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UTILIZATION OF BLENDED LEARNING
A LITERATURE REVIEW

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ABSTRACT

Advances in information and communication technology have resulted in the development of a wide range of innovative educational strategies, methodologies, and models. Blended learning is one of these potential educational approaches. Despite the fact that the blended learning model is not new, it creates new types of learning experiences and incorporates a considerably larger number of learning tactics or "dimensions." It maximizes the advantages of both traditional and electronic distribution systems while minimizing their disadvantages. (Abdel-Haq , 2021)

The goal of this article is to look at the fundamental ideas and practices of distance education in order to better comprehend recent advancements in online and blended learning. It is suggested that traditional distance education has not fully embraced online learning's creative potential. The ideas of determination and self-continue to guide distance education. On the other hand, traditional face-to-face education is rapidly using online learning approaches to promote collaborative and blended learning opportunities.

It examines some of the motivations for the implementation of blended learning, as well as the potential benefits and difficulties to be considered when implementing creative teaching practices in a combined learning environment. This literature review examines the potential applications for blended student experiences that combine time spent online with traditional face-to-face time to maximize student learning.

Keywords: Blended learning, utilization

I. INTRODUCTION

The 21st century education system requires personalized, productive, and collaborative teaching–learning experiences, which are expected to transform the entire education system from a traditional face-to-face (F2F) mode to a techno-based independent mode, with the primary focus on developing the learners' potentials and creativity in the most effective ways possible. (Akkoyunlu and Soylu , 2006)

The global pandemic is anticipated to produce the greatest significant disruption in educational opportunities in at least a century. Students' academics and lives will be impacted in a variety of ways, some of which are still unknown. In the short term, because mandatory physical separation measures would disrupt – or have already disrupted – their ability to attend school, they will learn less than they would otherwise. Changes in educational procedures, new forms of education and training, and new skills are all required as the modern knowledge society emerges. To achieve these improvements, simply changing the subject matter taught is insufficient; fundamental shifts in teaching methods are required. (T. Bates, 2000)

Information and communication technology (ICT) is an essential component of modern education, specifically because of the potential it provides to implement the new teaching paradigm. Since the beginning of this field, ICT has been used for teaching and learning. (C. McCormack and D. Jones,1997)

The focus of the review is on the papers' results and conclusions. A variety of factors for utilizing blended learning were revealed in the report.
Furthermore, this paper aimed to identify the effectiveness of implementations of blended learning for administrators, teachers, parents and students. Constant evaluation can track the difficulties and factors in implementing blended learning for students, parents, and the institution.

II. RESULTS

Nature and Value Of Blended Learning

In its most basic form, blended learning is defined as the purposeful blending of classroom face-to-face learning experiences with online learning experiences. Integrated learning is a set of delivery methods that have been selected and adjusted to fit the needs of a diverse group of students in a number of courses. (Garrison & Kamuka , 2004)

Combined learning is a term established by the distance learning community to describe the significance of synchronous learning activities, such as face-to-face meetings with instructors and collaborative work with peers, as complements to asynchronous learning activities carried out by potential learners. Teaching methods in formal education settings have virtually always constituted a synchronous traditional classroom (synchronous) supplemented by asynchronous services rendered outside of class (asynchronous); that is, formal education has traditionally been "blended. While outside-of-class work is an important part of the process, there is usually a loss of directness in terms of feedback though since assignments executed outside of class must be evaluated by individuals and then returned to the learner for analysis. (Howard et al ,2006)

The mixed model can take advantage of “the excellent features of online education as well as the interactivity that is strongly correlated with face-to-face classroom instruction” (Martyn, 2003).
A blended learning environment can allow for the continuing of conversations that were not accomplished during planned class time. Teachers can use class time to concentrate on crucial questions and conversations that previously took place in the online environment in a similar but different way. (Mohr, Wiskstrom, Bernshausen, Mathis, & Patterson, 2003).
The primary purpose of educational activities is to help the people become more creative, productive, problem-solving, and capable of producing new things as they acquire. Individuals may now acquire information, present it, and share it cheaply and easily because of advances in Internet and information technologies. (Kayalar, 2020).

