
Relationship Between Learning Management Systems And Implementation Of Business Education Programmes In Tertiary Institutions In Rivers State

JAMABO, IBIBERE MARCUS

Department of Business Education
Ignatius Ajuru University of Education
ibibere@yahoo.com

07063981080

&

JAMABO, JOYCE DICKSON

jamabojoycee@gmail.com

08068194566

Abstract

This study investigated the relationship between learning management system and implementation of business education programmes in tertiary institutions in Rivers State. Two research questions, and hypotheses guided the study. A correlational research design was used for the study, with a population of 729 final-year students of business education from tertiary institutions in Rivers State. A sample size of 248 respondents was derived based on the Krejcie and Morgan table. A simple random sampling technique was used to select the sample size, and a structured questionnaire titled Learning Management System and implementation of Business Education Programme Questionnaire (LMSIBEPQ) was used for the study. The reliability index of the instrument was 0.84 using the Cronbach Alpha method. Pearson's product-moment correlation was used to answer the research questions, while linear regression analysis was used to test the hypotheses at the 0.05 level of significance. Findings showed, that the degree of relationship between Moodle and schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State. The study concluded that Moodle and schoology learning management systems are practical tools for implantation of business education programmes in tertiary institutions in Rivers State. Findings of the study showed that the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State is moderate and there is a significant relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State. The study recommended, among others, that the management of tertiary institutions in Rivers State should adopt Moodle's and schoology learning management system to enhance the delivery of accounting programmes and prepare students for the dynamic nature of the business education programmes.

Keywords: Learning Management System, Moodle, Schoology, Business Education Programme

Introduction

Industries nowadays are in great need of skilled professionals hence business education as an important field of study in tertiary institutions in Nigeria has gained significant attention in recent years. The importance of this field of study comes to the fore due to the increasing demand for professionals who possess expertise in this field and can adapt to the rapidly changing market trends and technological advancements. It is as a result of this that the curriculum is designed to equip students with the necessary knowledge and skills to succeed in the dynamic business environment of today. However, it is surprising that despite several years of academic and practical training that many graduates still struggle to apply their knowledge effectively in real-world situations. This situation has been attributed to the high unemployment rate among graduates in Rivers State. Business education is also seen as a wide and all-inclusive field of study whose instructional programme is equipped with the function of providing knowledge, skills, vocation and aptitude needed to effectively manage personal businesses and at the same time function in the economic system (Hassan & Ogungbo, 2022).

Otamiri (2008) posited that business education is a fusion of pedagogical and entrepreneurial preparation. He maintained that business education, therefore, involves the study of technologies and related sciences and the acquisition of practical skills (including teaching skills), attitudes, understanding, and knowledge related to the occupation in various sectors of the economy and social life. In other words, the Federal Government has championed the integration of information technology in the teaching and learning of business education programmes through policies like the "Digital Nigeria" initiative and the establishment of ICT centres in tertiary institutions, aimed at equipping graduates with relevant skills for the job market. Another of its policies is the National Policy on Education, which seeks to promote the use of technology in education, particularly in the areas of science, technology, engineering, and mathematics (STEM), to enhance the quality of education and improve learning outcomes (Adeoye et al., 2020). Thus, it is on this basis that learning management systems have become increasingly popular in Nigerian educational institutions, as they provide a platform for the integration of technology into teaching and learning processes, enabling educators to deliver quality education to students regardless of their location. These learning management systems includes Moodle, Google Classroom, smart board, schoology and so on. This study therefore will be limited to Moodle and schoology learning management systems.

Moodle LMS therefore is an open-source platform that offers a variety of features such as course management, online assessments, and collaborative tools for educators and learners. Their use in instructional delivery has been found to enhance student engagement, promote active learning, and provide opportunities for collaborative and interactive learning experiences. However, whether they help lecturers and students achieve the core aim of the course is not always clear and may depend on the specific context and learning objectives. Thus, for vocational-based fields like business education, it is important to assess the effectiveness of technology-based teaching methods in terms of enhancing students' practical skills and preparing them for the demands of the industry. Integrating ICT into teacher training should encompass courses on the use of computer application software for teaching topics in various subject areas; the practical use of multi-media in enhancing

lesson delivery; and internet surfing and information locating and retrieval (Asogwa, 2018).

