

BLENDED INSTRUCTIONAL MEDIA FOR EFFECTIVE ACADEMIC ACHIEVEMENT AMONG UNIVERSITY STUDENTS. A CASE STUDY OF EDUCATIONAL TECHNOLOGY STUDENTS OF FEDERAL UNIVERSITY OYE-EKITI

ONI, S.O

Science Education, Federal University, Oye-Ekiti, Nigeria.

Abstract

More flexibility in students' learning experiences both domestically and internationally has been demanded in recent years due to the tightening shift of socioeconomic limitations on higher education sectors. In an effort to give our students more freedom and improved learning support, we recently launched a Blended Learning Initiative. Thus, the focus of this study was on blended learning materials for university students' successful academic success. A case study of Federal University of Oye-Ekiti students studying educational technology. The study's specific objectives were to: identify the different information sources that students have access to; determine the purpose of information for academic effectiveness; assess how frequently respondents use different information sources; and determine the barriers that restrict respondents' access to sources of information about agricultural science education. The population for the study was made up of all 134 students in the Educational Technology unit of the Department of Science Education in Federal University Oye-Ekiti. Data collected were analysed using frequency count, simple percentages and weighted mean score. Findings from the study showed that respondents mostly use lecture notes ($\bar{x}=4.53$), the Internet/online ($\bar{x}=4.42$) and their lecturers ($\bar{x}=4.36$) as their sources of information. The study concluded that information variation and adoption go a long way in uplifting academic standards in the tertiary Federal University Oye-Ekiti, and those students are more satisfied with electronic sources of information. The study identified barriers as inadequate current/relevant reading materials, poor guidance/assistance from librarians constitute barriers limiting students' access to Agricultural science-based information. The study recommended that: continuous training on the use of the library and information be embarked by the University librarians as part of the students' orientation programme; that the learner make use of user-friendly and accessible technology which enhances its simplicity in usage; Individuals and other corporate organisations are enjoined to provide information- resource centres, as functional ICT/internet facilities to enhance students' academic development in Educational Technology at Federal University, Oye Ekiti and hence the Nigeria Tertiary Institutions.

Key Words: Blended Learning Media, Effective Academic Achievement, University Students

Introduction

Blended learning, also known as blended instructional media, combines

traditional in-person education with online or digital elements, including interactive videos, learning management

systems (LMS) like Moodle, multimedia resources, and asynchronous activities. This strategy seeks to improve customisation, flexibility, and participation in higher education, especially for college students. Its effectiveness in fostering academic achievement—defined as enhanced information mastery, test scores, and skill application, has been the subject of more and more scholarly investigation. According to Turner (1988), in Thammanna (2017), information is a key resource that can bring about change and improvement in society. Okeke, Oghenetega and Umeji (2014) believe that information is a pervasive and essential part of our society and lives. It is an important and key resource for every organisation, and it is an essential input for all types of organisations, including educational institutions.

Humans are fundamentally information processors and consumers, according to Anandaraja (2012). People have always relied on knowledge to assist them in deciding what to do. Thammanna (2017) defined information as the message that a systematised collection of ideas conveys or is meant to communicate, using Bhattacharya (1997). According to Regha (2016), information is now seen as a basic resource for personal growth. He asserts that the basis of a competitive advantage is information. According to Varshney (2011), information is defined as that which is conveyed through the act or process of communication; it can be a message, a signal, or a stimulus; it assumes a response in the receiving organism and thus possesses response potential; its motivation is intrinsically utilitarian; it is instrumental; and it is typically communicated in an organised or formalised pattern, primarily because

such formalisation increases potential utility.

An individual must have a need that motivates them to seek information. An individual's natural drive to find information is known as an information need (Okoh & Ijiekhuamhen, 2017). Undergraduates' demand for knowledge is driven by their numerous information needs (Adebayo et al., 2015). These demands arise, according to Thammanna (2017), when an individual comes across a difficult situation that he cannot manage with his present level of expertise. According to Thammanna (2017), Talja (1992) classified information needs into four categories: Social or Pragmatic Information Needs (information needed to deal with day-to-day life), Recreational Information Needs (information satisfying an individual's recreational and cultural interests), Professional Information Needs (information required to operate competently within a business or professional environment), and Educational Information Needs (information required to satisfy academic requirements at an institution). According to Adebayo et al. (2015), undergraduates employ a variety of sources when looking for information to satisfy their demands. According to Akinola et al. (2009), information sources are the resources or methods used to locate information to fulfil a specific requirement. This is in line with Varshney's (2011) definition of information sources, which is everything that could enlighten or educate someone. Varshney (2011) states that observations, speeches, documents, images, and organisational charts are a few examples of information sources.

