Blended Learning Strategy: Adoption of Best Global Practices

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Abstract

In this increasingly globalised environment, blended learning technologies and strategies not only attract students but also make the process of learning an engaging one. The process of learning is one that is both lovely and never-ending. Through the process of learning, teaching is an extremely important component. Teachers who are passionate about their subjects consistently consider the useful tools that can make the learning process simpler and more engaging for their students. Compared to face-to-face or exclusive virtual, the blended learning approach will prove to be an invaluable resource for these enthusiastic educators. The concept of blended learning is examined from a variety of angles in this paper, which provides an overview of the topic. Additionally, it explains the various blended learning methodologies. Additionally, this article discusses the areas in which this technique is advantageous, as well as the obstacles that this technique faces, which include technical challenges, organisational challenges, and instructional design challenges. In conclusion, a few recommendations are made.

Keywords: Blended Learning Strategy, Best Global Practices, Virtual Learning, Face-to-Face

Introduction

Higher education's teaching and learning processes are undergoing rapid transformations due to technological advances such as blended learning (BL), which combines traditional classroom instruction with online learning. Because of this, as the number of policies related to BL keeps growing, it is imperative to look into the theoretical underpinnings of BL studies as well as the way BL was accepted and applied in respect to students, instructors, and administration. Conversely, comparatively few studies have focused on examining the constructs and factors related to the adoption of BL while concurrently accounting for the administration, lecturers, and students. Similar to this, earlier studies have not looked into the procedures entailed in putting blended learning into practice.

Since it combines the advantages of traditional and online teaching methods, blended learning, or BL, is growing in popularity in higher education (Poon 2014). Findings from earlier studies Edward et al. (2018) and Ghazal et al. (2018) claim that the BL approach significantly affects students' awareness of the learning background and teaching mode, which raises their level of engagement and experience with learning. Because of BL, students are able to become more engaged and enthusiastic about learning, which enhances their perseverance and commitment (Ismail et al. 2018a). Students can become more excited about learning when blogging takes the emphasis off of teaching and onto learning. Poon (2014) concluded that problem-based learning (BL) is likely to become the dominant instructional method in the coming years, ranking it as one of the top ten educational trends of the twenty-first century. Poon (2014) started off by saying that the right question to ask is not whether or not better learning should be implemented in higher education, but rather which practices should be included in order to make the implementation of better learning successful.

Definition and characteristics

Blended learning is an educational approach that prioritises the needs and interests of students by integrating synchronous and asynchronous learning components from e-learning and traditional face-to-face classrooms (Attard and Holmes, 2020; Kerzŷić et al., 2019). According to Adiguzel et al. (2020), Gambari et al. (2017) emphasised the significance of the e-learning component. Blended learning uses e-learning resources in presentations, training sessions, online discussion forums, Ediguzel et al. (2020), Alammary (2019), and Progress Learning, among other venues.

The origin of blended learning, according to Lazar et al. (2020), is digital technology and digital teaching resources. Subsequently, Lazar et al. (2020) coined the term "digital learning tools" to describe digital resources employed in blended learning. Kashefi et al. (2017) delineate the components of blended learning as they pertain to mathematical education: author, teacher, student, method, technology, and mathematics. The author is responsible for developing the curriculum and delineating the functions of every component. Among the primary objectives of blended learning is the improvement of rapport among students, instructors, and other relevant parties. By integrating diverse technologies with pedagogy, writers have the ability to generate assignments and complete maths exams on behalf of their students (Kashefi et al., 2017).

Blended learning comprises five elements, of which two occur in-person and three occur virtually (Alammary, 2019). The following constitutes each of these units: (1) In-person instructor-led: Participants engage in a classroom setting where the instructor delivers the course content, with limited chances for hands-on application, collaborative engagement, or experiential learning. (2) In-person collaboration fosters collective engagement among students during classroom exercises. (3) Instruction delivered online under the guidance of an instructor: the instructor administers progress evaluations while guiding students through the learning process. (4) Facilitates student participation in online learning endeavours by mandating teamwork. (5) Self-paced online learning affords students the flexibility to engage in their studies at their own convenience.

Models

Many studies have created distinct models of blended learning. The flipped, mixed, flex, supplemental, and online-practicing models are among the five models categorized by Alammary (2019) based on the face-to-face and online locations of content communication and practical activities.

