

Effectiveness of Microsoft Team Online Learning Package on Secondary Students' Academic Performance in Economics in Ondo State, Nigeria

By

Abidoye James Alabi (PhD)

Department of Educational Technology
Adeyemi Federal University of Education, Ondo
Ondo State, Nigeria
E mail: abidoyeja@gmail.com

Abstract

The persistent poor performance being recorded in Economics at the secondary school level in Nigeria has been attributed to inadequate instructional resources and the use of lecture methods which do not promote active participation of students in the teaching-learning process. Most previous studies have not really explored the use of Microsoft team online learning platform especially in Economics classroom which encourages active students' participation. This study therefore examined the effectiveness of Microsoft team online learning platform and students' academic performance in Economics in secondary schools in Ondo State, Nigeria. It also determined the moderating effects of gender on the dependent variables. 187 SS2 students from four secondary schools purposively selected in Akure South Local Government Areas of Ondo State, participated in the study. Intact classes were used in all the sampled schools. Instruments used were: Economics Students' Performance Test (ESPT) and Microsoft Team Online Learning Package (MTOLP). Two hypotheses were formulated and tested at 0.05 level of significance. Data were analysed using Ancova statistical tool. The findings of the study revealed that there was a significant difference in the academic performance of students taught Economics with MTOLP compared to those taught with conventional teaching methods ($F_{(1,182)} = 47.433$; $p < 0.05$, partial $\eta^2 = .207$). The study also revealed that gender has no significant effect on students' academic Performance of students taught with MTOLP. The paper recommended that, training, and workshops should be organized for both teachers and students on effective use of MTOLP for instructional delivery in all subjects taught in secondary school especially Economics. The paper further recommended that both male and female students should further be encouraged to use MTOLP for instructions in secondary schools in Nigeria.

Keywords: Microsoft Team, Online Learning Package, Academic Performance, Economics

Introduction

Economics is one of the school subjects offered by students at the senior secondary schools in Nigeria. It is designed to train students to understand the world around them and meaningfully contribute to the development and growth of the nation with the limited resources available. Adu, Galloway & Olaoye (2014) describes Economics as social science subject that seeks to analyze and describe the production, distribution, and consumption of wealth. Oleabhiele & Oko (2018) also referred to Economics as the science that studies the process and institutions whereby the limitless human wants are satiable within the limits imposed by availability of resources which have alternative uses. The study of economics is

very important because it prepares and equips students with knowledge of how individuals, businesses, governments and nations make choices on allocating resources to satisfy their wants and needs, and tries to determine how these groups should organize and coordinate efforts to achieve maximum output (Nji & Idka 2018).

Economics is a powerful tool for enhancing economic growth and development of any country. The introduction of Economics into the Nigerian education system in 1966 brought so much hope and enthusiasm to both students, business organizations and the government. The general belief was that Economics would help to build a strong and dynamic economy for our nation Nigeria.

Despite all these relevance of Economics in the school curriculum, literatures such as Oleabhiye & Oko (2018) have revealed that students' academic achievements in both internal and external examinations are generally low. The reasons for this low academic performance could be attributed to the use of conventional teaching method, where the teacher alone does the talking while the learners remain passive. This has failed to deal effectively with the problem of individual differences and also lead to poor attitude of learners towards the subject. Therefore, there is a need to search for innovative and technology-based strategies that are more effective and are likely to improve students' academic achievement in school subjects especially Economics. One of such innovative, interactive and technology-based learning techniques is Microsoft team online learning platform.

Ekinci & Ekinci (2021) describe Microsoft Teams as a digital hub that allows educators to build lively educational experiences by bringing discussions, information, exercises, and tools together within one location. Martin & Tapp (2019) also referred to Microsoft team as a digital cloud app hub that puts together discussions, meetings, files, and applications in a single Learning Management System (LMS). Microsoft Teams is unique and intuitive, yet similar to other virtual learning platforms, because it appeals to students and can be accessed using different technological devices such as a computers, tablets, mobile phones and laptop.

