure participants' comments related to the study's goals.



The data was then managed, organized, encoded, and classified using the qualitative data analysis application (NVivo) to interpret the results.

Students' perceptions of shifting to blended learning

To answer the first question, what are the students' perceptions of shifting to blended learning during the pandemic?

Students have been interviewed and asked to talk about their experience of learning in blended learning and how it can vary depending on the specific program or course. Still, students generally find blended learning a positive and practical approach. Here are some ways in which students may find blended learning based on these categories: **Flexibility**: They reported that blended learning allows students to work at their own pace and access course materials and resources from anywhere, at any time. This flexibility particularly appeals to those students with other responsibilities with their families and outside of school.

One of the high school students reported,

"With blended learning, I have opportunities to study anywhere, which gave me the opportunity to move and be with my family."

Another student in the middle school said,

"I had some health issues, so I was missing some of the classes, but with blended learning, I could attend the online classes from home, and for the F2F classes, the school offered me opportunities to attend the available other online classes when I could not be in school."

Interactivity: Blended learning has incorporated digital tools and interactive activities that are more engaging and fun, which makes the lessons more interesting. These tools included online discussions, simulations, gaming tools, and quizzes.

A middle school student said:

"My teachers used some tools in the online section to make us more active, and most of the assignments became interactive."

Another student in the high school reported:

"Our teacher used a great way; in this way, he sent us video clips before the class, and in the online class, he reteaches us and explain the unclear point, and in the F2F class, we make activities and do assignments."

Engagement: Blended learning becomes more engaging for students than traditional classroom instruction, incorporating various digital tools and interactive activities more appealing to today's students.

One of the inspired comments from a middle school student was:

"Our teachers used many interactive activities and games, which engaged us more and became active, and we loved the class and would not finish the course."

An elementary student reported that:

"The F2F class was boring, and with the online class, we were waiting for the F2F class to discuss ideas and do group activities."

Personalization: Blended learning has been personalized to meet students' needs and interests, from reviewing the online videos and available instruction online until



understanding the lessons and through their peer feedback to tailoring instruction and support to individual students.

One of the high school students stated that:

"This kind of learning offered me to review the recorded classes to understand them and review for exams, especially in the challenging courses, such as Mathematics and Physics."

Another student in the elementary said:

"Online and F2F classes gave us more personality to review the lesson and discuss with our peers on the discussion board before attending the F2F class."

Collaboration: Blended learning often involves collaborative activities that encourage students to work together and learn from each other. This has particularly benefited shy students who struggle to participate in traditional classroom settings.

A participant from the middle school said:

"Our science teacher used the online class for teaching by using active ways and provided us with videos, and used the F2F class to make group activities, which gave us more abilities to deal in groups with our peers."

Another student said:

"I am a shy student and afraid of participating wrongly, but the online course offered my best to participate and engage with the teacher without shyness."

Time management: Blended learning helped them develop time management skills as they learned to balance synchronous and asynchronous learning activities and complete assignments on their schedule.

A high school student reported that:

"Blended learning gives us opportunities to review the recorded classes any time we want and helps us to manage our time based on our favorite time to study; I prefer to review the recorded class early morning before going to school, which gives me more ability to remember and discuss the concepts with my teachers and peers."

One of the elementary students stated:

"My father did not allow anyone in the family to wake up after 10 PM, so I woke up early morning to pray. I used the time until starting school to review the courses, do homework, and do asynchronous activities."

Access to resources: They found that blended learning provides access to a wealth of digital resources and materials, including online lectures, videos, simulations, and interactive activities, which can enhance their learning experience.

A middle school student said:

"One of my worries was the ability to review teachers' teaching when I would like to review and study for exams, but my teachers record all their teaching and send it to us before the F2F class, and in the online class, they record the whole class; that gives me and my peers ability to review all the classes and re-attend it again and again as much we need to that."

An elementary student stated:

"Our teachers used all the available resources available online in the class to support their teachings, such as YouTube clips, recourses, and videos available on the iEN portal, provided by the Ministry of Education."



Balancing workload: Students found it challenging to balance the workload between online and offline learning activities in a blended learning environment because most did not have a personal computer, and they used the shared computer with their brothers and sisters.

