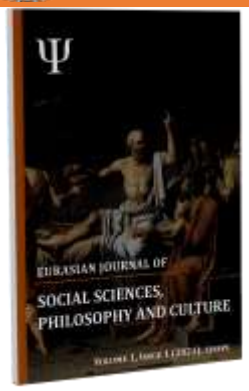
EURASIAN JOURNAL OF SOCIAL SCIENCES, PHILOSOPHY AND CULTURE
Innovative Academy Research Support Center
UIF = 8.2 | SJIF = 6.051 www.in-academy.uz



THE EFFECTIVENESS OF BLENDED LEARNING

Yusupova Sanobar Tursinbayevna

https://doi.org/10.5281/zenodo.7347798

ARTICLE INFO

Received: 13rd November 2022
Accepted: 20th November 2022
Online: 22nd November 2022

KEY WORDS

Blended learning, online teaching, face to face learning and teaching, design features.

ABSTRACT

This article investigates the effectiveness of a blended learning environment through analyzing the relationship between student characteristics/background, design features and learning outcomes. It is aimed at determining the significant predictors of blended learning effectiveness taking student characteristics/background and design features as independent variables and learning outcomes as dependent variables.

The teaching and learning environment is embracing a number of innovations and some of these involve the use of technology through blended learning. This innovative pedagogical approach has been embraced rapidly though it goes through a process. The introduction of blended learning (combination of face-to-face and online teaching and learning) initiatives is part of these innovations but its uptake, especially in the developing world faces challenges for it to be an effective innovation in teaching and learning. Blended learning effectiveness has quite a number of underlying factors that pose challenges. One big challenge is about how users can successfully use the technology and ensuring participants' commitment given the individual learner characteristics and encounters with technology. Hofmann adds that users getting into difficulties with technology may result into abandoning the learning and eventual failure of technological applications. In a report by Oxford Group (2013), some learners (16%) had negative attitudes to blended learning while 26% were concerned that learners would not complete study in blended learning. Learners are important partners in any learning process and therefore, their backgrounds and characteristics affect their ability to effectively carry on with learning and being in blended learning, the design tools to be used may impinge on the effectiveness in their learning. This study tackles blended learning effectiveness which has been investigated in previous studies considering grades, course completion, retention and graduation rates but no studies regarding effectiveness in view of learner characteristics/background, design features and outcomes have been done in the Ugandan university context. No studies have also been done on how the characteristics of learners and design

features are predictors of outcomes in the context of a planning evaluation research to establish the effectiveness of blended learning. Guskey noted that planning evaluation fits in well since it occurs before the implementation of any innovation as well as allowing planners to determine the needs, considering participant characteristics, analyzing contextual matters and gathering baseline information. This study is done in the context of a plan to undertake innovative pedagogy involving use of a learning management system (moodle) for the first time in teaching and learning in a Ugandan university. The learner characteristics/backgrounds being investigated for blended learning effectiveness include self-regulation, computer competence, workload management, social and family support, attitude to blended learning, gender and age. We investigate the blended learning design features of learner interactions, face-to-face support, learning management system tools and technology quality while the outcomes considered include satisfaction, performance, intrinsic motivation and knowledge construction. Establishing the significant predictors of outcomes in blended learning will help to inform planners of such learning environments in order to put in place necessary groundwork preparations for designing blended learning as an innovative pedagogical approach.

Kenney and Newcombe did their comparison to establish effectiveness in view of grades and found that blended learning had higher average score than the non-blended learning environment. Garrison and Kanuka examined the transformative potential of blended learning and reported an increase in course completion rates, improved retention and increased student satisfaction. Comparisons between blended learning environments have been done to establish the disparity between academic achievement, grade dispersions and gender performance differences and no significant differences were found between the groups. However, blended learning effectiveness may be dependent on many other factors and among them student characteristics, design features and learning outcomes. Research shows that the failure of learners to continue their online education in some cases has been due to family support or increased workload leading to learner dropout as well as little time for study. Additionally, it is dependent on learner interactions with instructors since failure to continue with online learning is attributed to this. In Greer, Hudson & Paugh's study as cited in Park and Choi, family and peer support for learners is important for success in online and face-to-face learning. Support is needed for learners from all areas in web-based courses and this may be from family, friends, co-workers as well as peers in class. Greer, Hudson and Paugh further noted that peer encouragement assisted new learners in computer use and applications. The authors also show that learners need time budgeting, appropriate technology tools and support from friends and family in web-based courses. Peer support is required by learners who have no or little knowledge of technology, especially computers, to help them overcome fears. Park and Choi,showed that organizational support significantly predicts learners' stay and success in online courses because employers at times