There are many benefits that Microsoft team online learning platform can offer especially in teaching and learning process. Olugbade & Olurinola (2021) claimed that the platform can offer corrective feedback but distinctively help with synchronous learning, i.e. comprising online oral discussions made alive, and asynchronous learning involving written forms made unnecessarily without live meetings. Liu, (2021) also avers that, Microsoft team as a cloud-based application, it can handle large amounts of data: collect, source, dissect, store, and share it with further technologies and devices. Denis & Madhubala, (2021) were of the opinion that Microsoft team is regulated by the internet and has some integrated potentials, such as distributing, data-grouping, and paralleling knowledge manipulation, as well as network data-saving, virtualizing, and toning capabilities, in addition to other types of features. Besides, Hai-Jew (2020) discovered that the platform has many cooperative capabilities, including a SharePoint spot and a Mailbox for mail exchange within a team. Furthermore, AlAdwani & AlFadley (2022) claimed that Microsoft Teams has interactive features such as audio, video, chat and content sharing, which allow students to do their homework assignments, quizzes, group projects, and record lectures with ease. Rojabai,

(2020) also avers that Microsoft Teams facilitates interactive learning, effective discussions and fosters interaction between students and instructors.

Gender is one of the important factors affecting the use of technology especially e-portfolio in teaching and learning process. Abidoye and Abidoye (2022) refers to gender as the socially constructed characteristics of women and men – such as norms, roles and relationships of and between groups of men (male) and women (female). Abidoye and Fakokunde (2019) also describe gender as the socially and culturally constructed characteristics and rules which are ascribed to males and females in any society. The authors further described male attributes as bold, aggressive, tactful and efficient in the use of words while the females are fearful, shy, gentle, dull, submissive and effective, In the same vein, Abidoye and Abidoye (2022) stated that more complex works are usually set aside for male, while the females are considered womanly in a natural setting. Therefore, gender neutrality, friendliness or otherwise of the school subject such as Economics is worth investigating especially at the senior secondary level of education.

Statement of the Problem

The problem of persistence low academic performance in Economics by secondary school students has been a major concern to educators. Researchers have identified a number of possible contributing factors to this issue, including the teaching strategies employed by teachers. In particular, the traditional "chalk and talk" method, which involves the teacher talking to students while writing notes on the board, has been criticized for its lack of interactivity, ability to engage and motivate students, and its inability of equipping students with the necessary scientific skills and mindset. However, a more effective technology-based learning strategy that is learner-centered and activity based needs to be explored for the teaching and learning of Economics. One of such technological-based and online learning platforms that can enhance students' academic performance is Microsoft team. However, literatures have revealed that as at the time of carrying out this research, there were little researches on the effectiveness of Microsoft team online learning package in Economics especially in Akure South local government area of Ondo State. Hence, this research examines the effectiveness of Microsoft team online learning package and students' academic performance in Economics in Ondo, Nigeria.

Research Hypotheses

The following null hypotheses were formulated and tested in the study at $P < 0.05$ level of significance.

- H₀₁:** There is no significant main effect of treatment (Microsoft Team Online Learning Package) on students' academic performance in Economics.
- H₀₂:** There is no significant main effect of gender on students' academic performance in Economics.

Research Methodology

The research design employed for this study was a quasi-experimental design; of pre-test, post test control group design, which enabled the researcher to study the effects of Microsoft team online learning platform when random assignment is not possible. The sample population for this study consisted of 187 Senior Secondary School 2 (SS2) students from four schools randomly selected in Akure South Local Government. Purposive sample technique was used to select the sample schools. Schools that have functional ICT laboratory and facilities were selected for the study. Intact classes were used in all the sampled schools. Two schools were sampled for experimental and two schools were sampled as the control groups. Two instruments were used in the study. They are; Economics Students' Performance Test (ESPT) and Microsoft Team Online Learning Package (MTOLP). All the instruments were validated by experts. The experimental groups were taught Economics with the use of MTOLP, while the control groups were taught with the use of conventional teaching method. The hypotheses were tested using ANCOVA statistical tool at 0.05 level of significance.

Results:

Research Hypotheses

Ho1: There is no significant main effect of treatment (Microsoft Team Online Learning Package) on students' academic performance in Economics.