A student in middle school said:

“In our home, we are eight brothers and sisters; based on that, in the beginning, we had a hard time balancing the time to attend classes at the same time because we did not have enough devices to attend the online class at the same time, but after the education moved to blended learning and schools time were not on the same time for us, some days my brothers and sisters attend F2F school and the rest in the online school, that gave us more flexibility to attend the synchronous classes.”

A high school student reported:

“One of the threats I faced was I lived in a family house with my parent, my uncles, and my cousins; we were more than 15 students in the same house, and we could not attend online classes because we had only three computers at home and one laptop. For that, we share these computers and time to attend classes and do homework.”

Social interaction: Most of the students reported they can think without shyness because they can use online tools to help them, which gives them more social interaction with their peers and teachers; on the other hand, few of them reported that blended learning could be less social than traditional classroom instruction, as students have fewer F2F opportunities to interact with their peers and teachers.

A high school student stated:

“In the online class, I had more opportunities to discuss and write my thought than in the F2F class because I did not have to be afraid of making mistakes or my peers laughing at my answers.”

A middle school student said:

“I could not participate in class and discuss with my peers in the F2F because I am a shy student. Still, in the online discussion, I experience participating and discussing with my peers and sharing my ideas.”

Technical difficulties: Most students do not face technical challenges because they are digital citizens and deal with technology in their lives. However, some reported blended learning as challenging because they need access to reliable technology or are uncomfortable using digital tools and platforms, and they could not access the Internet to join the online classes.

A student reported:

“As a student in high school, I have my laptop and cellphone, and I deal with digital life more than traditional life; for that, my peers and I, who had smart devices, did not face any technical difficulties. Also, most of my peers did not face technical difficulties as much as they faced the availability of devices.”

Another student in the elementary school stated:

“Based on my age, I cannot use the computer anytime, but with shifting to blended learning, I have been authorized to use the computer daily, but only for some hours to attend class and do homework. However, I found it confusing initially, and I had to be



supported to participate in classes and do assignments. Still, I became an expert in a few weeks and did everything myself.”

Overall, students born in a digital generation have the digital skills to deal with all the technology; most use it daily in games or social media, but not in education. For that, even if some students find blended learning challenging and uncomfortable with technology or prefer more traditional classroom instruction, all that could disappear when students develop self-discipline and time management skills to succeed in a blended learning environment. However, most students appreciate the flexibility, interactivity, personalization, collaboration, and time management skills blended learning offers, and many of them find it a positive and rewarding educational experience.

Teachers' perceptions of shifting to blended learning

To answer the second question, what are the teachers' perceptions of shifting to blended learning during the pandemic?

Teachers' perceptions of blended learning vary depending on their experiences, preferences, and teaching styles. Here are some common ways in which teachers may find blended learning:

Flexibility: Blended learning provided more flexibility to design and deliver instruction, allowing them to incorporate a range of digital resources and materials into their teaching practice.

One of the teachers said:

“Blended learning allowed me to design my courses by integrating the technology and videos available online to make the course more accessible, effective, and valid information so I did not have to reset it repeatedly.”

Another high school teacher said:

“I find the flexibility of blended learning in designing my courses that combine online and offline activities that students can complete at their own pace and on their schedule, which gives students more control over their learning and helps accommodate different learning styles and preferences.”

Individualization: The most common point was that blended learning allowed for greater individualization of instruction; some reported that blended learning gives us the opportunities to deal with our students based on their needs. Teachers can create personalized learning plans and provide students with individualized online and offline support.

“I could deal with students according to their abilities with blended learning. Some were quick to learn due to their high abilities, and some needed to repeat the passage according to their abilities. Also, blended learning helped us create treatment plans, send them to students, and give them time to enter and review lessons and treatment plans.”

Improved student engagement: Blended learning can be more engaging for students than traditional classroom instruction, as it incorporates various digital tools and interactive activities that are more appealing to today's students.



One of the participating teachers said:

“With the availability of digital tools, I used them to support my lesson, which engaged students in the lesson and made it more effective and enjoyable in the online class, activities, and assignments.