1. The flipped paradigm involves guiding students to access pre-prepared resources prior to beginning classes. In order to optimize teacher and student chances for engagement, cooperation, debugging, and manipulation during in-person learning, preparation is done online outside of school hours (Weinhandl et al., 2018).
2. Mixed model: face-to-face and online delivery of instructional materials and practice exercises (Alammary, 2019).
3. Flex model: practical assignments and course material are delivered virtually, but students still attend in-person meetings to assess their progress and get input on their

education. Students encounter each other often and in person for classroom teaching, and teachers allow them to learn at their own speed (Hauswirth and Adamoli, 2017).

4. Supplemental model, which adds online activities to increase student engagement while improving knowledge and practice learning through in-person instruction (Alammary, 2019).
5. Online-practicing model: this approach makes use of an online learning environment to enable students to practice, solve issues, and receive immediate feedback (Alammary, 2019).

In addition, Tesch (2016) put forth six blended learning models: the online lab, self-blend, flex, face-to-face driver, and station rotation. In order to enhance students' learning efficiency and support in-person classroom instruction, educators utilise an assortment of digital tools (Tesch, 2016; Alsalhi et al., 2021). By providing teachers with supplementary resources, it caters to the requirements of elementary and middle school students due to its adaptability and flexibility (Barros et al., 2017). By employing the online lab school methodology, pupils can gain access to supplementary study time in specialised computer laboratories while remaining online. Students are able to complete the courses in the interim due to the self-blend model. A significant distinction exists between online and traditional learning due to the individualised requirements of each student (Alsalhi et al., 2021). Comparable characteristics exist between the online-driver model and the online-practicing model, which is analogous to the supplemental model.

It is critical for each educational institution to select an appropriate blended learning model that aligns with its requirements, taking into consideration factors such as facilities, financial resources, subject matter, and curriculum, among others, in accordance with its capacity.

Implementation and assessment

KerzŇič et al. (2019) assert that blended learning is efficacious when it incorporates an advanced pedagogical strategy that not only supplements face-to-face instruction but also motivates learners to engage in project work, participate in supplementary activities, and make contributions to the learning journey. Students must be subject to consistent monitoring in an online classroom (Kerzűić et al., 2019). As per Kerzŷić et al. (2019), these factors fall into three distinct categories.

1. Attributes of the students, including but not limited to information accessibility, prior technological experience or knowledge (Alsalhi et al., 2021), self-control, assurance, learning style (Miyaji and Fukui, 2020), and personal responsibility for learning (Alammary, 2019).
2. Personality, ICT proficiency, instructional approach, knowledge, resources, feedback, course structure, online instruction, information quality, and communication of the instructor (Alammary, 2019).

   Implementation of technological advancements and provision of technical support, including but not limited to accessibility, user-friendliness, and ease of use (Alammary, 2019).

Online resources serve as a supplement to in-person instruction by offering supplementary reading material to round out the process. Next, conduct a self-assessment of the concepts and material covered in the online course. In addition, instructors offer students feedback on lengthy project-based assignments and request their evaluation of the quality of their work (Umek et al., 2015). Barros et al. (2017) and Kerzŷič et al. (2019) assert that the aforementioned evaluation results furnish students with both the necessary information and an assessment of their learning progress. Furthermore, instructors possess the capability to evaluate the extent to which pupils have comprehended the subject matter. To monitor their development, instructors must interpret and oversee the students' learning prerequisites.

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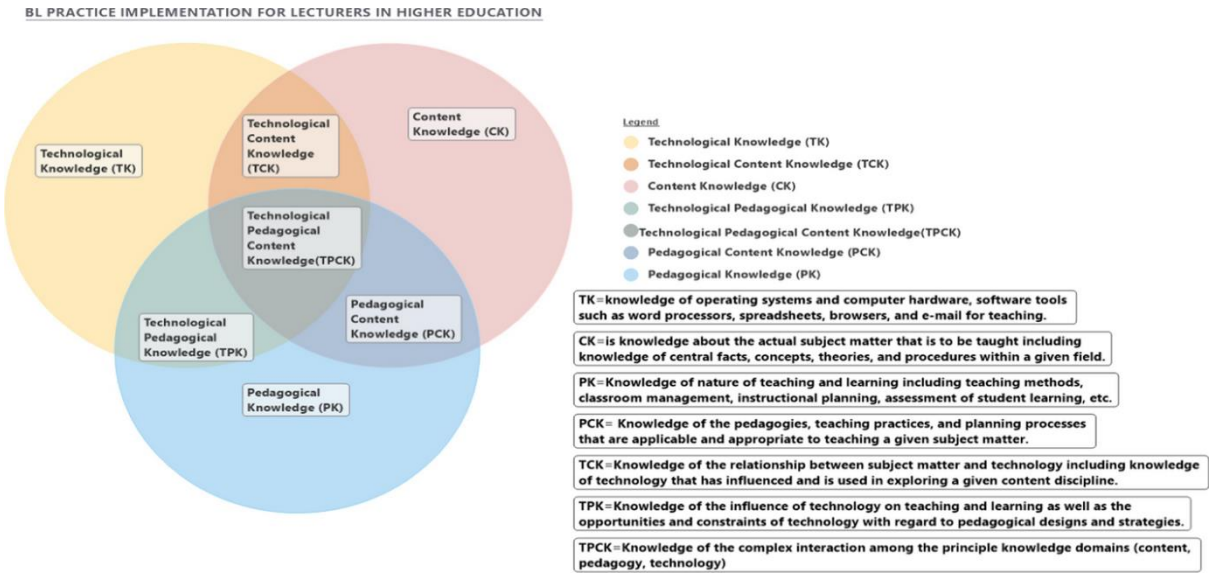

