Confluence learning: The new normal and emerging technologies

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Abstract

The COVID-19 pandemic boosted the global adoption of blended learning methodologies, since there was a need to limit interaction with people to lessen the risk of disease had resulted in the complete closure of all academic institutions. Blended learning is a modern teaching approach that blends conventional and contemporary learning approaches, wherein the online learning tools would not entirely substitute how conventional teachers engage with each other and educate their pupils. Nevertheless, there have been various difficulties in comprehending blended learning methods and working together as a team in an academic environment. The goal of this article is to examine teachers' and students' viewpoints on the usage of blended learning (offline/online) modalities in education and learning processes. Using a narrative literature review method, this study discusses emerging technologies. From the results, moving from a conventional to an e-learning platform requires changes in educational paradigms and behavior, resulting in the development of a modern learning culture and also the incorporation of technology advancements in education. During a crisis scenario, such as a pandemic or natural catastrophe, online/blended learning may help learners fulfill their academic requirements more effectively.

Keywords: Blended learning; Covid-19 pandemic; learning approaches; online education.

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1. INTRODUCTION

As a result of COVID-19, educational institutions like schools and colleges are grappling with how to maintain the teaching-learning process at the same time ensuring the safety of their faculty and students. To prevent the further spread of COVID-19, many universities have decided to eliminate all in-person classrooms, which include labs and other learning events, and therefore have demanded the faculty shift their teaching online (Roche et al., 2021).

Blended learning has turned out to be a circumstance in which conventional teaching is coupled using online opportunities, and the online resources are delivered in a regular classroom setting (Tang et al., 2024; Thompson et al., 2019). Online learning is just not thought to be similar to conventional techniques of teaching. As a result, both the teacher and the learner must be physically present. Within the educational arenas, as well as various development and training contexts, initiatives have also been made to adopt blended learning activities and techniques (Boelens et al., 2018; Nguyen et al., 2024).

To effectively combine such approaches, it is essential to first understand the appropriate blend of both conventional as well as online educational delivery settings. Developing an effective equivalent for such a conventional teaching model does not imply full replacement, and instead highlights rather than entirely replaces the old style of learning (Vo et al., 2017). Regularly, the integration of the two methods is insufficient to achieve digital domain convergence. Considering the criteria for implementing blended learning into reality necessitates the use of a thorough model that lays out a series of stages that influence the effectiveness of processes. However, there are many sectors in which both teachers and students have already embraced the impact of the digital world.

1.1. Purpose of study

The goal of this article is to learn about teachers' and students' viewpoints on the usage of blended learning (offline/online) modalities in education and learning processes.

2. METHOD AND MATERIALS

This study employed a narrative literature review method to analyze teachers' and students' perspectives on the adoption of blended learning modalities in education. The review focused on the integration of emerging technologies and their role in transitioning from traditional to e-learning platforms. The findings emphasize the need for paradigm shifts in education to create a modern learning culture and leverage technological advancements, especially in crisis situations like the COVID-19 pandemic.

3. RESULTS

3.1. Definitions of blended learning

The concept of "blended learning" is comparatively modern. The concept of "hybrid learning" was commonly used even before the term "hybrid learning" became widespread. The concepts of blended learning and hybrid learning are frequently utilized nowadays (Graham, 2009; Watson, 2008). A hybrid learning system is determined as a mix of face-to-face training with online learning material, that is equivalent to the blended learning definitions assessed (Hall & Davison 2007). Olapiriyakul & Scher (2006) state "These twin phrases (hybrid learning and blended learning) are being used interchangeably, yet relate to the very same construct," . Graham (2006) proposed a strategy for identifying good blend, as compared to bad blends, which make utilize of the privilege of face-to-face learning while avoiding the drawbacks of learning online. He demonstrated the approach by comparing the advantages and disadvantages of engaging in class discussions in classrooms vs online platforms. For instance, a teacher might decide to combine learning settings by beginning with just a quick introductory [face-to-face]

conversation to stimulate interest in the theme and set the vibe for a more detailed subsequent conversation [in an online] atmosphere.

3.2. Literature of confluence (blended) learning

Daniel (2020) stated that many governments have forced schools and colleges to shift from face-to-face to online teaching and digital education for students, citing the COVID-19 pandemic as one of the biggest issues the world's educational system has confronted.

In a blended education system, you may get the best of both: online and face-to-face learning. It incorporates online learning alongside face-to-face communication, with the intention of "joining the finest aspects of in-class teaching with the greatest characteristics of digital learning to encourage active, self-directed learning experiences with increased benefits" (Osguthorpe & Graham 2003; Vaughan, 2007).