are willing to reduce learners' workload during study as well as supervisors showing that they are interested in job-related learning for employees to advance and improve their skills.

The study by Kintu and Zhu investigated the possibility of blended learning in a Ugandan University and examined whether student characteristics (such as self-regulation, attitudes towards blended learning, computer competence) and student background (such as family support, social support and management of workload) were significant factors in learner outcomes (such as motivation, satisfaction, knowledge construction and performance). The characteristics and background factors were studied along with blended learning design features such as technology quality, learner interactions, and Moodle with its tools and resources. The findings from that study indicated that learner attitudes towards blended learning were significant factors to learner satisfaction and motivation while workload management was a significant factor to learner satisfaction and knowledge construction. Among the blended learning design features, only learner interaction was a significant factor to learner satisfaction and knowledge construction. The focus of the present study is on examining the effectiveness of blended learning taking into consideration learner characteristics/background, blended learning design elements and learning outcomes and how the former are significant predictors of blended learning effectiveness.

Studies like that of Morris and Lim have investigated learner and instructional factors influencing learning outcomes in blended learning. They however do not deal with such variables in the contexts of blended learning design as an aspect of innovative pedagogy involving the use of technology in education. Apart from the learner variables such as gender, age, experience, study time as tackled before, this study considers social and background aspects of the learners such as family and social support, self-regulation, attitudes towards blended learning and management of workload to find out their relationship to blended learning effectiveness. Identifying the various types of learner variables with regard to their relationship to blended learning effectiveness is important in this study as we embark on innovative pedagogy with technology in teaching and learning.

This review presents research about blended learning effectiveness from the perspective of learner characteristics/background, design features and learning outcomes. It also gives the factors that are considered to be significant for blended learning effectiveness. The selected elements are as a result of the researcher's experiences at a Ugandan university where student learning faces challenges with regard to learner characteristics and blended learning features in adopting the use of technology in teaching and learning. We have made use of Loukis, Georgiou, and Pazalo value flow model for evaluating an e-learning and blended learning service specifically considering the effectiveness evaluation layer. This evaluates the extent of an e-learning system usage and the educational effectiveness. In addition, studies by Leidner, Jarvenpaa, Dillon and Gunawardena as cited in Selim have noted three main factors that affect e-learning and blended learning effectiveness as

instructor characteristics, technology and student characteristics. Heinich, Molenda, Russell, and Smaldino showed the need for examining learner characteristics for effective instructional technology use and showed that user characteristics do impact on behavioral intention to use technology. Research has dealt with learner characteristics that contribute to learner performance outcomes. They have dealt with emotional intelligence, resilience, personality type and success in an online learning context. Dealing with the characteristics identified in this study will give another dimension, especially for blended learning in learning environment designs and add to specific debate on learning using technology. Lin and Vassar, (2009) indicated that learner success is dependent on ability to cope with technical difficulty as well as technical skills in computer operations and internet navigation. This justifies our approach in dealing with the design features of blended learning in this study.