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Three assessment approaches discussed by Landenfeld et al. (2018) are concise warm-up questions, summative exercises, and diagnostic and summative evaluations. These methods employ an assortment of question formats. Diverse types of inquiries serve to reinforce critical knowledge throughout the process of learning and provide personalised feedback (Landenfeld et al., 2018).

Hoyos et al. (2018) and Attard and Holmes (2020) highlighted some requirements for using technology in education and research, assuming all other variables remain constant. One goal is to allow students to obtain technical support and ask questions. Diep et al. (2017) identified learning management system usage as the second element. The price, intricacy, and capacity to explain concepts from many angles of math films and specialized math software like Desmo or Geogebra must be considered. The fourth factor is how technology affects student learning and material availability (Attard and Holmes, 2020). Hoyos et al. (2018) found that using online learning resources to study or teach staff (or students) about educational software affects educators and the instructional process.

Many technical aspects affect student participation in learning, especially in blended learning. Jeffrey et al. (2014) describe these indicators as those that catch, retain, and re-engage disinterested or unable students. Through decoys, instructors can engage students by sparking interest and encouraging concept associations. They can also achieve this by attending class regularly and enthusiastically, showing their peers that they are important to the course and its material. Students need timely, practical feedback, clear assessment instructions, and difficult assignments to stay engaged. Recognizing and addressing pupils' challenges helps them re-engage in learning. Instructors must also communicate directly with troublesome students, monitor and recognize them quickly, and encourage constructive conversation (Jeffrey et al., 2014). To improve classroom communication, blended learning instructors and students should use discussion boards, chat, and email. More significantly, group presentations and projects improve student communication. In pairs or small groups, students use inquiry methods, critical thinking, and peer work as examples (Kashefi et al., 2012).

The mixed learning environment also promotes active teaching approaches like collaborative learning, problem-based learning, and STEM education (ElSayary, 2021; Kandakatla et al., 2020). Research has also examined many blended learning strategies in education. The above resources include machine learning techniques (Ho et al., 2020), Massive Open Online Courses (MOOCs) (Avineri et al., 2018; Borba, 2016), Personal Online Desk, e:t:p:M® project (Mundt and Hartmann, 2018), viaMINT (Landenfeld, 2018), MyMathLab learning system (Chekour, 2018), and more.

Advantages of Blended Learning

Technology is crucial to teaching and integrated learning, according to extensive studies. Mixed learning research has helped teachers and students academically. Due to its qualities, blended learning maximises in-person and virtual learning benefits (Alsalhi et al., 2021). Online instruction uses advanced learning management system (LMS) functions to assist learning, student interaction, academic performance assessment, and goal-setting (Adiguzel et al., 2020; Sun, 2016). Online learning's lack of temporal and spatial constraints allows for more personalized training and evaluation (Mundt et al., 2018; Rifa'i and Sugiman, 2018) and instructor-student-family interactions (Alsalhi, 2021). Blended learning creates a flexible educational environment where students can choose from a variety of learning materials, according to study. This allows individuals to review and consolidate teachings at their convenience (Zhang and Zhu, 2017; Sánchez-Gómez at al., 2019; Uz and Kundun, 2018).

Several studies (Alsalhi et al., 2019; Balentyne; Varga, Gambari et al., 2017; Rifa'i and Sugiman, 2018; Zhang and Zhu, 2017) have shown that blended learning improves student learning attitudes. The benefits include fostering a desire to learn, adaptability, self-confidence, and collaboration. Thus, this improves student learning and engagement. It boosts learning interest. Several studies (Alammary, 2019; Alsalhi et al., 2021; Balentyne and Varga, 2017; Gambari, 2017; Kundu, 2021) have shown opposing evidence that blended learning increases student performance. Blended learning also enhances math and technological skills (Kashefi, 2012). Additionally, it improves student communication (Dziuban et al., 2018; Kashefi, 2012; Kashefi, 2017).