With a multitude of data and information sources encompassing a wide variety of human endeavours, today's world is information-rich (Hong &

Jo, 2017). New information is produced and made public every second, and anyone may easily access a variety of information in whatever format they like (Nwaobasi, Ewa, & Ossai-Onah, 2013). You can find this information online, in print, at the library, and in both electronic and non-electronic formats. Aiyebelehin (2012) claims that because there is so much information available, students now have more choices for preferences. As a result, while selecting information and information sources to meet one's needs, several considerations must be made. Language, comprehensiveness, currency, accuracy, credibility, coverage, accessibility, simplicity of comprehension, portability, efficiency, and ease of use were these variables, according to Hong and Jo (2017). One's information needs dictate the extent to which information sources and resources are used; most significantly, the use of information to satisfy one's information needs depends on one's awareness of these sources and resources. Information needs can be influenced by several social factors, such as age, educational background, personal characteristics, family dynamics, motivation, professional orientation, the local economic system, a person's place in society, teaching and research experience, and the range of information sources available (Chen & Lu, 2019).

Blended learning project

The institution started utilising blended learning in 2022 as a strategic goal to link course delivery with its main campus at Federal institution, Oye-Ekiti. The primary objectives were to improve the educational experience for students and provide them with more flexible and interactive delivery options. To test the delivery of blended learning, two courses were first selected. Ongoing tasks, course

materials, and student feedback were the components that were found to be advantageous to be supplied online. Online practice tests were developed in place of the customary paper assignments. Following each topic's presentation, the quizzes were released. The questions were selected from a pool of online multiple-choice questions (MCQ) that were created and randomised using chalk-and-talk or Blackboard. Students could attempt each online work more than once, and they had a week to finish it. The idea behind this strategy was to get students to practise more and become better acquainted with the applied principles. Because multiple-choice questions (MCQs) were utilised in the traditional form of delivery, marking for the assignments was automated, allowing students to get instant feedback on their comprehension of the subjects. Additionally, computerised marking spared academics the constant burden.

Statement of the Problem

The post-COVID era has seen a paradigm shift away from traditional teaching methods and towards digital education. Information and communication technology is used in both teaching and learning in digital education. Online teaching and learning tools like Zoom, Microsoft Teams, WhatsApp, and Google Classroom are used to do this. Despite the benefits of using digital learning platforms, the majority of tertiary education students still struggle to use them, and some teachers and students lack digital learning gadgets giving rise to challenges like technological difficulties in the digital learning environment, skepticism about the digital teaching and learning approach's capacity to achieve learning goals, and skepticism about the proficiency of

educators and learners in utilising the digital learning platforms.

Research objective and methodology

This study aims to evaluate both academics' and learners' perceptions of blended learning in the university. This investigation will provide a better understanding of factors and issues to be considered when adopting blended learning. The academics' perceptions survey on blended learning was conducted at the beginning of the implementation of blended learning. The survey was rolled out to a focus group. The survey aimed to investigate academics' understanding and to identify the types of support they require in the implementation of blended learning. The survey was divided into two sections: qualitative and quantitative. The quantitative section consisted of four Likert items on a scale rated from 1 to 4 ("Strongly Disagree" to "Strongly Agree"). On the other hand, students' perceptions were investigated to investigate their learning experiences in blended learning activities. The survey was conducted at the end of the semester. The students' satisfactions were determined from different perspectives, such as motivation, technical support, flexibility and preparation time. Similar to the academics' perceptions survey, the students' perceptions survey was also divided into two sections: qualitative and quantitative, measured with the same Likert scale rated from 1 to 4 ("Strongly Disagree" to "Strongly Agree").

Results and Discussions

Academics' perceptions of blended learning

Although advances in technology provide opportunities for academics to design and deliver their courses in ways

that support and enhance a teacher's role, the integration of technology in blended learning has also changed the role expectations of teachers and students. According to Norberg, Dziuban & Moskal 2011, teachers embraced a new role as facilitators, and students had access to seemingly limitless sources of informational assets through the internet. Conversely, leaders of educational institutions are challenged to meet the demands to facilitate meaningful learning outcomes. Hence, Garrison & Kanuka (2004) emphasised that a clear institutional direction is vital to successfully adopt a blended learning initiative. According to the feedback from the academics' perceptions survey, most academics responded that they were new to blended learning and had never implemented a blended learning initiative in their units. The implementation of blended learning is certainly a new challenge for most educators as they have to change their delivery method to accommodate the use of technology. Hence, it was not surprising that some academics had expressed drawbacks about the implementation of blended learning.