These advancements in information and communication technology have resulted in the development of a wide range of new educational strategies, methodologies, and models. Blended learning is one of the most promising techniques of incorporating digital technologies into education. (Titov, Kurilov, Titova & Brikoshina, 2019).
Although the distance education concept is not new, it continues to expand and mature, resulting in new types of learning experiences. Online education is the combination of face-to-face and online/mobile learning. Blended learning, on the other hand, comprises new non-computer instructional tools and approaches as well as digitally mediated ways, whether offline or virtual. (Kayalar, 2020). However, the term "dimensions" has come to refer to a wider range of learning techniques. A blended educational approach today may include one or more of the dimensions listed below, however many of these have overlapping characteristics. (Kayalar, 2020, Marunić, 2015; Singh, 2003).Using a variety of web-based technologies for educational purposes, such as traditional learning, self-education, group learning, video, audio, or print., with or without instructional technology, combining different educational concepts such as structuralist, behavioral, and cognitive approaches to deliver the optimum learning outcomes.
using various instructional platforms such as videotape, CD-ROM, web-based education, and films in combination with face-to-face instructor-led programs. using teaching methods in

compliance with traditional tasks to create a pleasant learning and study environment, using a combination of offline and online learning, Identity and live, blended learning are combined, learning that is both structured and unstructured, using custom and off-the-shelf content together and learning, application, and performance support are all combined.

Blending learning can help you get the most out of both platforms while minimizing the drawbacks of each. It retains the opportunity for fast feedback that learners desire while allowing learners with more flexible schedules to participate more fully. It also improves faculty innovation by integrating instructional activities and assignments, as well as promoting conversation on a variety of topics using resources from numerous partner centers and national resources. It provides more opportunity for students to reflect on course concepts and share their expertise in a group setting. (Lotrecchiano, McDonald, Lyons, Long & ZajicekFarber, 2013).

Blended learning is a type of learning that combines traditional face-to-face lectures, online learning, and learning supplemented by other technology to create the most efficient learning environment possible. Online and conventional learning settings, technology and media for learning material delivery, various teaching and learning methods (both online and traditional), group and individual learning activities, and synchronous and asynchronous interactions are all part of blended learning. The goal is to find a combination that would motivate students and help them master the course. (F. Alonso et al, 2005)(K. Thorne, 2003) (J. Bersin 2004) .Blended learning is an endeavor to use synchronous learning activities, such as face-to-face interaction with educators and joint effort with peers, as a supplemental to asynchronous learning activities carried out by students independently.

In broad terms, blended learning is defined as the integration of face-to-face instruction with computer-mediated instruction. (Bonk and Graham , 2006). Various names, such as "hybrid learning" and "mixed-mode" learning, have been used in the literature. While the terms "hybrid learning" and "blended learning" are interchangeable, the word "hybrid learning" is more commonly used. (Martyn , 2003) .Considers, for example, that 21st-century classroom activities are inextricably linked to the usage of the Internet and learning platforms, combining the interactive and social nature of classrooms with students' own learning environments. (Clark, 2001)

Most definitions define blended learning platforms to always be e-learning applications with a face-to-face classroom component. (Sharma and Barrett, 2007) In fact, blended learning can integrate the best characteristics of both classroom-based and e-learning learning settings. (Bonk & Graham, 2006).

The purpose of blended learning is to give an eclectic approach that seeks to reduce the flaws of multiple learning approaches while maximizing their strengths to provide the most effective learning environment possible. (Brown, 2016; Graham, 2006; Williams et al. ,2008). To put it another way, blended learning entails combining activities from several venues, such as face-to-face instruction and e-learning, each with its own set of procedures. (Garrison and Vaughan ,2008). Blended learning is described as the use of both in-class face-to-face learning activities and web-based online learning to produce the best results. (Bersin ,2004; Garrison and Kamuka ,2004; Stain and Graham, 2014)

Some scholars, on the other hand, have ventured beyond e-learning and out of the classroom. They think that blended learning entails the use of two or more separate teaching/training methods, i.e., a combination of methods that fit the needs of learners/students/trainees regardless of the subject they are studying. (McSporran & King ,2002).

