



Blended Teaching: A Futuristic Approach for the Development of Higher Education

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Abstract

Universities and colleges are managing their growth and addressing the rapidly developing framework of technology, as well as the expectations of learners themselves; blended teaching has emerged as an effective model for building the educational formats of the future. In this paper, the author seeks to understand what constitutes blended teaching and how it may redefine higher education. Moreover, combining classroom interactions and digital resources can foster greater learner engagement and motivation, leading to improved learning outcomes. Blended teaching also promotes accessibility and inclusivity by offering a platform for students with diverse backgrounds, schedules, and needs to access quality education. Furthermore, the data-driven nature of blended learning environments enables instructors and institutions to continuously optimize the teaching and learning process, using analytics to identify areas for improvement and implement evidence-based pedagogical strategies. Importantly, blended teaching encourages the integration of innovative educational technologies, such as virtual classrooms, adaptive learning platforms, and collaborative online tools, where digital literacy and self-directed learning are increasingly valuable.

**Key Words : Blended Teaching, Higher Education, Online Tools, Futuristic Teaching
and Learning Approach**

Introduction

As the world continues to undergo unprecedented technological transformations, the landscape of higher education is also undergoing a significant shift. Traditional approaches to delivering knowledge are being challenged increasingly, forcing schools and colleges to for the complexity of the modern world. In such a climate, blended teaching has been acknowledged as a progressive and efficient approach to developing higher learning. The given model combines synchronistic and asynchronous education to bring a more effective, flexible, and individualised learning approach. In essence, this forward-thinking strategy has the potential to revolutionize higher learning institutions with new mechanisms of delivering content and producing learners capable of competing in the contemporary world and handling the challenges of modern society.



At the heart of the blended teaching model is the recognition that the traditional, lecture-based classroom is no longer the sole or optimal means of delivering content and fostering student engagement. Blended teaching acknowledges these shifts and seeks to harness the power of technology to enhance and complement the in-person learning experience.

This paper will explore the key aspects of blended teaching and its transformative potential for developing higher education. The discussion will highlight how blended teaching can address the pressing difficulties by examining the theoretical foundations, practical applications, and emerging trends in this field.

Higher Education Blended Learning Effectiveness

Blended learning is a teaching model now integrated into higher education institutions. Not only did it raise interaction levels and promote a type of learning environment that had the potential to be more constructive, but it also relieved the pressure that the students felt regarding making errors. (Wong et al., 2014). Implemented initially in university settings at the close of the 1990s (Edward et al., 2018), BL has become well-adopted by the onset of the 2000s (Graham et al., 2013). Another hybrid approach combines web and face-to-face and is helpful for educators to fulfil different objectives, such as algorithmic and constructive reasoning or improve teaching quality and social integration (Kaur, 2013). Bowyer and Chambers (2017) have indicated that through BL, student togetherness and self-identity are nurtured, besides considering issues related to mistakes. Technology in the classroom enables the freedom to discover knowledge by themselves, makes them more focused and allows for better student feedback (Bowyer & Chambers, 2017). Integrating online and face-to-face learning helps educators achieve the following goals: Developing critical thinking, improving assessment skills, and fostering and promoting social justice (Kaur, 2013).

As postulated in Figure 1 below, BL combines face-to-face contact with the following delivery methods; typically, key delivery methods are combined with blended learning face-to-face interaction, as presented below. The students generally attend conventional face-to-face classroom instructions, which are supported by other forms of computer-mediated technologies, making it a BL environment that fosters students' learning, performance, satisfaction and learning outcomes (Moskal et al., 2013). Graham (2013) has admitted that BL is on the verge of becoming the following course delivery mode, using various media resources to engage students. Applying both asynchronous and synchronous teaching methods, including using forums, SNS, live chats, webinars, blogs, and others, BL enables effective and productive learning spaces for the students.

