

**ANALYSIS OF ONLINE LEARNING PLATFORMS AS A DETERMINANT OF
STUDENTS' ATTITUDE AND ACHIEVEMENT IN ECONOMICS IN
PLATEAU STATE**

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Abstract

The correlational research design was used to find out the relationship between online learning platforms and students' attitudes and achievements in Economics. Two instruments were developed to measure the relationship between online learning platforms, attitudes and achievements of the respondents. The number of students in 300 level sampled from both universities was 103 while those in 400 level were 165 making a total of 268 and were purposively sampled for this study. The instruments for data collection was a questionnaire titled Online Learning Platforms Questionnaire, Students Attitudinal Scale and Economics Achievement Test. The instruments were subjected to face validity while Cronbach Alpha reliability test was conducted with a reliability coefficient of 0.81 and 0.76 obtained for the Online Platform and Students' Attitudinal scale respectively. The Kuder Richardson (K-R20) was used to establish the reliability of the Economics Achievement test with a reliability coefficient of 0.74. The Pearson Product-Moment Correlation Coefficient was used to answer the research questions while Linear Regression was used to test the hypotheses at 0.05 level of significance. The study revealed a significant relationship between online learning platforms and the attitudes of students. It also revealed a significant relationship between online learning platforms and the achievement of the students. However, among the recommendations made is the need to ensure available facilities to promote

exposure to online learning platforms by both lecturers and students of Economics in Plateau State.

Keywords: online learning platforms, Economics, Students' attitude, achievement

Introduction

The pursuit of education since its inception has been a worthwhile venture by humans at every level in society. This has led to the evolution of the teaching-learning process from conventional methods to modern ones based on the need and necessity at the time. Tertiary education has in recent times made an effort to integrate technology as part of the curriculum, especially in the teaching-learning process. Higher education organizations over the previous two decades have offered full courses online as an integral part of their curricula, besides encouraging the completion of online courses (Abuhassna, Al-Rahmi, Yahya, Megat, Kosnin & Darwish, 2020). The conventional methods of the teaching-learning process have always emphasized physical contact between the teacher and learner which usually takes place in the classroom setting. The classroom setting gives direct physical access between the teacher and the learner during teaching-learning activity. This method like any other has its pros and cons due to the setting which guarantees direct contact and closer monitoring by the teacher on the students or learners.

Meanwhile, with the visible progression in society occasioned by technological advancement, other modern methods of achieving teaching-learning exercises have emerged and are gradually being embraced by most stakeholders involved in the teaching-learning process. These modern methods, unlike the conventional methods, encourage less physical contact between the teacher and learner yet ensure that adequate learning takes place. Abuhassna and Yahaya (2018) claimed that the current technologies in education play an essential role in providing a fully online learning experience which is close enough to a face-to-face class despite the physical separation of the students from their educator, along with other students. Unlike the need for a normal typical classroom setting which is the conventional setting, there is an alternative which is electronic through online learning platforms. Online learning platforms ensure that learning takes place electronically without necessary physical contact between the teacher and learners.

According to Abuhassna, Megat, Yahaya, Azlina, and Al-rahmi., (2020), online learning platforms are the most suitable ways for autonomous students. This also has its pros and cons such that can be weighed to assist in making decisions as to whether to adopt it or not. Similarly, an online learning platform according to Turner (2023) is simply a platform that is designed to offer students or trainees everything they need for their education in one place. It allows them to access course materials and interact with other students. It also makes it easy for tutors to monitor student progress. In addition,

online learning platforms are mostly used by schools, colleges, and other educational institutions. However, it is also used by other types of customers, such as corporations that want to deliver training materials to their staff. Such platforms can also be used to create lectures, assignments, quizzes, and issue certificates to people who complete the course (Stephan, Markus & Glaeser-Zikuda, 2019)

Conversely, Turner (2023), asserted that online learning platforms include i. Moodle LMS (Best online learning platform for open source)- This open-source learning platform can be downloaded and used for free which is estimated to have over 200 million users. Learners and teachers are sure to like the expansive feature set, such as interaction with multiple choice questions in the content, an integrated text editor, and support for third-party cloud storage providers, such as DropBox to submit assignments. It is also multi-language capable and supports open standards such as SCORM. ii Adobe Captivate (Best online learning platform for professional project creation), iii. Acorn LMS (Best online learning platform for upfront pricing), iii. Canvas LMS (Best online learning platform for app integration), vi. Google Classroom (Best online learning platform for Google types among others. Online learning has become widely accepted and is considered as an important approach that can overcome the limitations of on-campus learning, especially in higher education (Stephan, Markus & Glaeser-Zikuda, 2019). In a situation where the method or platform is appealing to the learner, it can lead to a positive attitude towards the content. On the other hand, if the method or platform is not appealing to the learner, it might result in a poor or negative attitude towards the content intended to be transmitted.