The Learning Management System (LMS) is software that allows for the creation and management of educational content and support materials for three types of users: the teacher, the learner, and the administrator. The LMS brings together the tools required for the three types of stakeholders, allowing for the incorporation of multimedia educational resources, participation in activities, and carrying out an educational and administrative follow-up with the learners (Naveed et al., 2020). Learners can use learning management systems to authenticate themselves, enrol in or register for courses, complete courses, and participate in the evaluation. The learning management system (LMS) serves as a central repository for all types of educational needs. It has helped advance various aspects of educational activities such as curriculum planning, learner engagement, content management, and evaluation (Kulshrestha & Kant, 2013; Goh et al., 2014). Because of the benefits it provides in teaching and learning, several universities around the world, including Nigeria, have integrated LMS into their educational systems (Olatubosun, et al., 2015; Nicholas-Omoregbe, et al., 2017). LMS has enabled lecturers and students to access learning content at any time and from any location, as well as share courseware with friends and colleagues. It also supports tracking and reporting of students' engagement and progress, increases students' seriousness, particularly in turning in assignments, increases communication and interaction between lecturers and students, and student-to-student interaction (Goh, et al., 2014).

Modular Object-Oriented Development Learning Environment (MOODLE) is an open-source learning management System that enables teachers to arrange their materials in a student-friendly manner. MOODLE is a free open-source LMS built on a sound educational philosophy through collaboration from members of the MOODLE community (Cole, 2005). It is open source because each user has to assess the software source code and can design the environment to suit any peculiarities. As a result, MOODLE can be used in the blended learning approach as teachers can post educational resources and links online that students can access at any time and place as long as there is an internet connection. MOODLE also has an activity section that enables the teacher to set different types of assessments ranging from assignments, quizzes, forums, surveys and so on. The quiz could be structured in short-answer, multi-choice, true/false, matching, drag-and-drop formats, and so on. It is a learning platform originally designed by Martin Dougiamas. The first version of Moodle was released on 20 August 2002. Moodle is a robust open-source e-learning platform, and it was used and developed in the years following its release by a global collaborative effort of the international community. Moodle is designed and continually improves to provide educators, administrators and learners with a single robust, secure and integrated system to create personalized learning environments which enhances the implementation of business education programme in tertiary institutions.

Schoology on the other hand can be seen as a cloud-based Learning Management System that is based on curriculum management, resource sharing, and system-wide collaboration. Schoology as a learning management system was developed in 2007 by four college students: Jeremy Friedman, Ryan Hwang, Tim Trinidad, and Billkindler (Priyatno, 2017). Schoology's improved Google and Microsoft connectivity opens up new possibilities for developing more engaging

curricula that work with the resources teachers already use. It's simple to integrate or attach Google Docs or Slides into a class page. Schoology even makes a special copy for each person as soon as they click on the link for the assignment (Marcus, 2021). The creation of a parent or grade-level group and the posting of class events and school announcements there can help strengthen the relationship between the home and the school. Important materials can be kept by teachers and school officials in group folders that are accessible to everyone. Schoology was created to facilitate educational activities both in traditional classroom settings and online learning environments and this will help to facilitate the implementation of programmes. It increases educational options for students and allows them more freedom over when and how they learn (Drumm, 2023).

Schoology according to Brillian (2018) can facilitate the implementation of business education programme through the use of differentiation, feedback, data analysis, communication, collaboration and paperless classrooms. Schoology promotes instructional activities both in traditional classroom settings and in online learning environments. It also improves students' learning options and gives them more flexibility over when and how they learn (Kasumu & Nwaizugbu, 2023).