Another teacher reported that:

“Blended learning allows students to work at their own pace and provides them access to various resources and tools. It also helped us use data from online assessments and activities to better understand each student’s strengths and weaknesses and adjust their instruction accordingly.

Data-driven insights: Blended learning provided data-driven insights into student performance and engagement, which allowed teachers to adapt and improve their teaching practices to meet student needs better.

“I track the data to gain insights into student progress, identify areas where students may be struggling, and adjust their teaching strategies to better meet the needs of individual students.

Another teacher said:

“I analyze data from various sources, such as learning management systems, online quizzes and assessments, student feedback, and engagement metrics. I use data to evaluate the effectiveness of different blended learning approaches and make data-informed decisions about optimizing their teaching practices.”

Balancing workload: Most teachers reported they had no issues with their workload, and those who used flipped classrooms were very satisfied with balancing their workload and their students’ achievements. However, few found balancing the workload between online and offline learning activities challenging. They adapted their teaching practices to ensure students got a balanced and practical learning experience.

Some teachers reported they had some difficulties balancing their workload:

“I find it challenging to balance their workload as they must manage both online and offline classes. They must prepare digital materials, grade assignments, and provide feedback to students online while also conducting face-to-face classes, preparing lesson plans, and grading papers offline.”

On the other hand, most of the teachers agreed that blended learning helps them to balance workload efficiently and effectively:

“I find blended learning beneficial regarding workload management. They can use technology to automate some tasks, such as grading and feedback, which saves them time. In addition, they can reuse digital materials for future classes, which reduces their preparation time.”

Reduced social interaction: Teachers agreed that distance learning reduced the social interaction between teachers and students, as well as among students themselves, which may be a challenge for some teachers who value classroom instruction’s social and emotional aspects. However, switching to blended learning allows students and teachers to meet F2F and raise social interaction; it also gives shy students opportunities to interact and participate in online lessons, especially in writing discussions.



Elementary teachers reported that:

“Students at the beginning of shifting to distance learning lost a lot of their ability to interact socially because they were dealing with devices and did not interact directly with their peers and teachers. However, after moving to blended learning, they still benefit from online learning and social interaction in the F2F class.”

A high school teacher stated:

“I can help my students develop critical social skills such as communication, collaboration, and teamwork by incorporating online discussion forums, collaborative projects, and other interactive activities. Additionally, blended learning allows students to connect with peers from different backgrounds and locations, which can broaden their perspectives and help them develop their social interaction and understanding.”

Technological challenges: few teachers had faced challenges in using digital tools and platforms or needed access to training in using technology; most were old and required to use technology in their daily lives, which made them uncomfortable with adopting blended learning. Instead, most teachers deal with technology quickly and feel comfortable using blended learning while teaching their students.

One of the old teachers said:

“I did not feel comfortable using the computer in teaching, and I could not feel I was in class without seeing my students; I will be retired if that continues.”

Another teacher stated:

“I overcame challenges by seeking help from IT support, attending training sessions, and collaborating with other teachers to share best practices. Some teachers have also mentioned that they found the experience of using technology to be rewarding and that it has helped them to engage students in new and innovative ways.”

Overall, teachers’ blended learning experiences likely depend on various factors, including their teaching styles, technological literacy, and the design of the blended learning course or program. However, with proper training and support, many teachers can successfully adapt their teaching practices to incorporate blended learning, provide students with a more engaging, personalized, and effective learning experience, and give them more flexibility and opportunities to personalize student learning experiences, enhancing student engagement, and learning outcomes. Still, it presents unique challenges that must be addressed to ensure successful implementation.

Blended learning needs to be more effective and ensure added value

To answer the third question, how can blended learning be more effective and provide additional value?