Blended learning benefits educators and students. Through one-on-one encounters, teachers can assess student learning needs. This information allows them to alter or create lesson plans that match students' learning goals. According to Attard and Holmes (2020), survey participants might give their pupils more arithmetic learning materials via digital tools. By creating learning settings and instructional spaces, LMS permits instructors to use varied teaching methods and visual aids (Attard and Holmes, 2020). Blended learning also increases educators' digital resource and information use in the classroom.

Challenges of Blended Learning

Blended learning presents several advantages, specifically for educators and learners who have been most profoundly affected by the unforeseen phases of the COVID-19 pandemic. Nonetheless, the incorporation of blended learning into mathematics education poses a number of obstacles. Boelens et al. (2017) and Owston and York (2018) identify four significant obstacles in the subject matter: creating an optimal learning environment (by promoting encouragement and motivation, exhibiting empathy, and individualising instruction), ensuring interaction (through both face-to-face and virtual means), achieving flexibility in integration (with regard to temporal, spatial, and academic advancement), and providing support for student learning through observation and assessment.

As a result, the adoption of blended learning often places educators under additional strain, culminating in a substantial workload (Adiguzel et al., 2020; Attard and Holmes, 2020). Nevertheless, the literature also highlights the dearth of professional development programmes that adequately equip educators with the necessary communication methods, information technology competencies, and pedagogical approaches to effectively implement blended learning and online instruction (Attard and Holmes, 2020; Sánchez-Gómez et al., 2019).

Students who participate in blended learning encounter similar obstacles. Nakamura et al. (2018), in their examination of the advantages and disadvantages of blended learning in mathematics education, found that students perceive the utilisation of online learning platforms (such as CAS) for assignment submissions as a significant burden. Psycharis et al. (2013) and Poon (2013) both raise the previously mentioned technological concerns. Poon (2013) found that students perceive online learning as uninspiring, primarily because of sentiments of isolation and inauthenticity resulting from reduced course offerings and a dearth of leadership. A sense of sincerity and connection among students is palpable within the classroom environment. Furthermore, students encounter difficulties in completing assignments when learning face-to-face as a result of time wastage, inadequate individualised problem-solving instruction, and a dearth of social interaction (Poon, 2013).

Nevertheless, Alsalhi et al. (2021) found that the effectiveness of the blended learning technique is contingent upon the proficiency levels of the students. Students who earn low grades may find it difficult to implement new teaching and learning practices in blended learning, especially if they lack intrinsic motivation (Yusoff et al., 2017). To facilitate the development of blended learning activities that cater to diverse learning styles and cognitive ability levels, Yusoff et al. (2017) introduced a collection of classroom assessments.

Moreover, in order to meet the diverse requirements of blended learning, institutions of higher education confront obstacles of every kind. (Nakamura et al., 2018; Uz and Kundun, 2018) A multitude of scholarly investigations has established that a significant barrier to implementing an online curriculum is the insufficiency of technical resources to support both instructors and learners during their online experiences. Some scholars have proposed approaches for educators and institutions to implement in conjunction with blended learning, providing a potential resolution to some of the challenges that may arise from this pedagogical method. In order to effectively integrate learning and instruction, the instructor (Kunddu et al., 2021; Stahl, 2021) should align math teaching activities and textbooks with the evolving understanding of individual students. Instructors must possess confidence in their capacity to instruct within an online environment.

Furthermore, it is imperative that educators have both technological and pedagogical expertise to effectively utilise an array of information and communication technology (ICT) tools within the classroom (Bunatovich and Khidayevich, 2020; ElSayary, 2021). To ensure that pupils can proficiently and assuredly utilise the diverse functionalities of the software, academic establishments must establish pedagogical training for instructors and furnish instructional guidelines for incorporating ICT into the learning process (Kundu et al., 2021; Naveed et al., 2020; Stahl, 2021). It is of the utmost importance to design courses that equip students with the knowledge and abilities required to utilise computers and online learning resources effectively (Naveed et al., 2020; Bunatovich and Khidayevich, 2020). To facilitate student inquiry throughout the learning process, educational institutions must furnish students with the necessary devices for online learning (Kundu et al., 2021; Naveed et al., 2020; Attard and Holmes, 2020).