In addition, the emphasis should not only be on skill acquisition but also the pedagogy behind the effective use of the technologies. For instance, lecturers of business education programmes like accounting and entrepreneurship should not just teach how to use accounting software or how to start a business online but also educate students on the best practices and strategies for using these technologies to enhance their businesses and financial management skills. This will ensure that students are not only proficient in using the technology but also understand its practical applications in real-world scenarios. Therefore, it is based on this background that investigating the relationship between learning management system and implementation of business education programmes in tertiary institutions in Rivers State was considered timely and necessary to provide insights into how technology can enhance the quality of education and prepare students for the demands of the modern workforce.

Statement of the Problem

The business education programme is a vocational-based programme that equips students with the practical skills and knowledge needed to succeed in the business world. It focuses on areas such as accounting, office and information management, marketing, and management. However, with the rise in the integration of ICT, many tertiary institutions in developed countries of the world have incorporated learning management systems like Smartboard, Moodle, Google Classroom, schoology and Canvas to facilitate online learning, making it easier for students to access course materials and collaborate with peers and instructors. In Nigeria, the adoption of learning management systems in tertiary institutions is still relatively low, with many institutions still relying on traditional classroom teaching methods. This situation not only limits the potential for remote learning and flexibility in education but also hinders the development of digital skills among students, which are becoming increasingly important in today's job market. It is against this backdrop that this study investigates the extent of relationship between the learning management system and the implementation of business education programmes in

tertiary institutions in Rivers State to bridge the digital skills gap and ensure that graduates are adequately prepared for the demands of the job market.

Aim and Objectives of the Study

The aim of this study was to investigate the extent to which learning management system relates to implementation of business education programmes in tertiary institutions in Rivers State. Specifically, the study sought to:

1. Ascertain the extent of relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State.
2. Examine the extent of relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Research Questions

The following research questions were formulated to guide the study

1. What is the extent of relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State?
2. What is the extent of relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State?

Hypotheses

Ho1: There is no significant extent of the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Ho2: There is no significant extent of the relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Methodology

The study adopted a correlational research design. The design was adopted since the study is concerned with the relationship that exists between the usage of the learning management system and implementation of business education programmes. Buttressing the suitability of the research design to this study, Ahukannah and Ugoji (2017) opined that correlational research design involves the collection of data to determine the relationship between variables, which helps to indicate the direction and magnitude of the relationship between the variables. The population of this study consisted of 729 final-year students of the tertiary institutions in Rivers State. The population was drawn from the Department of Business Education from the three tertiary institutions that offer business education. The sample of 248 respondents was derived from the population of the study using the simple random sampling technique. A questionnaire designed by the researcher, titled "Learning Management System and Implementation of Business Education Programme Questionnaire (LMSIBEPQ),"

was used to gather data from the respondents based on the items of the questionnaire. The instrument was tested for reliability through a pilot study, with a reliability coefficient of $r = 0.84$ ascertained through the Cronbach Alpha test. Pearson's Product Moment Correlation (PPMC) was used to answer the research questions, while Linear Regression Analysis (LRA) was used to test the hypotheses at the 0.05 level of significance.

Data Analysis

Research Question One: What is the extent of relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State?

Table 1: PPMC analysis on the extent of the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Variables	Mean	Std. Dev	n	R	Remark
Moodle	17.860	3.148	243	0.499	Moderate
Implementation of Business Education Programme	18.800	2.209			

Table 1 shows the extent of the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State. However, the result revealed that the correlation value (r) is 0.499 that is 50%, which is within the correlation values of 0.400-0.599 which shows a moderate relationship. This result implies that the degree of relationship between Moodle learning management system and implementation of business education programme in tertiary institutions in Rivers State is moderate.

Research Question Two: What is the extent of relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State?