A focus group of five faculty members in education technology and instructional design met and discussed virtually their thoughts and views on blended learning and how we could make it more effective and valuable; at the end of the focus group, they reported that creating a successful blended learning experience requires effective instructional design to enhance blended learning effectiveness in several ways:



- a) Identify learning objectives: Before designing a blended learning course or program, instructional designers should identify clear learning objectives and align all learning activities with those objectives. This ensures that students work towards specific goals and that all course materials and assessments align with those goals.
- b) Use various digital tools and resources: Instructional designers should incorporate multiple digital tools and resources to create a more engaging and interactive learning experience. This can include videos, interactive activities, simulations, and other online resources tailored to the specific learning objectives.
- c) Provide opportunities for social interaction: Instructional designers should design blended learning courses that provide opportunities for social interaction among students, such as online discussion forums, group projects, and collaborative learning activities. This helps to create a sense of community among students and encourages active participation in the learning process.
- d) Provide opportunities for personalized learning: Instructional designers should provide customized learning experiences, such as adaptive assessments and individualized learning plans, to cater to students' needs and interests.
- e) Use data to inform instruction: Instructional designers should use data analytics to inform their instruction, including monitoring student progress and engagement and identifying areas where students may need additional support or feedback.
- f) Support teachers in delivering instruction: Instructional designers should support teachers, including training on digital tools and resources and ongoing support throughout the course or program.

Overall, instructional design can help to ensure that blended learning programs are effective and meet the needs of both teachers and learners. Instructional designers should focus on developing engaging content, selecting appropriate technology, and creating assessments that measure the achievement of learning outcomes. By using a systematic and data-driven approach, instructional designers can help to develop blended learning programs that are effective, engaging, and meet the needs of all learners.

Conclusions

In conclusion, blended learning is an approach that combines traditional classroom instruction with online learning, which allows students and teachers to gain the benefits of Online and F2F education. I recommend using blended learning and making it the primary education approach for the following reasons: Flexibility, Personalization, Engagement, Cost-effective, and Improved outcomes. Blended learning has significantly impacted the educational system's effectiveness and allowed students to reduce their learning loss, even though it was an emergency shift without providing all the requirements for this shift. Blended learning can transform the educational system and provide personalized, engaging, and effective student learning experiences. Also, teachers can be engaged with blended learning and design



and build practical lessons. Blended learning allows teachers and students to connect through the integration of the virtual and physical worlds, synchronous and asynchronous, allowing them to learn and attend class, do assignments, and mark them based on their schedule.

In addition, to reach the higher benefits of blended learning, teachers need to follow instructional design models such as the ADDIE model to build and design blended learning and the ARCS model for motivating students and using blended learning models such as flipped classrooms. In addition, offering institutional support through training teachers to develop their professional skills and offering support tools and online sourcing will ensure that blended learning is the most effective to create lessons for the most suitable classes.

Recommendations

1. Doing an experimental study to compare students' achievements in blended and F2F learning.
2. Training teachers on Instructional design and how to design online content.
3. Making a study to identify the obstacles students and teachers face in implementing blended learning.
4. Offering schools tools to record the F2F classes to allow students to review them anytime.
5. Adopting blended learning is the primary approach to teaching students in general education.

References

1. Alhojailan, M.I. (2012). Thematic analysis: A critical review of its process and evaluation. *West east journal of social sciences*, 1(1), 39–47.
2. AlNajdi, S. (2014). Hybrid Learning in Higher Education. In M. Searson & M. Ochoa (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2014* (pp. 214-220). Chesapeake, VA: AACE.
3. AlNajdi, S. (2018). Design a Blended Learning Environment to Teach Arabic Alphabet for Non-Arabic Speaker Children Based on ASSURE Model. *International Journal of Information and Education Technology* 8(2), 128-132.
4. AlNajdi, S. (2022). The Effectiveness of Using Augmented Reality (AR) to Enhance Student Performance: Using Quick Response (QR) Codes in Student Textbooks in the Saudi Education System. *Education Technology Research and Development* 70, 1105–1124. <https://doi.org/10.1007/s11423-022-10100-4>
5. Anthony, B., Kamaludin, A., Romli, A., Raffei, A. F. M., Phon, D. N. A. E., Abdullah, A., & Ming, G. L. (2020). Blended learning adoption and implementation in higher education: a theoretical and systematic review. *Technology, Knowledge and Learning*, 1-48.
6. Buzzetto-More, N. A., & Sweat-Guy, R. (2006). Incorporating the hybrid learning model into minority education at a historically Black university. *Journal*