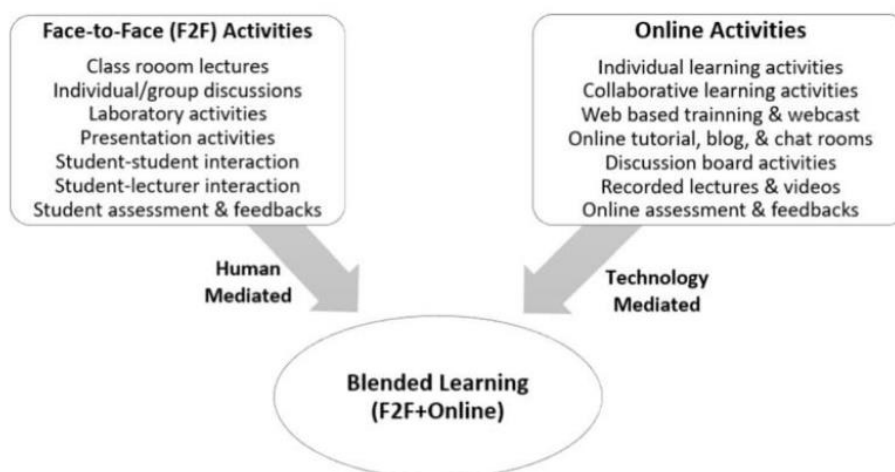


Figure 1 Key Elements of Blended Learning Platform

Course management software, especially the Virtual learning environment, includes Blackboard WebCT, Moodle, and other Web 2. Notably, 0 platforms are significant in fostering inter-students and faculty members' learning within the BL context (Edward et al., 2018; Anthony et al., 2019). Further, more than 97% of these organizations adopt at least one mode of learning supported by information technology. Although not shown as a tree, BL for instructional design and delivery comprises workbooks, reading assignments, text editing tools, forums, links, lessons, forums, reference materials, simulations, quizzes, and others, as shown by Anthony et al. (2019). On the other hand, face-to-face teaching consists of lectures, laboratory exercises, skills check, presentations, discussions, individual and group dialogue, and proctor discussions intended to evaluate students' performance (Sun & Qiu, 2017).

Blended learning (BL) is increasingly used in education for the following reasons: pragmatism, efficiency, accessibility, flexibility, and effectiveness (Bliuc, Goodyear & Ellis, 2007). Osguthorpe & Using technologies, which are the Web 2. Consequently, no virtual classrooms combined with the traditional face-to-face teaching and learning environment are facilitating the emergence of new education paradigms (Hiltz and Turoff, 2005). It enhances the traditional academic experience by averting the disadvantages of fully online and face-to-face learning paradigms (Masie, 2006). However, what do we know about the specifics of this process and what makes blended learning a thing of beauty? To answer this question, it will be pertinent to briefly trace the development of the concept of blended learning and explain Graham's (2006) concept in detail. Blended learning, as defined by Kazu and Demirkol (2014), is a new learning technique developed for particular learners, incorporating the merits of more than one learning model. The blended learning then accommodates seeds of different curriculum ideologies in an integrated manner, leveraging the strengths of the various philosophies. Both ideologies focus on enlightening the students, but they use different approaches and come with different goals, encompassing a wide range of teaching approaches. This is one of the strategies used and



is referred to as blended learning. However, “due to the lack of standard definition of blended learning, the educators, instead, define as well as adopt and infuse blended learning into their courses using their perceptions of what constitutes blended learning” (Alammary et al., 2014, p. 440).

Since no consensus on blended learning has been reached, teachers can define their function and chart courses that are best applicable to their students. Readers will recall that the term has numerous interpretations depending on the context, yet several experts argue for the absence of a standard definition. (Alammary et al., 2014, p. 443). Such flexibility means that educators can deliver knowledge depending on the developmental phases of the learners they are handling, delivering knowledge at the right time (Koops, 2012, p. 50).

Rousseau’s educational ideas, where she envisioned a teacher who should not intervene much in her student’s life practice, provide much freedom to the pragmatists and, consequently, the freedom to learn sustains. There is no concern about eliminating a teacher; instead, Rousseau indicated that the educator must indirectly formulate an environment wherein an experience must occur for the child (Lewis, 2012, p. 92). According to Lewis (2012), this approach only affords children ‘an appearance of freedom’; in other words, they can play, learn, and be creative in infant schools (p. 92). Blended learning thus offers teachers, schools, and entire educational systems relatively large freedom regarding how the approach will be implemented. Despite the various interpretations of blended learning, all definitions share a common element (Alammary et al., 2014, p. 443) using a combined approach of teaching strategies.