Table 2: PPMC analysis on the extent of the relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Variables	Mean	Std. Dev	n	R	Remark
Schoology	18.240	3.235	243	0.519	Moderate
Implementation of Business Education Programme	18.800	2.209			

Table 2 shows the extent of the relationship between the schoology learning management system and delivery of business education programme in tertiary institutions in Rivers State. However, the result revealed that the correlation value (r) is 0.519 that is 52%, which is within the correlation values of 0.400-0.599 which shows a moderate relationship. This result implies that the degree of relationship

between the schoology learning management system and delivery of business education programme in tertiary institutions in Rivers State is moderate.

Hypothesis One: There is no significant extent of the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Table 3: Summary of Linear Regression Analysis of the extent of the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Variables	Coefficients	Std. Error	t	Sig.
(Constant)	12.539	0.710	17.651	0.000
Moodle	0.350	0.039	8.946	0.000*
R	0.499 ^a			
R-squared	0.249			
Adjusted R-squared	0.246			
F-statistic	80.023			
P-value	0.000 ^b			
Df	241			

a. Dependent Variable: Implementation of Business Education Programme

b. Independent Variable: Moodle

c. *Items show a significant relationship with the dependent variable at the 0.05 level of significance

The result of Table 3 shows that an R-value of 0.499 indicates a moderate relationship between Moodle learning management system and delivery of business education programme in tertiary institutions in Rivers State. The R²-value of 0.249 indicated roughly a variation of 25% in the relationship between Moodle learning management system and implementation of business education programme in tertiary institutions in Rivers State. Furthermore, since, F-statistic = 80.023, t = 8.946, at df = 241, and p = 0.00 < 0.05, hence, null hypothesis one is rejected at the 0.05 level of significance. Therefore, there is a significant relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Hypothesis Two: There is no significant extent of the relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Table 4: Summary of Linear Regression Analysis of the relationship between schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State

Variables	Coefficients	Std. Error	t	Sig.
(Constant)	12.331	0.697	17.703	0.000
Schoology	0.355	0.038	9.430	0.000*
R	0.519 ^a			
R-squared	0.270			
Adjusted R-squared	0.266			
F-statistic	88.917			
P-value	0.000 ^b			
Df	241			

a. Dependent Variable: Implementation of Business Education Programme

b. Independent Variable: Schoology

c. *Items show a significant relationship with the dependent variable at the 0.05 level of significance

The result of Table 4 shows that an R-value of 0.519 indicates a moderate relationship between the schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State. The R^2 -value of 0.270 indicated roughly a variation of 27% in the relationship between the schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State. Furthermore, since, F-statistic = 88.917, $t = 9.430$, at $df = 241$, and $p = 0.000 < 0.050$, hence, null hypothesis three is rejected at the 0.05 level of significance. Therefore, there is a significant relationship between the schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State.

Discussion of Findings

The study investigated the extent of relationship between Moodle's learning management system and the delivery of business education programmes in tertiary institutions in Rivers State. However, findings of the study showed that the relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State is moderate and there is a significant relationship between Moodle's learning management system and implementation of business education programme in tertiary institutions in Rivers State. Findings of the study therefore has shown that Moodle's learning management system enhances instructional delivery because it improves students' engagement, promote active learning and provides opportunity for interactive learning experiences. The findings from this study are corroborated by Chigozie-Okwum et al. (2018) who revealed that Moodle LMS was the most preferred learning management system among students, and it significantly improved their academic performance compared to traditional classroom teaching.

Findings from the study also showed that the relationship between the schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State is moderate and there is a significant relationship between the schoology learning management system and implementation of business education programme in tertiary institutions in Rivers State. Findings of the study have shown that schoology learning management system gives feedback, enhances communication and hence facilitates the implementation of business education programmes. The findings from this study therefore are corroborated by a previous study by Kasumu and Nwaizugbu (2023), which revealed that schoology promotes instructional activities both in traditional classroom settings and in online learning environments. It also improves students' learning options and gives them more flexibility over when and how they learn.