This could involve a variety of options, such as: integrating classroom and online learning, integrating online learning with access to a coach or faculty member, integrating simulations with structured courses, integrating on-the-job training with one-on-one sessions and integrating managerial mentoring with e-learning activities.

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It is common knowledge that teachers must consider their students' needs, aptitudes, and successes, as well as the time invested before they gain the skills. We must also consider a student's need for guidance, as well as their capacity to deal with difficult activities, use items, be

creative and innovative, and solve problems. Feedback and assessment are necessary to complete each student's specific profile, and as we all know, time is of the essence. As a result, blended learning provides teachers with an opportunity to spend more time with students.

As a result, the individual learning process is improved since the learning environment is a mix of material and diverse methods that lead to interactions.
Communication is, in reality, the essential 'ingredient' of the blend, as it is built on remembering the interactions and the practice done throughout the contacts. (Caraivan, 2011).

Blended Learning Modalities

Blended learning is characterized by the effective integration of many means of delivery, educational models, and different learning in an interactively meaningful learning environment.
Blended Learning courses integrate online, and classroom learning activities and make the most use of resources to improve student learning outcomes and solve critical institutional concerns. (Garrison, 2004). Blended Learning is the organic combination of carefully chosen and compatible face-to-face and online techniques and methods. (Graham, 2006). Blended learning, in general, blends online educational digital distribution with the best characteristics of teaching process and live instruction to customize learning, promote deliberate reflection, and differentiate teaching from students' perspective across a diverse group of learners. (Watson ,2012)

Blended learning, according to Thorne (2003), is a way of addressing the challenges of tailoring learning and development to the needs of individuals by combining the innovative and technological advances offered by online learning with the interaction and participation offered by the best of traditional learning.

Blended learning is a major portion of a continuum that runs from totally online to traditional face-to-face settings, according to the author. The following are the categories that make up the blended learning continuum:
1) An online learning curriculum with no face-to-face components, with all teaching done online and at a distance. 2) An entirely online curriculum with the option of face-to-face education, however this is not needed. 3) A curriculum that is mostly or entirely online, with certain days in the classroom or computer lab required. 4) A computerized lab or classroom where students gather every day, with a mostly or fully online curriculum. 5) Classroom instruction with major, mandatory online components that extend learning beyond the classroom and school day 6) Online resources are integrated into classroom education, but there are little or no mandates for pupils to be online. 7) Face-to-face interaction with limited or no internet resources or interaction (Watson 2008)

Staker and Horn (2012) proposed four blended learning models that they claimed characterize the majority of blended learning programs in the K-12 sector. These are the following: 1) The rotation approach, in which students alternate between several learning modalities, including online learning. Full-class education, group projects, and individual tutoring are some of the other options. 2) The flex model, in which curriculum is mostly supplied online and students go at their own pace. Through activities such as limited instruction, group projects, and individual training, the teacher or other adults provides face-to-face support when needed. 3) The identity model, in which students complement traditional courses with one or more online courses. 4) The enhanced model, in which students alternate between attending classes on campus and engaging online.
online in a remote area.

Graham (2006) proposed a strategy for identifying good mixes, as opposed to bad blends, that take use of the strengths of face-to-face learning while avoiding the drawbacks of online learning. He demonstrated the approach by comparing the advantages and disadvantages of conducting class discussions in classrooms over online venues.
Blended learning, according to Garrison and Kamuka, (2004), is "the intentional integration of classroom face-to-face learning experiences with online learning activities."

Blended Learning Conceptualizations

The Inclusive Conceptualization

Blended learning should be viewed in an inclusive manner, according to the inclusive conceptualization. Mixing instructional modalities (or delivery media), combining instructional approaches, and combining face-to-face and online training were the three most common types of blended learning, according to a literature review (Graham, 2006). Although the first two perspectives demonstrate an interest in the effects of media and method on learning, Graham argues that they define blended learning so broadly that it encompasses almost all learning systems.

When putting forth the above-mentioned definition, he stated that the third position is more useful: Face-to-face training is combined with computer-mediated instruction in Blended teaching approaches. This concept, however, could be taken fairly broadly, as blended learning encompasses any methods of education that incorporate some aspect of face-to-face or computer-mediated training.