Tips for Achieving Good Blended Learning Approach

Blended (or hybrid) learning has introduced novel opportunities for integrating technology into the teaching process. However, when creating blended learning resources and activities, how do instructors determine which technologies to implement and guarantee their efficient operation? Identifying the tools that can assist you in advancing your profession is the next step, following introspection regarding the strategies employed by effective educators to captivate their students.

The following are seven recommendations for contemplation.

Tip 1: As a first step, start with the learning outcomes.

The course learning outcomes serve as an outstanding starting point. Your choice of technology will be influenced by the knowledge, skills, and characteristics you desire your students to exhibit.
In a similar vein, if one desires students to exhibit the practical implementation of intricate principles, one may contemplate the utilisation of digital tools that facilitate the decomposition or "chunking" of said principles into smaller components, which can then be presented across diverse media platforms in order to cater to the distinct learning requirements of each student. An instance of an effective method to elucidate and illustrate complex subjects through the use

of visuals and audio is through the production of a video. An additional approach is to furnish students with prompt feedback on revision problems for each chunk through the use of an online quizzes or interactive modules such as H5P.

Tip 2: Ensure timely provision of technical support.

Check the software suite at your university. Choosing one or more tools that are officially supported by your university can greatly facilitate the launch of your new blended learning project. Contact an IT support system administrator or a learning designer affiliated with your faculty.

Tip 3: Consider scale.

Select tools that facilitate time savings. One can decrease the volume of inquiries and electronic mails received from pupils by making a prudent decision. For instance, by implementing a proficiently managed discussion forum or developing an online interactive module that provides prompt responses to revision questions, you could effectively mitigate the frequency with which you are required to address identical inquiries from multiple students. You can also save time on assessments by utilising tools to provide students with insightful feedback. Numerous learning management systems permit the incorporation of pre-populated evaluation rubrics and feedback comments.

Tip 4: Practice and keep things simple.

Maintain a basic understanding when you first begin! Select one tool to perform a specific task and strive to achieve mastery over it. A medium-impact or low-impact mixture is an expedient and uncomplicated remedy that diminishes the probability of malfunction. Establish a "sandpit" in which you can perform experiments and "play" with the tool's features while learning it. Bear in mind that with practice comes perfection. One advantage of initially maintaining simplicity is the ability to promptly modify and enhance any online learning activity that requires improvement.

Tip 5: Incorporate technology into your lessons.

Ensure that, during instruction, you demonstrate all digital tools and online learning activities. Ensure that student expectations, including the essential level of engagement, are clearly defined during this process. Students will then be better able to comprehend the activity's purpose and how it contributes to their education. For instance, if you simply delegate the management of the discussion forum to the students, it will not be effective to incorporate one into your course. You should rather initiate conversations, ideas, or topics, and then respond to frequently asked questions, perhaps by discussing them in class. Subsequently, the students will perceive the discussion forum as a deliberate and significant tool for enhancing their educational progress.

Tip 6: Align instruction, tools, and assessment

It is essential that your assessment assignments correspond with both the teaching and learning activities and the course learning outcomes. It is therefore logical that the online activity and tool you have chosen have a significant bearing on the assessment. Inform students once more of the direct correlation between the online activity they are completing and their assessment. Students must have quick access to the necessary resources to complete their assessments via the technology that you choose.

Tip 7: Test the students.

Good educators constantly consider their profession. Asking your children how your new online activity will enhance their learning is part of this process. Simultaneously solicit feedback regarding ways to enhance an activity. Your students will value your endeavours to enhance your instruction, particularly if they have the opportunity to offer feedback.
Developing blended learning can be time-consuming in the short term. Nevertheless, one could perceive this as a commitment of time towards enhancing one's professional growth. The improvement is that it becomes less difficult.

Conclusion

This paper provides valuable insights into research related to BL practice. This paper conducted a systematic literature review to investigate the adoption of blended learning (BL) in higher education. The review focused on prior BL adoption models and the theories used in these models. In order to achieve this goal, the constructs/factors that have been identified as influencing the adoption of blended learning (BL) and the implementation of BL practices can be utilised to create a model that examines the adoption and implementation of BL in education from the perspectives of students, lecturers, and administrators simultaneously. This paper offers comprehensive guidelines for the design and implementation of business law practices. This paper proposes that the successful implementation of BL practice is contingent upon the decision-making of lecturers, which is influenced by the level of ease in managing online course services. Therefore, it is imperative for institutions to ensure the provision of computer hardware and software resources, pedagogical support, financial support, and consideration for promotion. This paper offers a comprehensive policy roadmap for administrators to implement blended learning in higher education.

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