3.3. Emerging technologies

With the rapid advancement of ICT (information and communication technology) in modern times, blended teaching has appeared as the preferred method of learning in education, particularly in higher education. A blended learning climate's procedure is "premised on the idea that there have been intrinsic advantages in face-to-face contact and also the knowledge that there are opportunities to adopting online techniques" (Clark & James 2005). Blended learning blends conventional face-to-face along with learning online, allowing students to receive education both offline and online classroom. It's important to emphasize that perhaps the online mode is a logical extension of conventional classroom training (Falconer & Littlejohn, 2007). Blended learning has been identified as a growing phenomenon that aims to provide students with the benefits of every other approach (Dziuban & Florida, 2004; Garnham & Kaleta 2002).

During the COVID-19 lockdown, with the end goal of rethinking the possibility of teaching methodology from conventional chalk-and-talk technique to online, blended learning, the Indian government introduced the "Bharat Padhe Online" initiative to motivate teachers to design online learning resources, disseminate innovative ideas on social forums by providing educational blogs, wikis, and constructing even more open educational resources (OERs). Several working groups have been implemented to regulate the online learning atmosphere throughout the country – from the national level to the state level, and afterward from the state level to district levels – to offer continuous learning assistance to students during all stages. Despite that, as Garg (2020) indicates, the COVID-19 pandemic has extraordinarily influenced further education.

3.4. Blended Learning during the COVID-19

Due to the emergence of the COVID-19 pandemic, there has been a surge in global interest in the function and usefulness of online and digital education during times of crisis. Various experiments with group learning, productive learning, collective learning, and transformative learning (TL) studies have found by incorporating in-person and online activities when structuring learning outcomes as well as evaluating the anticipated academic achievement of the learners, relatively new and more successful methods of learning could be discovered. Moreover, if the human community is confronted with a catastrophe such as a war, natural disaster, or pandemic, such educational concepts may be very beneficial. For instance, Baytiyeh et al., (2018) addressed the effect of tremulous occurrences such as earthquakes on educational bodies, emphasizing the important role of (ICTs) Information and communication technologies in providing education even when academic institutions are temporarily closed after a natural catastrophe such as an earthquake. Some research has focused on teacher and student views of the usage of online learning during the period of pandemic (Davies et al., 2020).

The blended learning approach is well-positioned to handle several difficulties posed by the COVID-19 pandemic in the academic year 2020-21. Therefore, if social distancing mechanisms remain in force, the face-to-face education component of this blended learning may evolve with what we refer to as mixed online pedagogical in the interim. Face-to-face synchronized learning (which may also be assisted by technology like Zoom) will be combined with varied online teaching. Google chat, for example, allows for asynchronous communication. This provides interaction and psychological empowerment, allowing learners to develop and remark on what they have learned (van Dorresteijn et al. 2024).

Face-to-face and other online learning modalities of delivery are widely used in Blended learning implementation. Students typically attend conventional lecturer-led face-to-face sessions using digital technologies to develop a blended learning environment for gathering experiences and promoting learners' learning achievement and engagement (Baragash & Al-Samarraie, 2018; Moskal et al., 2013; Vermeulen & Volman 2024; Sun & Shi 2024). Moreover, according to Graham et al., (2013), blended learning will become the next latest teaching method that incorporates many media resources to improve student involvement. Blended learning uses a variety of asynchronous and synchronous teaching tactics, including such platforms like social media, discussion forums, webinars, MOOCs, blogs, and more, to create engaging and relevant learning experiences for students (Dakduk et al., 2018; Graham et al., 2013; Moskal et al., 2013).

Figure 1
Key features of blended learning
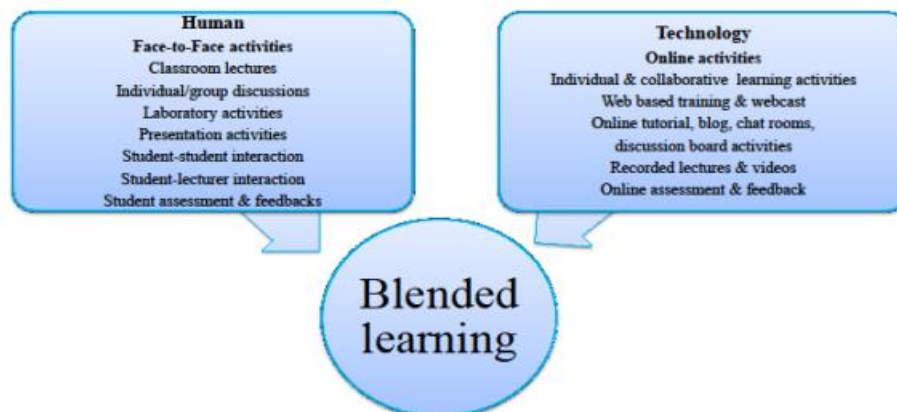
Source: Graham et al., 2013; Moskal et al., 2013.