Learner characteristics/background and blended learning effectiveness. Studies indicate that student characteristics such as *gender* play significant roles in academic achievement, but no study examines performance of male and female as an important factor in blended learning effectiveness. It has again been noted that the success of e- and blended learning is highly dependent on experience in internet and *computer applications*. 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 . Shraim and Khlaif 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 to avoid failure in applying technology in education for learning effectiveness. Rovai, noted that learners' *computer literacy* and *time management* are crucial in distance learning contexts and concluded that such factors are meaningful in online classes. This is supported by Selim 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. Factors such as learners' *hours of employment and family responsibilities* are known to impede learners' process of learning, blended learning inclusive . It was also noted that a common factor in failure and learner drop-out is the *time conflict* which is compounded by issues of *family*, *employment status* as well as *management support*. A study by Thompson (2004) shows that *work, family, insufficient time* and *study load* made learners withdraw from online courses.

Learner *attitudes* to blended learning can result in its effectiveness and these shape behavioral intentions which usually lead to persistence in a learning environment, blended inclusive. Selim, noted that the learners' attitude towards e-learning and blended learning are success factors for these learning environments. Learner performance by *age* and *gender* in e-learning and blended learning has been found to indicate no significant differences between male and female learners and different age groups (i.e. young, middle-aged and old above 45 years). This implies that the potential for blended learning to be effective exists and is unhampered by gender or age differences.

Blended learning design features. The design features under study here include interactions, technology with its quality, face-to-face support and learning management system tools and resources.

Research shows that absence of learner *interaction* causes failure and eventual drop-out in online courses and the lack of learner *connectedness* was noted as an internal factor leading to learner drop-out in online courses . 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. Learners' *Interactions* with teachers and peers can make blended learning effective as its absence makes learners withdraw. Loukis, Georgious and Pazalo noted that learners' measuring of a *system's quality, reliability* and *ease of use* leads to learning efficiency and can be so in blended learning. Learner success in blended learning may substantially be affected by system functionality and may lead to failure of such learning initiatives . It is therefore important to examine *technology quality* for ensuring learning effectiveness in blended learning. Tselios, Daskalakis, and Papadopoulou investigated learner perceptions after a learning management system use and found out that the actual system use determines the usefulness among users. It is again noted that a system with poor response time cannot be taken to be useful for e-learning and blended learning especially in cases of limited bandwidth . In this study, we investigate the use of Moodle and its tools as a function of potential effectiveness of blended learning.

The quality of learning management system content for learners can be a predictor of good performance in e-and blended learning environments and can lead to learner satisfaction. On the whole, poor *quality technology* yields no satisfaction by users and therefore the quality of technology significantly affects satisfaction . Continued navigation through a learning management system increases use and is an indicator of success in blended learning . The efficient use of learning management system and its tools improves learning outcomes in e-learning and blended learning environments. It is noted that learner *satisfaction* with a learning management system can be an antecedent factor for blended learning effectiveness. Goyal and Tambe noted that learners showed an appreciation to Moodle's contribution in their learning. They showed positivity with it as it improved their understanding of course material. The study by Goyal and Tambe used descriptive statistics to indicate improved learning by use of uploaded syllabus and session plans on Moodle.

Improved learning is also noted through sharing study material, submitting assignments and using the calendar. Learners in the study found Moodle to be an effective educational tool. In blended learning set ups, *face-to-face* experiences form part of the blend and learner positive attitudes to such sessions could mean blended learning effectiveness. A study by Marriot, Marriot, and Selwyn showed learners expressing their preference for face-to-face due to its facilitation of social interaction and communication skills acquired from classroom environment. Their preference for the online session was only in as far as it complemented the traditional face-to-face learning. Learners in a study by Osgerby had positive perceptions of blended learning but preferred face-to-face with its step-by-stem instruction. Beard, Harper and Riley (2004) shows that some learners are successful while in a personal interaction with teachers and peers thus prefer face-to-face in the blend. Beard however dealt with a comparison between online and on-campus learning while our study combines both, singling out the face-to-face part of the blend. The advantage found by Beard is all the same relevant here because learners in blended learning express attitude to both online and face-to-face for an effective blend. Researchers indicate that teacher presence in face-to-face sessions lessens psychological distance between them and the learners and leads to greater learning. This is because there are verbal aspects like giving praise, soliciting for viewpoints, humor, etc and non-verbal expressions like eye contact, facial expressions, gestures, etc which make teachers to be closer to learners psychologically (Kelley & Gorham, 2009).