On the one hand, it may be argued that the idea of blended learning is that it means different things to different people, demonstrating blended learning's future opportunities. (Driscoll ,2002)

On the other perspective, it may be argued that the lack of clarity on how to define blended learning is a concern. (Oliver and Trigwell ,2005).

The Quality Conceptualization

By strategically blending the strengths of face-to-face and online learning, the quality concept of blended learning emphasizes the improvements in the quality, or other positive results. They differentiated blended learning from enhanced classroom or entirely online learning experiences, despite the fact that the lines between these approaches are unclear. Because no two blended learning designs are alike, Garrison and Kanuka acknowledged the significant complexity of blended learning. They recommended using the term blended learning to describe when face-to-face and online learning are combined in a strategic manner. According to numerous research, the goal should be for face-to-face and online teaching and learning to complement each other by integrating various advantages. (e.g., Bicen et al. ,2014; Cakir and Bichelmeyer ,2016; Deschacht and Goeman ,2015). However, with a few exceptions, it is frequently not mentioned what these benefits are. Zacharis (2015), for example, claimed that blended learning may help students learn outside of the classroom. Because teachers and students have limited time in the classroom, a seminar could be conducted online via a discussion board or other platform. Preparing students for face-to-face activities, such as the differentiated instruction, in which participants activate educational activities such as video lectures from home, allowing in-class face-to-face time to be used for classroom discussion and student-centered learning activities such as group work. (Tan and Hew ,2016)

The Quantity Conceptualization

Blended learning's quantity conceptualization stresses the quantity of face-to-face and online learning. According to Allen and Seaman (2010), a blended learning course is characterized as follows: A mixed course that combines online and face-to-face instruction. A significant percentage of the curriculum is supplied online, and there are usually online discussions and less face-to-face discussions. They also proposed that in blended learning, the proportion of content supplied online should be 30 to 70%.

The Synchronous Conceptualization

The synchronous perspective of blended learning stresses real-time teaching and learning that includes both on-campus and online students. The following is a definition of blended synchronous learning: Distance students participate in face-to-face classes using rich-media synchronous platforms such as virtual meetings, web conferencing, or virtual reality. (Bower et al. ,2015) 1) It is distinguished by the use of various technologies to facilitate synchronous class discussion, decision making, interaction, and student engagement. (Bower et al., 2014)

The Digital Classroom Conceptualization

The blended learning paradigm of the digital classroom stresses the utilization of internet tools in the classroom. The term "blended learning" refers to the usage of digital technology in the classroom. Many of these research are performed in K-12 schools. (e.g., Cakir and Bichelmeyer 2016; Hong et al. 2016; Smith and Suzuki 2015) Students in one research used a tablet computer

and earphones they were given when they come to the class to access multimedia teachings. (Smith and Suzuki ,2015)

Other Conceptualizations

Oliver and Trigwell (2005) concluded in a thorough analysis that the term blended learning merely refers to the mixing of two or more different types of information. Mixing e-learning with blended teaching, mixing online learning with face-to-face learning, combining media, mixing settings, mixing theories of learning, mixed learning objectives, and mixed pedagogics were recognized as several sorts of mixtures. Blended learning, for example, should strategically integrate many instructional modalities (Alammary et al. ,2014), Zacharis (2015) recommends using active learning techniques and a variety of teaching methods, including both asynchronous and synchronous distance learning (Diep et al., 2017), provide comprehensive learning resources and course content, and provide timely feedback to the students' course development via in-class interactions and online resources (Cakir and Bichelmeyer, 2016). These conceptualizations do not appear to be in line with the definitions that have been evaluated.

The following are some definitions of blended learning from various perspectives:

Holistic Perspective- This refers to the use of many media to give instruction. This can include incorporating instructional material into a typical classroom or a distance learning setting. It also encompasses any combination of synchronous and asynchronous media that aids in the delivery of teaching.