Influential Perspectives of Blended Learning

The historical analysis unveils that the educational process, teaching motives, and ideas have constantly shifted. Sometimes, in the past, education was all about the students reading large amounts of information and repeating it back parrot-like; performance was measured by one’s ability to reproduce information (Mertler, 2014). This is true because, during this era of its practices, the essentialist approach to education served its purpose adequately. The children’s achievements in their education also featured as a major preoccupation for some of the first philosophers of the topic. Blended learning is in tune with Rousseau’s notion that the teacher should not necessarily be the focal point of a learner. The thinking that a teacher should facilitate and not dictate the process conforms to the possibility of success in blended learning. Often, Koops (2012), the author mentions that the “Citizen of the West is a Child of the Enlightenment” (p. 46), which indicates that such systems should aim at achieving this. As Rousseau noted: ‘Make your children do things, when it is possible, and only speak when it is impossible to do’ (as cited in Chapman & King, 2012, p. 71) and three centuries later, there is an increasing attempt to bring Rousseau’s ideas into practice. In the early 20th century, a new educational theory emerged: Progressivism means gradual development, incremental change towards the progressive liberalization of the civil service and a country’s more general political culture. This approach brought a new approach to the education system based on Washed John Dewey, which placed the individual



learner. (Mertler, 2014, p. 74). Dewey promoted classrooms based on students' needs and interests, purposeful learning, questioning, problem-solving, and creativity (Mertler, 2014). This was a shift from traditional forms of learning; therefore, it focused on the central points of students.

Conceptual Framework of Blended Learning

Anyone wishing to adopt the holistic approach must use media to deliver education. This method of delivering education incorporates both face-to-face and distance classes, where any combination of synchronous and asynchronous media that supports the teaching process is used (Holden & Westfall, 2006). From a learning delivery perspective, blended learning combines learning/eLearning with face-to-face learning in an intentional manner whereby the replacement of some face-to-face classroom time with bLearning is done. This approach combines two distinct teaching paradigms: face-to-face and technology-mediated instruction, such as synchronous class teaching and online learning (Laster, 2005). The courses comprise both class and out-of-class activities and try to interlink the methods of instruction using instructional media and professional work experience to make an effective coping mechanism (Moodle: Blended Learning 2009).

These studies underscore the vast prospect of the blended learning strategy implemented in many learning institutions. Liu and his team also contributed to the advancement of the research by undertaking a meta-analysis of 56 studies on blended learning. According to their research, blended learning positively affects student learning outcomes compared to traditional teaching. Also, the study establishes that concerning the level of knowledge acquisition, the blended learning methods are at least as effective as the traditional face-to-face learning methods and may even be more effective in some instances. At this level, though, blended learning operated positively at the course level. Liu's meta-synthesis also indicated that science, technology, engineering and mathematics students performed better in their understanding of blended learning than in Classroom learning. Nevertheless, based on such optimistic findings, few studies examine the process factors that underpin these successful outcomes.

CABLS Framework (Complex Adaptive Blended Learning Systems)

The researchers advise that they study the interactions within the blended learning setting within the CABLS framework in the future since they are non-linear. This paradigm gives an understandable picture of how six constituent systems—teacher system, learner system, institutions system, learning support system, technology system, and content system collaborate in a blended learning environment (Wang et al., 2015). Unlike these fully closed subsystems working in a closed environment, these subsystems are fully dynamic, working in a reciprocally interactive way.

These roles and components of blended learning are described through the facilitation, administration, assessment and integration of relationships in learning spaces or what is abbreviated as CABLS. Teachers' roles are to become facilitators, moderators, guides, and advisors. Learner roles are becoming researchers, practitioners, and collaborators. Institutions' roles are becoming strategy providers, support systems, services, and environments. Content is becoming collaborative, interactive, flexible, and context-based problem-solving learning resources. Also, CABLS integration includes technical and academic support and technology for face-to-face and online learning (Wang et al., 2015). This framework could help stakeholders regarding the concept of blended learning by providing a better and deeper view of the different aspects, thereby making adopting this form of learning more accessible. To contribute to the enhanced understanding of such non-linear interactions, Wang also underlines the necessity of further research on the perception of interactions within a CABLS framework to further the development of the concepts promoting integrated learning environments among institutions.

