The Effectiveness of Blended Learning and Student Characteristics: An Overview.

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Abstract:

This paper analyses the importance of blended learning and its effectiveness in relation to student characteristics and the factors that negatively influence it. Blended learning is one of the most important ways of educational process. Under the blended learning mode, it can fully mobilize the enthusiasm and initiative of students, and transform the shallow learning in the traditional classroom into deep learning, so as to obtain better teaching results. It provides students with different learning options through accessible and diverse materials, promoting motivation and self-confidence, increasing achievement and satisfaction, saving time, and allowing them to learn more in less time and energy. Learner's characteristics like time management skills, computer literacy, system functionality, peer assistance and interaction with the teachers are crucial for its effectiveness. While as technical problems, high maintenance costs, teacher's ineffective communication skill are some factors that negatively influence blended learning.

Keywords: blended learning, effectiveness, information and communication technology.

Introduction:

The use of information and communication technologies (ICT) in the field of Education clearly has positive effects on the learning process. Developments in the information age have had impacts on education as well as on most of the fields. This impact has resulted in the formation of new paradigms in the education process. Some of these paradigms are electronic learning (e-learning) distance learning and Blended learning and these educational paradigms have been evolved to use the ICT. The first generation of e-learning or Web-based learning programs focused on presenting physical classroom-based instructional content over the Internet. In the second wave of e-learning, various delivery modes are combined into e-learning which is termed as the "blended learning". It is also known as 'Hybrid Learning' or the 'Flipped Classroom. Blended learning is an educational approach that combines learning with the participation of a teacher (face to face) and online

International Journal of Research in Economics & Social Sciences

Email:- editorijrim@gmail.com, http://www.euroasiapub.org

(An open access scholarly, peer-reviewed, interdisciplinary, monthly, and fully refereed journal.)

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learning. According to Graham (2006), "Blended learning systems combine face-to-face instruction with computer-mediated instruction. Blended learning involves the elements of self-control by the student of the educational route, time, place and pace of learning, as well as the integration of learning experience with the teacher and online. In the blended learning process, online learning and teacher-related learning are equally important. The online environment provides students with the opportunity to control the pace, time, place and path of learning. Its advantages are due to the fact that it combines traditional and online learning. Through the use of blended learning approaches, it is feasible to improve student happiness, decrease stress, and enhance deeper learning. Blended learning is also known as personalised learning since it combines instructional differentiation with blended learning **(Nayak & Panda, 2018).** It helps develop planning skills, self-control and self-regulation, and also gives freedom. Teaching with the teacher is an important part of blended learning. The role of the teacher varies according to the needs of the students. Pupils of elementary grades need almost constant presence of a teacher in a class. The teacher demonstrates patterns of behavior and thinking, ways of building relationships. Teenagers, students and adults need more likely a tutor, adviser, and specialist. Today, blended learning is one of the most important ways of the educational process. Under the blended learning mode, it can fully mobilize the enthusiasm and initiative of students, and transform the shallow learning in the traditional classroom with knowledge point transmission into deep learning, so as to obtain better teaching results.

With the rapid development of information technology and the widespread application of the sharing economy in the field of education, the online courses represented by MOOC are gradually popularized, and high-quality educational resources are no longer scarce. As the students of learning, mobile phones have become their learning life and the way in which knowledge and information are acquired has also undergone profound changes. The traditional one-way knowledge transfer can no longer meet the growing demand for knowledge from students. Blended learning provides a possible solution. Blended learning combines the advantages of classroom teaching and digital teaching. It has been transformed from traditional single knowledge transfer to multi-channel knowledge acquisition and interactive discussion and exchange to achieve the best teaching effect. In b-learning

environment, students can access to learning materials by using web technologies outside the class while attending face to face education **(Graham et al., 2003).** Lessons can be supported by discussion groups, chat platforms and various content presentations. In this way advantageous and strong aspects of face to face and online learning complete each other **(Thorne, 2003; Graham, 2006**). While online learning environment enables time and location flexibility which is not possible within class environment, face to face education environment enables further social interaction. B-learning which combines the advantageous aspects of these two environments, have many pluses in terms of student, instructor and educational institution **(Brown 2003; Singh and Reed,2003**) According to the researches, three main reasons why the blended learning is being recommended have been put forward **(Graham, 2006):**

a) Boosting up effectiveness of education.

b) Increased access and convenience.

c) Greater cost effectiveness.