Educational perspective - Blended learning refers to courses that combine traditional and online face-to-face class activities in a planned methodologically valuable manner, with a significant proportion of face-to-face time being substituted by online communications. It is primarily concerned with combining two distinct concepts: synchronous classroom instruction and asynchronous internet instruction. (Laster, 2005).

Pragmatic perspective- Courses that are offered both in the classroom and online and employ a variety of instructional techniques: To blend diverse pedagogical techniques, such as constructivism, behaviorism, and formative assessment approaches, in order to achieve the best possible learning outcome, whether or not instructional technology is used,
to blend face-to-face instructor-led teaching with any form of instructional technology, such as CDs, videos, or web-based training and to integrate or combine instructional technologies with real-world job responsibilities in order to achieve a harmonious learning and working environment. (Blended Learning, 2009).

Blended learning is one of the most popular training methods today. While the term is relatively new, the concept has existed for decades. To achieve optimal efficacy, blended learning mixes e-Learning tools (everything from video streaming over the Web to email) with traditional classroom training. Students can use the internet to prepare for, consolidate, and recall classroom experiences while also benefiting from interaction with teachers and peers in a physical or virtual classroom. Without sacrificing the convenience, cost-effectiveness, or flexibility of self-paced Web-based coursework, student learning and retention rates improve. Blended learning can also be defined as combining the best features of self-paced, instructor-led, distance, and classroom delivery to create flexible, cost-effective training that can reach the broadest audience possible in terms of geography, learning styles, and levels. Each component becomes a component of a larger workplace performance solution.

The following are some examples of blended learning options: Instructor-led class in real time such as classrooms of the past . online virtual classroom videoconferencing or live video via satellite and coaching/mentoring through the internet. E-mail-based instructor-led classrooms, for example, allow you to learn on your own time, instructions, textbooks, study guides , internet resources and networks. Chat, real-time messaging, and news groups are all being used to create tools for deep learning communities.

Kachmarchyk, Khrystiuk and Shanaieva-Tsymbal (2019)) and Titov, et al. (2019), the following are some of the advantages of blended learning: because it focuses on learning that benefits the most from face-to-face interaction, classroom training provides social benefits, the individualization benefits of self-paced, online learning are strong for subject that requires

minimal interaction, time away from the job is minimized, as are classroom/instructor costs, leading in cost savings, follow-up strategies based on the internet boosted retention and reinforcement ,more adaptability to the varied learning styles and levels of your audience. (Marsh ,2001) ease of use, flexibility, convenience, and time efficiency, the ability to change the components of learning; improving instructional efficacy as well as student motivation, autonomy, and social interaction and a range of methods and approaches are used including two or more different teaching approaches, interaction, and mixing different training tasks. (Kachmarchyk, Khrystiuk and Shanaieva-Tsymbal,2019) (Titov, et al. ,2019) Changes in educational procedures, new forms of education and training, and new skills are all required as the modern knowledge society unfolds. To achieve these improvements, simply changing the subject matter taught is sufficient; fundamental shifts in teaching methods are required. The traditional educational technique, in which knowledge is mostly transferred through lectures, has a number of problems, most notably that pupils are not highly motivated to actively gain knowledge. To achieve a transition in teaching from a teacher to a learner-centered setting, the role of an instructor must be redefined. The educational system should encourage students to learn individually and prepare them for lifelong learning, which is a necessary capability for successful participation in the globalized world.

Blended learning focuses on maximizing the achievement of learning objectives by utilizing the appropriate personal learning technology while monitoring the appropriate personal learning style in order to transfer the appropriate skills to the appropriate individual at the appropriate time.

III. SYNTHESIS

A reciprocal structure for student learning was created by combining face-to-face and digital tools. Beyond the scheduled class time, the online area supported the face-to-face atmosphere by allowing teacher candidates to ponder, process, and have online interactions. Teachers benefited much from the blended design. It provided a versatile option for teacher education by allowing for discussion in both a face-to-face and online setting. The mixed design also allowed students to use time in a more flexible manner both within and outside of the classroom. There are definitions of blended learning in the publications reviewed. However, the assessment of the literature reveals a deficiency of studies on the efficiency of blended learning. As a result, additional research into the advantage of utilizing blended learning for administrators, teachers, and students is recommended.

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