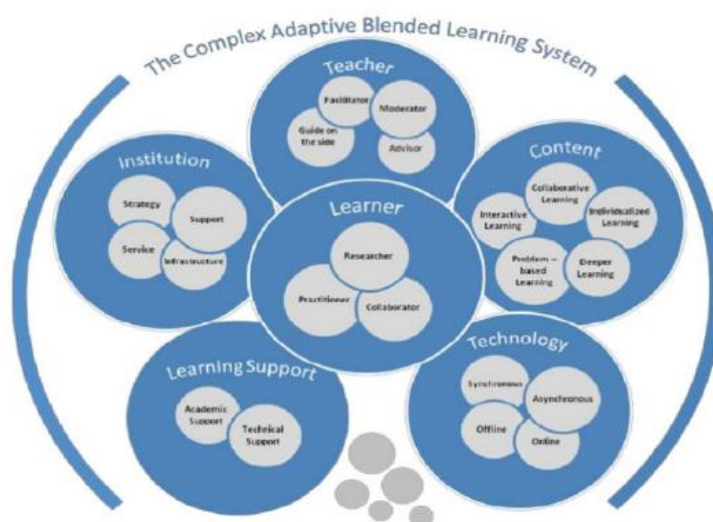


Fig 2: The CABLS used by Wang (2015)

This indicates integrating different parts that make up a blended learning environment. Previous works have considered fixed correlations between all the elements involved in this process (Boelens et al., 2018), albeit to a lesser extent, with conflicting findings (Boelens et al., 2018) Boelens et al. (2017) explored blended learning from the faculty side of things. Their work enriched my understanding of how faculty and staff perceived blended learning while other research was conducted on understanding students' perceptions of it.

As a cross-sectional study, Holmes and Prieto-Rodriguez (2018) aimed to assess 470 students and staff participants' perceptions of the blended learning LMS. Based on the findings, both groups proved informative and receptive to the learning facilitated by using the LMS, especially the interactive option. However, there were some difficulties regarding accessibility to Internet content defined (Holmes & Prieto-Rodriguez, 2018).



Furthermore, the study addressed the concern of administrators' perception of the blended learning environment. Thurab-Nkhosi (2018) undertook a qualitative study to identify the experiences of administrative officers and deans of blended learning. The study pointed out that in implementation, leaders must provide a vision and suitable approaches (Thurab-Nkhosi, 2018).

Blended learning Approaches

Supplementary activities are introduced additionally in an otherwise traditional face-to-face mode of teaching and learning when there is a specific instructional demand for the Web to enhance the category of the course's instructional interactions. For example, McCarthy (2010) added an online component to the Imaging Our World program. The usage of Facebook assignments as part of class activity and the requirement for students to comment on friends' works and to have online discussions in addition to the traditional classes and workshops. These online discussions were then used in classroom-related activities to solidify student relations or affirm interactions made over the Internet. McCarthy evaluated this approach using weekly student feedback, pre- and post-semester surveys, and project reflections, finding that Facebook activities facilitated academic and social connections among students while addressing diverse learning needs.

Conversely, Kaleta et al. (2007) identified a trend where many instructors add online elements to existing courses without removing any original components. This phenomenon, termed the "course-and-a-half syndrome," often occurs when less experienced teachers attempt to create blended courses.

Online Learning Managing Tools

The advancing of this trend is the blending, a learning approach that combines both online and face-to-face teaching. This method became popular because of technology, with the Learning Management System as the primary tool for handling and delivering instructions (Psycharis et al., 2013).

Current studies reveal that deficiency in interaction decreases flow, and adopting a blended learning environment improves learners' interactions and enhances their involvement with learning (Aslan et al., 2011). This 'blended' approach of half face-to-face contact with the lecturer and the other half online means the learning is more engaging.

However, despite the many advantages of blended learning and LMSs, integrating these technologies into educational settings presents several challenges. Researchers have identified various issues related to implementing blended learning. (Comas-Quinn, 2011). LMS platforms like Moodle offer valuable features, including personalized instruction, electronic assessments, and feedback mechanisms that support self-regulation. Nevertheless, the effective use of these systems requires careful planning and adaptation by educators (Blanco & Ginovart, 2012).