Virtual learning management systems (LMS), for instance, Moodle, Blackboard WebCT, and other Web 2.0 portals are also used to allow collaborative learning processes among teachers and learners in blended learning (Anthony et al., 2019; Edward et al., 2018). The above figure shows that blended learning instructive design and delivery methods comprise online activities which include wordbooks, an online writing tool, web links, reference books, a message board, lectures, reference materials, quizzes, simulations, and a discussion forum among others (Anthony et al., 2019). Face-to-face education, at the same time, includes lectures, experimental activities, evaluation skill practices, presentations, individual/group conversations, and discourses led by the lecturer to assess students' academic achievement (Sun & Qiu, 2017). Asynchronous lectures and resources, lecture slides plus audio recordings could have been used. The presentations should offer a summary of the important topics and their application to the course's objectives and assessments. Professors are compelled to explore and pick existing high-quality online resources, such as video clips, and public presentations, including online

readings, with a focus on compiling and curating existing resources so that tutors may devote more time to extending and expanding on novel content. The lecture resources are prepared for students to access and learn at their leisure.

Online lecture tasks (asynchronous), suitable online activities should be selected and put up inside Moodle VLE (virtual learning environment) to enhance students' learning. Forum discussions on problems related to lecture themes or specialized readings might be part of the seminar duties. A well-designed online discussion prompt encourages and enriches student learning while also fostering robust social communication. Students' understanding may also be assessed through an online quiz, which would reinforce positive student involvement. Students may even be expected to create reflective comments on everyone's daily learning using blogs or wikis. Tutorial activities (synchronous online teaching or face-to-face small group teaching if permitted) , small group teaching may take the form of synchronous online teaching through Zoom or face-to-face on campus, depending on social distancing mechanisms in place. The primary tutorial objectives should be to debate important ideas and study material related to every week's lectures.

3.5. Important determinants for an effective blended learning approach

➢ Creating a perception of belonging to the community of learners and learning: A key and recurring aspect determining blended learning effectiveness is students' experience of belonging to the community of learners. Due to the complexity of ability grouping, this could entail assigning students to cooperative learning groups/learning sets to work on online activities that may stimulate peer learning.

➢ Teaching assistant: This is critical for academicians to still be prevalent in their students' education process. It does not have to be just a synchronous existence and can include activities like engaging with students' significant contributions to online tasks and offering usual office hours either virtually through Zoom or in person if possible.

➢ Creating a framework for student learning: Learners would have a regular framework for their learning if they had a weekly timetable that did not indicate the hour of study but did identify the time of tutor-directed learning they should partake in every day. Students can opt to participate in most classes (excluding synchronous sessions) at times that are agreeable to them. Furthermore, a weekly framework for online resources/activities would be beneficial for students to be more conscious of the periodic requirements for online learning.

➢ Scheduling and preparation: If we decide to use blended learning or completely online teaching for the current academic year, curriculum planning might have to begin though for the advent term to take a much more assertive instead of reactive methodological approach for processes to settle in for a productive e-learning perspective.

4. CONCLUSION

If blended learning is effectively developed, it has the potential to significantly enhance the educational experience for learners by offering a flexible and personalized approach to education. Blended learning combines traditional face-to-face teaching with digital learning tools, allowing students to engage with content at their own pace while benefiting from the guidance and support of in-person instruction. This hybrid model not only makes education more accessible but also encourages the development of critical thinking, self-discipline, and adaptability in students as they navigate between online and offline learning environments. However, there is no single approach that works for every institution. Each educational institution must find its own balance, customizing its blended learning model to fit the unique needs of its student population, faculty, infrastructure, and learning objectives.

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Given that blended learning can take many forms, ranging from simple integration of digital tools into a classroom setting to more complex combinations of synchronous and asynchronous online learning, it is crucial for educators and academic institutions to define what blended learning means within their specific context. Academicians and practitioners must carefully choose and implement a model that aligns with their educational goals, teaching methodologies, and student needs. Whether it involves flipped classrooms, online lectures, or interactive digital assignments, the model should be tailored to promote optimal learning outcomes. By clearly articulating the rationale behind their chosen blended learning approach, institutions can better support their faculty in delivering high-quality education and provide students with the structure and guidance needed to succeed in this increasingly digital educational landscape.

Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: The study adheres to the ethical guidelines for conducting research.

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