Review of related literature:

Within the studies carried out, it is stated that in comparison to conventional face to face learning, students participating in b-learning applications take positive attitude towards lesson and internet supported learning and exam success rates are high **(Dowling et al., 2003; Toole and Absalom, 2003; Riffell and Sibley, 2004)**. Furthermore, it is also stated that interaction in online environment supplies individual feedback and guidance. Every school that wants to provide students the chance to improve their social skills while learning new things has to create an effective blended learning environment (**Nayak & Panda, 2018).** Students had positive feelings about blended learning technology, which could be attributed to factors like providing different learning options through accessible and diverse materials, promoting motivation and self-confidence, increasing achievement and satisfaction, saving time, and allowing them to learn more in less time and energy (**Taghizadeh and Hajhosseini, 2021**). (**Chen CC, Jones KT, 2007**) reported better learning outcomes in students in BL environment when compared to students in traditional learning environments. (**Shantakumari N, 2016**) found that students show greater satisfaction in blended courses than in traditional lectures. Students perceive that presenting the course in blended format

made it easy to follow and enhanced their learning. The online content was well- illustrated and easy to understand. The online activities increased interactions and were well- framed with regards to their objectives and duration. It is of importance that the intended learning objectives of the course correspond with the online activities so as to ensure linking between the two components (**Dana A, Wafa AS, 2011**) BL requires an intentional approach to instructional design so that the program is blended in design, not just in delivery. (**Ughade & Badre, 2020**) stated that the Blended Learning (BL) approach have shown that students demonstrate positive perceptions towards learning. Study also reveals that students are optimistic about incorporation of BL in Higher Education. Therefore, with the help of technology, Blended Learning can be used as an alternative approach in teaching and learning in order to motivate students.

Objectives:

- To study the effectiveness of blended learning in relation to student characteristics.
- To study the importance of blended learning in education.

In the b-learning model, the educator plays the role of guide. The student is more active in comparison with face to face education. However, it is a means of providing quality and active education. When technological developments are considered, it is clearly seen that b-learning increases the quality of education and therefore in future it will be more preferable learning approach.

Importance of Blended Learning:

Face-to-face training enables interaction between students and the teacher, as well as students. In the process of joint study, a favorable educational environment is created, the mood to achieve results, the motivation to study. Participants in the learning process instantly receive feedback, discuss the material, and ask questions. Cooperative learning and student interaction not only increases cognitive abilities, but also develop students' emotional intelligence. From the point of view of online learning, a mixed model provides more freedom for students: they can choose the material, pace, time and place of study. Blended learning environments are created to meet the requirements of students while still using current classroom equipment (**Aqel, 2016**). Learners have realized that using a mixed

learning method may help them take charge of their own education by enabling them to be self-sufficient and confident in their talents **(Bakeer, 2018)**. Students will be able to increase their computer literacy abilities by using a blended learning approach **(Ali, 2021).** According to the National Education Policy 2020, blended learning should be experiential and activity based. It is not a mere mix of online and face-to-face modes, but refers to a well-planned combination of meaningful activities in both.

Student characteristics and blended learning effectiveness:

It has again been noted that the success of blended learning is highly dependent on experience in internet and computer applications **(Picciano & Seaman, 2007)**. Rigorous discovery of such competences can finally lead to a confirmation of high possibilities of establishing blended learning. Research agrees that the success of e-learning and blended learning can largely depend on students as well as teachers gaining confidence and capability to participate in blended learning **(Hadad, 2007). (Shraim and Khlaif, 2010)** note in their research that 75% of students and 72% of teachers were lacking in skills to utilize ICT based learning components due to insufficient skills and experience in computer and internet applications and this may lead to failure in e-learning and blended learning. It is therefore pertinent that since the use of blended learning applies high usage of computers, computer competence is necessary **(Abubakar & Adetimirin, 2015)** to avoid failure in applying technology in education for learning effectiveness. **(Rovai, 2003)** noted that learners' computer literacy and time management are crucial in blended learning contexts and concluded that such factors are meaningful in online classes. This is supported by **(Selim, 2007)** that learners need to posses time management skills and computer skills necessary for effectiveness in e- learning and blended learning. Self-regulatory skills of time management lead to better performance and learners' ability to structure the physical learning environment leads to efficiency in e-learning and blended learning environments. Learners need to seek helpful assistance from peers and teachers through chats, email and face-to-face meetings for effectiveness **(Lynch & Dembo, 2004)**.