Moodle and Learning Management Systems

A Learning Management System (LMS) is an application intended for web-based application of technology in the management of learning tasks. This is because it facilitates several functions that will help in the process of course development, teaching strategies, assessments and evaluations, as well as helping to support the instructional and administrative facets (Psycharis et al., 2013). Interactivity is achieved through communication and collaboration tools, including discussion forums, chat rooms and other icons that improve the learning process (Ssekakubo et al., 2013).

Examples of widely used LMS applications are Canvas, h5p, moodle, padlet, mindmap, Kahoot and Quiz Editor. All of these tools offer particular functions in order to meet diverse educational requirements and teaching approaches. For example, Moodle is perhaps one of the most used LMSs, aiming to promote collaborative learning while embracing a student-centered approach. Moodle, the second platform in the study, was developed by Martin Dougiamas, a former WebCT administrator, and it incorporates both constructivist and social constructivism learning theory, which prescribes that students are active constructors of their knowledge (Sanchez & Hueros, 2010; Janzen et al., 2012; Ursache et al., 2012).

As an open-source platform, Moodle is equipped with a range of necessary features that support diverse educational activities. Teachers can design or upload lessons, quizzes, assignments, and discussion forums, all integrated with a grade book for tracking student progress (Ursache et al., 2012). The system allows for flexible configuration, including timed activities, password protection, and set completion deadlines (Brandl, 2005). Moodle also supports uploading and sharing various file types, such as HTML pages, multimedia files, graphics, videos, and audio recordings (Brandl, 2005).

Due to its user-friendly interface and robust functionality, Moodle is utilized in over 200 countries and is available in 80 languages, reflecting its global reach and widespread adoption (Tiantong & Teemuangsai, 2013).

E-Assessments And Self-Regulation

Formative assessment is widely recognized as a pivotal strategy for enhancing educational practices and fostering student self-regulation. By providing ongoing feedback, formative assessment helps educators refine their teaching methods and supports students in managing their learning processes (Black & Wiliam, 2009). This approach is crucial for effective learning, as self-regulation enables students to plan, monitor, and direct their educational activities (Wang, 2011).



Integrating formative assessment tools, such as the Moodle quiz tool, allows teachers to deliver immediate feedback to students, which can help diagnose learning issues and guide improvements. The automatic feedback feature of Moodle quizzes supports self-directed learning by providing students with insights into their performance and areas for growth (Brandl, 2005). This capability enhances the effectiveness of formative assessment by enabling timely and actionable feedback.

Cooperation And Involvement In A Blended Learning Environment

Technology provides students with fresh and effective avenues for engagement, collaboration, and educational approaches by promoting innovative communication and interaction within a blended learning environment. (DePietro, 2013).

The lecture-based environment was compared with the project-based blended learning environment by Delialioglu (2012). Blended learning is an interaction between students and teachers with the additional help of technology (Kliger & Pfeiffer, 2011). Using motivational query instruments in cross-sectional surveys, the study pointed out that students who take project-based blended learning had enhanced motivation levels more than those in the traditional classroom learning environment.

Based on Delialioglu's survey, future research should examine the effects of instructor behaviours on students' engagement within the context of BL. Moreover, more research about the organizational impact of blended learning is required, particularly concerning the changes that blended learning brings to teachers' work. Downing et al. (2014) examined the effect of using student-created sources in a blended learning approach. According to the findings in the survey done among students, producing movies presented students with tangible challenges as part of real-life assignments where students had to cooperate and solve the challenges they faced. It helped improve the capability of content understanding and sharpened skills that must be learnt elsewhere.

Conclusion

This progressive model is already proving to be an asset to teaching and learning and positively impacting the various competencies, including self-management, teamwork, information technology skills, students' motivation, and academic performance in their courses. The model's main benefits are the flexibility and personalization of the learning process, the launch of classes for people with disabilities and other learning needs, and students' readiness for the job market. However, blended teaching cannot be done haphazardly; that is, there is a need for an institutional vision, faculty development and training, and an integration of technology. Thus, to achieve success under the constant changes in higher education, blended teaching offers one of the possible ways for institutions to meet the requirements of the digital millennium. In this way, it will be possible to form more lively, qualitative, and prospective educational spaces that can prepare students for



success in the emergent complex environment of the contemporary university. Subsequent research should focus on the lifelong outcomes of blended learning, investigate maturing technologies more thoroughly, and define methods for the diffusion of effective blended teaching within numerous contexts.

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