Consequently, Garner (2015) attitude is the evaluative reaction to a certain object which is inferred based on the individual's belief or opinion about it. Hamdan and Amorri,(2022) saw attitude as a disposition to respond favourably or unfavourably to an object, person, institution or event. Nevertheless, learners differ in their previous background and experience, along with their education techniques, which influence their online course results besides their achievement (Kauffman, 2015). It therefore implies that for higher achievement in Economics as a subject area, there is a need for the students to have a positive attitude towards the method or platform used in the teaching-learning process. However, when the attitude is poor or negative, it equally translates to poor attention towards the learning process thereby leading to lower comprehension and achievement in Economics.

In the submission of Pekrun, Goetz, Frenzel, Barchfeld, and Perry, (2011) explored achievement emotions, showing that positive emotions can predict creative thinking and reflecting, thereby supporting academic performance, whereas negative emotions are more associated with lower levels of performance. More precisely, positive emotions such as enjoyment, hope, and pride were positively associated with student effort, self-regulation and more elaborated learning strategies, whereas anger, shame, anxiety and boredom have been associated with lower

performances and more external regulation. Furthermore, positive emotions facilitate self-regulated learning. For online learning environments, D'Errico, Paciello, and Cerniglia (2016) demonstrated that students' positive emotions across different online learning activities are higher than negative emotions, particularly during synchronous activities with a teacher and with peers. They also found that experiencing positive emotions during exam preparation strongly correlates with students' motivation supporting students' learning process and learning outcome.

Moreover, Kauffman (2015) observed that online learning has become widely accepted and is considered as an important approach that can overcome the limitations of on-campus learning, especially in higher education. The submission of Hamdan and Amorri (2022) noted how higher education institutions have shifted from traditional face-to-face to online teaching due to Corona coronavirus pandemic which has forced both teachers and students to be put in a compulsory lockdown. Xhomara and Karabina (2021) equally observed that the variance of online learning is different, revealing those different levels of online learning influence academic performance and that the variance in students' satisfaction can be explained or accounted for by online learning differences. Alameri, et. al. (2020) observed that the strategic design of the university's e-learning program using Moodle, Microsoft Teams and Zoom platforms was more important than individual context variables in assessing student perception. Yu, (2021) submitted that the rampant pandemic of COVID-19, an increasing number of people are acquiring knowledge through online learning approaches. Fernandez, et. al. (2022) also observed in a study that emphasized the role of the E-learning environment, Digital readiness, Academic engagement, and students as well as instructors E-learning attitude as the decisive factors that determine students' Academic achievement. This implies that institutions that adapt to a changing environment by aligning students' and instructors' goals to develop a positive and supportive E-learning environment, will foster Academic engagement and promote students' Academic achievement. Therefore, the focus of this study is to establish the relationship between online learning platforms on students' attitudes and achievement in Economics.

Purpose of the Study

The purpose of this study is to investigate online learning platforms as determinants of students' attitudes and achievement in Economics in Plateau State. Specifically, the study sought to;

1. examine the extent of the relationship between online learning platforms and students' attitudes toward Economics.
2. To examine the extent of the relationship between online learning platforms and students' achievement in Economics

Research Questions

The following research questions based on the objectives of this study were answered:

1. What is the extent of the relationship between online learning platforms and students' attitudes in Economics?
2. What is the extent of the relationship between online learning platforms and students' achievement in Economics?

Hypotheses

1. There is no significant relationship between online learning platforms and students' attitudes in Economics
2. There is no significant relationship between online learning platforms and students' achievement in Economics

Methodology

The quantitative research method was adopted for this study, specifically the correlational research design. This research design is considered appropriate for this study because it enables the researcher to test if any relationship exists between the independent variable and the dependent variables in this study. It also ensures the collection of data directly from the sample of the population, analysis and generalize based on the research outcome. The population of this study is the undergraduate students of Economics in Universities in Plateau State which comprise the University of Jos and Plateau State University, Bokokos. The target population that was studied is the 300 and 400-level students who have been exposed to online learning during the 2020/2021 academic session.

The number of students in 300 level sampled from both universities was 103 while those in 400 level were 165 making a total of 268 and were purposively sampled for this study. The instruments for data collection were a questionnaire titled Online Learning Platform Questionnaire, Students Attitudinal Scale and Economics Achievement Test. The questionnaires were subjected to a validity test by experts and the Cronbach Alpha reliability test was also conducted with a reliability coefficient of 0.81 and 0.76 for the Online Platform and Students' Attitudinal scale respectively while the Kuder Richardson (K-R20) was used to establish the reliability of the Economics Achievement test with a reliability coefficient of 0.74. The Pearson Product-Moment Correlation Coefficient was used to answer the research questions while Linear Regression was used to test the hypotheses at 0.05 level of significance.

Results

The results of the study are presented below:

Research Question One: What is the extent of the relationship between Moodle's online learning platform and Economics students' attitude?