Studies comparing blended learning with traditional face-to-face have indicated that learners perform equally well in blended learning and their *performance* is unaffected by the delivery method . In another study, learning experience and performance are known to improve when traditional course delivery is integrated with online learning . Such improvement as noted may be an indicator of blended learning effectiveness. Our study however, delves into improved performance but seeks to establish the potential of blended learning effectiveness by considering grades obtained in a blended learning experiment. Score 50 and above is considered a pass in this study's setting and learners scoring this and above will be considered to have passed. This will make our conclusions about the potential of blended learning effectiveness. Regarding *knowledge construction,* it has been noted that effective learning occurs where learners are actively involved and this may be an indicator of learning environment effectiveness. Effective blended learning would require that learners are able to initiate, discover and accomplish the processes of knowledge construction as antecedents of blended learning effectiveness. A study by Rahman, Yasin and Jusoff indicated that learners were able to use some steps to construct meaning through an online discussion process through assignments given. In the process of giving and receiving among themselves, the authors noted that learners learned by writing what they understood. From our perspective, this can be considered to be accomplishment in the knowledge construction process. Their study further shows that learners construct meaning individually from assignments

and this stage is referred to as pre-construction which for our study, is an aspect of discovery in the knowledge construction process.

Predictors of blended learning effectiveness. Researchers have dealt with success factors for online learning or those for traditional face-to-face learning but little is known about factors that predict blended learning effectiveness in view of learner characteristics and blended learning design features. This part of our study seeks to establish the learner characteristics/backgrounds and design features that predict blended learning effectiveness with regard to satisfaction, outcomes, motivation and knowledge construction. Song, Singleton, Hill, and Koh examined online learning effectiveness factors and found out that time management (a self-regulatory factor) was crucial for successful online learning. Eom, Wen, and Ashill using a survey found out that interaction, among other factors, was significant for learner satisfaction. Technical problems with regard to instructional design were a challenge to online learners thus not indicating effectiveness (Song et al., 2004), though the authors also indicated that descriptive statistics to a tune of 75% and time management (62%) impact on success of online learning. Arbaugh (2000) and Swan (2001) indicated that high levels of learner-instructor interaction are associated with high levels of user satisfaction and learning outcomes. A study by Naaj et al. (2012) indicated that technology and learner interactions, among other factors, influenced learner satisfaction in blended learning.

References:

1. Darwin. (2019). Increasing Students Vocabulary Mastery Of The Seventh Grade At Mts AlKhairat Sandana Through Words On Card Strategy. Research Paper .
2. Garrido, M. A. (2016). Teachers Strstegies For Teaching . Article .
3. Hidya Maulida, M. P., & Palupi, S. P. (2019). Teaching Vocabulary For The Students With Mental Retarduction.
4. Kamelia. (2019). Using Video as Media of Teaching in English Language Classroom: . Journal of Ultimate Research and Trends in Education .
5. Ningrum, A. S., & Kurniasari, E. (2014). The Effectiveness Of Mapping Word In Teaching vocabulary At The Tenth GRADE Of Students Of SMK Hassanuddin Pare. Research Paper
6. Nurdini, R. A. (2018). The Use Of Picture To Improve Students English Speaking Skill. Journal .
7. Pamungkas, S. A. (2019). Strategies In Teaching Vocabulary At First Year In Smp N 2 Beringin, Kabupaten Semarang. Research Paper .
8. Pdt. Partohap S.R Sihombing, S. P. (2019). The Effect of using Jumble Letters in Teaching Vocabulary in Eight Grade Students of SMP Negeri 7 Pematangsiantar. Research Paper .
9. Sri Harnani, S. (2020). EFEKTIVITAS PEMBELAJARAN DARING DI MASA PANDEMI COVID-19 . Article .
10. Tacac, V. P. (2008). Vocabulary Learning Strategies and Foregin Language Aquisition. Canada: British Library Cataloguing in Publication Data.