- of Information Technology Education, 5, 153-164. Retrieved from <http://jite.org/documents/Vol5/v5p153-164Buzzetto130.pdf>
7. Christensen, C., Horn, M., & Staker, H. (2013). Is K–12 blended learning disruptive? An Introduction to the theory of hybrids. The Christensen Institute. Retrieved from <http://www.christenseninstitute.org/publications/hybrids/>.
 8. Copp, C. D. (2007). Students, faculty, and administrators: Perceptions of hybrid instruction in higher education (Doctoral dissertation). Retrieved from <http://www.lib.uci.edu/>
 9. Dahmash, N. B. (2020). 'I couldn't join the session': Benefits and challenges of blended learning amid covid-19 from EFL students. *International Journal of English Linguistics*, 10(5), 221. <https://doi.org/10.5539/ijel.v10n5p221>
 10. Dakhi, O., JAMA, J., & IRFAN, D. (2020). Blended learning: a 21st century learning model at college. *International Journal Of Multi Science*, 1(08), 50-65.
 11. King, K. P. (2008). Blended learning. In L. A Tomei (Ed.), *Encyclopedia of information technology curriculum integration*. (pp. 85-87). Hershey, PA: Information Science Reference. doi:10.4018/978-1-59904-881-9.ch013
 12. Kumar, A. (2012). Blended learning in higher education: A comprehensive study. *Proceedings of International Conference on Business Management & IS*, 0(1), 345-352. Retrieved from <http://journal.ijacp.org/index.php/ICBMIS/article/view/82/127>
 13. Lee, J., Lee, H., Jeong, D., Lee, J., Kim, T., Lee, J. (2021). Developing museum education content: AR blended learning. *International Journal of Art & Design Education*, 40(3), 473–491. <https://doi.org/10.1111/jade.12352>
 14. Li, S., & Wang, W. (2022). Effect of blended learning on student performance in K-12 settings: A meta-analysis. *Journal of Computer Assisted Learning*, 38(5), 1254-1272.
 15. Lin, Q. (2008, Winter). Student views of hybrid learning: a one-year exploratory study. *Journal of Computing in Teacher Education*, 57-66. Retrieved from <http://www.iste.org/learn/publications/journals/jct>
 16. Mali, D., & Lim, H. (2021). How do students perceive face-to-face/blended learning as a result of the Covid-19 pandemic?. *The International Journal of Management Education*, 19(3), 100552.
 17. Megahed, N., & Ghoneim, E. (2022). Blended learning: the new normal for post-Covid-19 pedagogy. *International Journal of Mobile and Blended Learning (IJMBL)*, 14(1), 1-15.
 18. Megahed, N., & Hassan, A. (2022). A blended learning strategy: reimagining the post-Covid-19 architectural education. *Archnet-IJAR: International Journal of Architectural Research*, 16(1), 184-202.
 19. MOE (2020). Ministry of Education, Saudi Arabia. Retrieved May 24, 2022, from <https://www.moe.gov.sa/ar/mediacenter/MOENews/Pages/MR2-2020-453.aspx>
 20. Rasmitadila, R., Widyasari, W., Humaira, M., Tambunan, A., Rachmadtullah, R., & Samsudin, A. (2020). Using blended learning approach (BLA) in inclusive education course: A study investigating teacher students'



- perception. *International Journal of Emerging Technologies in Learning (IJET)*, 15(2), 72-85.
21. Vallée, A., Blacher, J., Cariou, A., & Sorbets, E. (2020). Blended learning compared to traditional learning in medical education: systematic review and meta-analysis. *Journal of medical Internet research*, 22(8), e16504.
 22. Visage, M., & Crole, W. (2023). *Contemporary Blended Learning and the Future Scope* (No. 9821). EasyChair.
 23. Widjaja, G., & Aslan, A. (2022). Blended learning method in the view of learning and teaching strategy in geography study programs in higher education. *Nazhruna: Jurnal Pendidikan Islam*, 5(1), 22-36. (Widjaja & Aslan, 2022)
 24. Zhonggen, Y. (2016). Blended learning over two decades. *Professional Development and Workplace Learning: Concepts, Methodologies, Tools, and Applications*, 1248-1267.