Table 1: Extent of Relationship Between Moodle Online Learning Platform and Economics Students' Attitude

Variables		Online Learning Platform	Students' Attitude
Online Learning Platform	Pearson Correlation	1	.967
	Sig. (2-tailed)		.000
	N	268	268
Students' Attitude	Pearson Correlation	.967	1
	Sig. (2-tailed)	.000	
	N	268	268

Table 1 revealed a Pearson Correlation Coefficient (R) of 0.96 between online learning platforms and Economics students' attitudes. This represents a positive relationship of 0.96 between online learning platforms and Economics students' attitudes.

Hypothesis One: There is no significant relationship between online learning platforms and Economics students' attitude

Table 2: Analysis of Variance (ANOVA) of Relationship Between Moodle Online Learning Platform and Economics Students' Attitude

Source	Sum of Squares	Df	Mean Square	F	Sig.
Regression	520.972	1	520.972	3779.146	.000
Residual	36.669	266	.138		
Total	557.642	267			

The data in Table 2 shows an F-value of 3779.146 and a significant P-value of 0.000 which is less than the alpha level of 0.05. This implies the null hypothesis is rejected. Therefore, there was a significant relationship between Moodle's online learning platform and Economics students' attitudes.

Research Question Two: What is the extent of the relationship between online learning platforms and Economics students' achievement?

Table 3: Extent of Relationship Between Online Learning Platforms and Economics Students' Achievement

Variables		Online Learning Platform	Students Achievement
Online Learning Platform	Pearson Correlation	1	.182
	Sig. (2-tailed)		.003
	N	268	268
Students Achievement	Pearson Correlation	.182	1
	Sig. (2-tailed)	.003	
	N	268	268

Table 3 revealed a Pearson Correlation Coefficient (R) of 0.18 between online learning platforms and Economics students' achievement. This represents a positive relationship of 0.18 between online learning platforms and Economics students' achievement.

Hypotheses Two: There is no significant relationship between Moodle online learning platform and Economics students' achievement in tertiary institutions in Plateau State.

Table 4: Analysis of Variance (ANOVA) of Relationship Between Moodle Online Learning Platform and Economics Students' Achievement

Source	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1538.525	1	1538.525	9.140	.003
Residual	44776.340	266	168.332		
Total	46314.866	267			

The data in Table 4 shows an F-value of 9.140 and a significant P-value of 0.003 which is less than the alpha level of 0.05. This indicates the null hypothesis stated is rejected. Therefore, there was a significant relationship between Moodle online learning platform and Economics students' achievement.

Discussion of Findings

The data in Table 1 revealed that there is a positive significant relationship between Moodle online learning platform and Economics students' attitudes. The hypothesis tested in Table 3 showed that there is a significant relationship between online learning platforms and Economics students' attitudes affirming the extent of the relationship. This is corroborated by D'Errico, et. al. (2016) that students' positive emotions across different online learning activities are higher than negative emotions, particularly during synchronous activities with a teacher and with peers. More so, Turner (2023) concurred that if you have hundreds to thousands of students, to manage their attitudes, a more advanced platform such as Moodle is better for online learning. This study revealed to a large extent the acceptability of online learning platforms as a determinant of attitude in learning as shown by previous studies (Abuhassna, et. al., 2018 and Abuhassna, et. al., 2020) and also the extent of students' positive attitude towards it.

The results in Table three presented showed that the relationship between online learning platforms and Economics students' achievement is significantly positive. The data in Table 4 affirmed that there is a significant relationship between online learning platforms and Economics students' achievement. This finding is confirmed by Xhomara, and Karabina, (2021) who after employing the online learning platform found that the variance of online learning is different, revealing those different levels of online learning influence students' academic achievement. The online learning platforms from the results of these findings have a determinant role in the attitude and achievement of students as has been revealed.

Conclusion

The outcome of this study has validated the role of online learning platforms as determinants of attitude and achievement in the area under consideration. The study results and findings showed the need to reconsider the rigid stance on the conventional face-to-face teaching-learning method in embracing technological and modern methods such as online learning platforms. The fact that society keeps advancing technologically is a pointer to individuals, households and organizations especially schools at the tertiary level to embrace technologically advanced ways of carrying out activities. Moreso, with recent trends of increasing difficulty in face-to-face contact globally, students should be allowed and encouraged to embrace online learning platforms for their studies.

Recommendations

From the outcome of this study, the following recommendations are made;

1. School management and all stakeholders should ensure the provision of adequate necessary gadgets needed to enhance the use of online learning platforms especially in tertiary institutions. This would serve as an encouragement and motivating factor for both teachers and students to get acquainted with online learning platforms as a strategy for teaching and learning.
2. There should be provision by management to ensure that teachers and students acquire the skills necessary to utilize the equipment used for online learning. Training and retraining through workshops and seminars should be provided to ensure that the teachers can efficiently utilize the equipment for online learning platforms in schools.

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