Apart from academics' understanding of blended learning, other factors which determine the successful Implementation of blended learning were also identified through the survey. Most academics perceived themselves as beginners in the use of technology tools in teaching and learning activities. Some lacked technology skills and thought that it would be a challenge to apply the approach in their unit delivery. Thus, there is a need for academic support in the use of technology to implement blended learning. The types of support that academics expect in the implementation of blended learning are shown in Table 1. Specifically, they

require a dedicated person to assist them in gaining experience with technology. Apart from this, they would also like to

have professional development training and workshops in designing blended activities and the use of technology.

Table 1. Descriptive statistics for the many forms of assistance used in blended learning implementation.

S/N	Items	Mean	Standard Deviation
1.	Educational support group	4.00	0.93
2.	Educational Technology Tutors/Academics	4.13	0.64
3.	Professional development and Training/Workshop in Designing blended Module and technological use	4.13	0.99
4.	Demonstration/Sharing/Lesson Session	4.13	0.99

Learners' perceptions of blended learning

Learners showed positive responses to the blended learning initiative applied in the two trial units identified in 2014. The components identified as beneficial to be delivered online were ongoing assignments and tutorials. Due to these blended learning activities, learners were able to pace their own learning as they had flexible access to the learning resources they required. Besides that, they were also able to review and test their understanding of a topic whenever they needed. As automated marking on Blackboard was used, learners were also able to get feedback and grades on their assignments immediately. In 2015, the blended learning approach was

introduced to the whole faculty, and three additional units were selected to participate in the delivery method. The participants were undergraduate degree students who enrolled in the respective units in the faculty. The type of blended learning activities implemented in the units includes online quizzes, videos, online forums or discussions, online peer feedback and use of technological tools such as iPad and Clickers. The descriptive statistics for items (mean and standard deviation) with regard to the blended learning activities in the three units are shown in Table 2. It is essential to obtain learners' feedback on their learning experience from the aspect of resources, content, and design of the blended learning activities to identify areas for future improvements.

Table 2. Descriptive statistics for blended learning activities

S/N	Items	Mean	Standard Deviation
1.	Accessibility and flexibility	4.00	0.84
2.	Self-directed learning	3.88	0.87
3.	Motivation	3.42	0.91
4.	Content	3.75	0.90
5.	Resources (technological tools and access to study	4.30	0.72
6.	Technical ability	3.83	0.85
7.	Preparation time	3.60	0.89
8.	Preference for face-to-face instruction	3.07	0.95
9.	Overall satisfaction with Blended Learning Activities	3.93	0.76

With an overall satisfaction mean score of 3.93, the survey indicates that most students responded favourably to the blended learning initiatives implemented in the units, as indicated in Table 2 above. Through blended learning activities, students could readily access educational materials and get online feedback. Given that students dominated the classes, this is extremely beneficial. In class, pupils hardly ever offer to ask or respond to a teacher's question.

University's blended learning initiatives

It is shown in the study that to facilitate blended learning in the university, academics and learners ought to have a shared vision, understanding and expectation in the adoption of the approach. Specifically, there is a need to have a clear definition of blended learning. There are many different models of blended learning found (Regha, 2015), but the model adopted by the university was developed by Abidin et al (2020).

In their model, three distinct design approaches were identified:

- (1) Low-impact blend: adding extra activities to an existing course
- (2) Medium-impact blend: replacing activities in an existing course
- (3) High-impact blend: building the blended course from scratch.

It is important to create and support plans for institutions to start this new blended learning project after the blended learning vision has been determined and acknowledged. To oversee this effort and strategically handle any problems or difficulties that might arise during blended learning, an academic practice team was formed. A minimal level of Blackboard or Chalk-

and-Talk usage is required in order to support blended learning. Effective content management is acknowledged to need the use of the LMS. The setting should be appealing and easy to use so that students may quickly access the necessary information. Additionally, the grading centre should be used to give the class timely feedback, and information regarding examinations must be accessible. Blackboard's discussion board could potentially be utilised to facilitate communication between students and instructor-learners. Additionally, since it has been noted that e-learning frequently suffers from having a lot of material available for students to digest on their own, the activities developed should complement rather than overwhelm the students (Waddoups. et al, 2002)

Conclusions/Recommendations

The current study has a number of educational implications. First, it demonstrates that blended learning can meet students' educational needs. According to the overall learners' satisfaction survey, blended learning increased student learning flexibility while maintaining social ties in the traditional classroom by allowing students to study through a variety of delivery methods by combining in-person and online components. Second, the study shows that scholars faced difficulties in meeting the increasing demands of blended learning. There is no denying that an educator plays a crucial role in deciding how well blended learning is implemented. It takes time, effort, technological expertise, and a clear pedagogical objective to design a mixed-delivery course that incorporates technology. Consequently, there is a need to provide a professional development program and support for academics and learners as well. The

study recommended that schools should use more online learning where students/learners spend maximum time together, and hence, the mode of learning is learner-centred.

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