Conclusion

Based on the findings, the study concluded that Moodle and schoology learning management systems are practical tools for implementing business education programmes like accounting and entrepreneurship business education programmes in tertiary institutions in Rivers State to enhance the quality of teaching and learning, improve student engagement and participation, and ultimately improve the overall educational experience.

Recommendations

Considering the findings, discussion and conclusions of this study, the following recommendations were made:

1. The management of tertiary institutions in Rivers State should adopt Moodle's learning management system to enhance the implementation of business education programme and prepare students for the dynamic nature of the business profession.
2. There is a need for tertiary institutions in Rivers State to adopt and integrate schoology into the implementation of business education programme to enhance the quality of education and improve student's learning outcomes.

References

- Adeoye, I.A., Adanikin, A.F. & Adanikin, A. (2020) COVID-19 and E-Learning: Nigeria tertiary Education System Experience. *Open Access Library Journal*,10(2)4-8.
- Ahukannah, I. I., & Ugoji, E.I. (2017). *Guide to research in business studies and education*. Polytechnic Publishers.
- Asogwa, U. D. (2018). Integrating information and communication technology as an integral and learning tool in teacher training: A challenge for Nigerian teacher education. In B.G. Nworgu (ed), *Education in the information age: Global challenges and enhancement strategies* (p. 155-158). Proceeding of the First International Conference of the Faculty of Education, University of Nigeria, Nsukka.
- Brilliant, R., (2018). Schoology, changing a negative thinking pattern about use of social media. *Indonesian Journal of Informatics Education* 2(1), 1-6.
- Chigozie-Okwum, C.C., Ezeanyej, P. C., & Odii, J. N. (2018). Adoption of learning management systems in Nigerian tertiary institutions: Issues and challenges. *International Journal of Computer Applications*, 181(30), 5-10.
- Cole, J. (2005). *Using MOODLE, teaching with the popular open source course management system*. California: O'Reilly Community Press.
- Drumm, L., (2023). Why use of schoology? <https://www.collegeschool.udel.edu.....>
- Francom, G. M., Schwan, A., & Nuatomue, J. N. (2021). Comparing Google classroom and D2L Brightspace using the technology acceptance model. *Tech Trends*, 65(1), 111-119.
- Goh, W. W., Hong, J. L., & Gunawan W. (2014). Exploring lecturers' perceptions of learning management system: An empirical study based on TAM. *International Journal of Engineering Pedagogy* 4(3), 63-74.

- Hornby, A.S. (2015). *Oxford advanced learner dictionary*, 8th Edition. Oxford University Press.
- Kulshrestha, T., & Kant, A. R. (2013). Benefits of learning management system in Indian education. *International Journal of Computer Science & Engineering Technology (IJCSET)*, 4(8), 1153-1154.
- Marcus, J., (2021). Schoology causes unnecessary difficulties for students, teachers. [https://www.thesoutherneronline....](https://www.thesoutherneronline...)
- Naveed, Q. N., Qureshi, M. R. N., Tairan, N., Mohammad, A., Shaikh, A., Alsayed, A. O., & Alotaibi, F. M. (2020). Evaluating critical success factors in implementing E-learning system using multi-criteria decision-making. *Plos one*, 15(5), 23-35.
- Nicholas-Omoregbe, O. S., Azeta, A. A., Chiazor, I. A., & Omoregbe, N. (2017). Predicting the adoption of e-learning management system: A case of selected private universities in Nigeria. *Turkish Online Journal of Distance Education-TOJDE*, 18(2), 23-55.
- Olatubosun, O., Olusoga, F. A., & Samuel, O. A. (2015). Adoption of elearning technology in Nigerian tertiary institution of learning. *British Journal of Applied Science & Technology*, 10(2), 1-15.
- Otamiri, S. (2008). Business education and self-employment: A Case for Entrepreneurship Education. *Business Education Journal*, 3(5), 23-39.
- Priyatno, A., (2017). Promoting autonomy through schoology m-learning platform in EAP class at an Indonesian university. *The central European journal of social sciences and humanities*. 17(12), 53-76.