Research shows that absence of learner interaction causes failure and eventual dropout in online courses **(Willging & Johnson, 2009)** and the lack of learner connectedness was noted as an internal factor leading to learner drop-out in online courses **(Zielinski, 2000).**It was also noted that learners may not continue in e- and blended learning if they are unable to make friends thereby being disconnected and developing feelings of isolation during their blended learning experiences **(Willging & Johnson, 2009**). Learners' Interactions with teachers and peers can make blended learning effective as its absence makes learners withdraw **(Astleitner, 2000**). Learner success in blended learning may substantially be affected by system functionality **(Pituch & Lee, 2006)** and may lead to failure of such learning initiatives **(Shrain, 2012).** It is therefore important to examine technology quality for ensuring learning effectiveness in blended learning. Thus the learner satisfaction with a learning management system can be an antecedent factor for blended learning effectiveness. Learner satisfaction was noted as a strong factor for effectiveness of blended and online courses **(Wilging & Johnson, 2009**) and dissatisfaction may result from learners' incompetence in the use of the learning management system as an effective learning tool since, as **(Islam, 2014**) puts it, users may be dissatisfied with an information system due to ease of use. A lack of prompt feedback for learners from course instructors was found to cause dissatisfaction in an online graduate course. In addition, dissatisfaction resulted from technical difficulties as well as ambiguous course instruction (**Hara and Kling, 2001).**

Factors that negatively influence blended learning:

While elaborating on the negative sides of blended instruction, the first factor to be considered is the insufficient technical accessibility. However, during the virtual sessions, the researchers have found that some teachers reported that their students gave the excuse that they did not have their laptops, so they failed to attach their submission on time. Those students preferred to use their smart phones and that created a lot of technical problems for both teachers and students.

- Technical problems including poor internet connectivity: Technology is very unpredictable. Technical disturbance can occur at any time. In some countries, internet connectivity is very unstable and poor.

• Blended learning involves high maintenance cost of Internet facilities and it becomes difficult   for lower-income students.

• Blended learning is challenging for teachers as it needs time for preparation. (Hughes, 2007) considers these extra efforts can be minimized with the help and coordination of students and administration.

• Some students prefer to ask questions to teachers face-to-face instead of asking through email.

• Some instructors' ineffective communication affects the learning of students in BL.

• When students are given the choice of attending online sessions, then there is a low percentage of students' attendance.

• Mostly online assessments are confined to objective questions.

• The researchers are not against the view of using blended learning, but they want teachers and administrators to pay attention to its negative sides, so they can overcome the negative impacts of BL and it can be applied as a facilitative and useful technique to have its benefits to a larger extent.

Recommendations / Suggestions:

Understanding the essentials of what is the ideal mix for a successful blended course can provide great management insights into developing effective strategies that will allow institutions to create new opportunities for their students and instructors.

• To have good online learners, teachers can guide the learners to acquire skills and apply strategies for becoming successful online learners.

• Electronic/computer literacy is a must for the learners to understand blended instructions.

• Appropriate learning strategies should be used according to students.

• For the smooth functioning of BL, institutions need to ensure that all staff members and students are trained in digital literacy.

• Teachers should encourage students for more participation in the online environment and should find ways of creating social interaction through more collaboration.

• Students' attendance needs to be mandatory.

• Blended learning needs to be planned precisely.

• Educational institutions need to be strict about the policies of conducting online exams

conclusion:

It was observed that blended instruction is the need for modern education and without its inclusion; learning is going to be unimaginable in the future. Thus the knowledge of digital and media literacy and the student characteristics are the prerequisite of effective blended learning. By formulating frameworks for successful learning, all educational institutions need to emphasize blended learning approaches. When used as an instructional tool in the improvement of the learning outcomes, blended learning is potentially useful. Quality education is a challenge therefore, blended learning is the indicator of considerable change in education, but the degree to which blended learning provides an effective learning environment needs to be ensured by all administrators of institutions.

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