Table 1:

Analysis of Covariance (ANCOVA) of Academic Performance by Treatment and Gender

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	8889.579 ^a	4	2222.395	14.340	.000	.240
Intercept	579.018	1	579.018	3.736	.055	.020
Pretest	937.513	1	937.513	6.049	.015	.032
Treatment	7351.398	1	7351.398	47.433	.000	.207
Gender	182.159	1	182.159	1.175	.280	.006
Treatment * Gender	525.568	1	525.568	3.391	.067	.018
Error	28207.052	182	154.984			
Total	256682.000	187				
Corrected Total	37096.631	186				

a. R Squared = .240 (Adjusted R Squared = .223)

Dependent Variable: Performance in Economics

Table 1 shows that there is significant main effect of treatments (Microsoft team online learning platform) on students' academic performance in Economics ($F_{(1,182)} = 47.433$; $p < 0.05$, partial $\eta^2 = .207$). The treatment effect size is 20.7% (partial $\eta^2 \times 100$). This result means that there is significant difference in the post-performance mean scores of the students due to the treatments. Thus, the null hypothesis 1 was rejected. In order to determine the mean difference across the groups, the Estimated Marginal Means of the treatment groups were carried out and the result is presented in Table 2 below.

Table 2

Estimated Marginal Means of Post-Performance across the Groups

Variables	N	Mean	Std. Error
INTERCEPT			
Pretest (Pre-performance)	187	51.16	-
Posttest (Post-performance)	187	70.27	14.12
TREATMENTS			
Traditional	106	66.07	1.22
Microsoft Team	81	74.50	1.39
GENDER			
Male	84	68.92	1.34
Female	103	70.21	1.35

Table 2 reveals that the pre-performance mean score (covariates) of the students appeared as 51.16 while it became 70.27 after treatments when the effect of covariates has been statistically controlled. The table shows further that the students in Microsoft team online learning platform had the higher post-performance mean score ($\bar{x} = 74.50$), and then by those exposed to traditional teaching method ($\bar{x} = 66.07$). This result implies that Microsoft team learning platform is more potent for increasing students' performance in Economics.

Ho2: There is no significant main effect of gender on students' academic performance in Economics.

From table 2, it was shown that there was no significant main effect of gender on students' academic performance in Economics. The table reveals that the male participants had lower mean post-performance score ($\bar{x} = 68.92$) than the female participants ($\bar{x} = 70.21$) but not statistically significance. Hence, the hypothesis that states that there is no significant main effect of gender on students' academic performance in Economics is hereby accepted.

Discussion of Results

The major finding of this study is that there was significant main effect of treatment (Microsoft Team Online Learning Package) on students' academic performance in Economics. The study found that Microsoft Team Online Learning Package (MTOLP) had positive effects on the academic performance of students in Economics. This implies that Microsoft Team Online Learning Package is better in improving students' academic performance than the conventional teaching method. This result is in line with the findings of Olugbade & Olurinola (2021), who reported that Microsoft Team Online Learning Package was very effective in the attainment of skills by the learners at their own pace and that it increases academic achievement and independent learning. This finding also agrees with that of Martin & Tapp (2019) who reported that students who were taught using Microsoft Team Online Learning Package performed better than those taught using conventional teaching method.

The result obtained in this study also reveals no main effect of gender on academic performance of students taught with Microsoft team online learning package. The reason for this could be as a result of the fact that Microsoft team online learning package has the capacity to neutralize the gender gap in academic performance. This implied that gender differences had no significant effect on the academic performance of students taught Economics using Microsoft team online learning package. This means that the results of male and female students were alike. This result indicated that the effectiveness of using Microsoft team online learning package as an instructional aid does not depend on gender (male and female). This finding is in line with the claim of Abidoye & Fakokunde (2019) who found that students' achievement is not determined by gender in terms of interaction and treatments on students' academic achievement.

Conclusion

Base on the findings from this study, it can be concluded that; there is significant difference between results of experimental group and the control group. This implies that the use of Microsoft team online learning package has grown significantly. This finding shows that the application of Microsoft Team online learning packages are effective in improving secondary school students' academic performance in Economics.

Recommendations

Based on the findings of this study, the following recommendations were made;

- I. Secondary school teachers especially economics teachers (irrespective of gender) should be encouraged to always make use of Microsoft team online learning package for the teaching and learning of Economics in secondary schools.
- II. Seminars, workshops, symposia, and conferences should be organized at federal, state, and local government levels for teachers, so as to equip them with skills and competencies required in using Microsoft team online learning instructional package for classroom instructions.
- III. Economics curriculum planners should inculcate the use of online learning platform such as Microsoft team online learning package into secondary school curriculum.

References

- Abidoye J.A. and Abidoye O.G. (2022) Web-based Learning as a Panacea for Effective Teaching and Learning of English Language During Covid-19 Pandemic in Nigerian Schools. *ABSU Journal of Educational Studies* 9(3) 26-32.
- Abidoye, J. A. & Fakokunde J. B. (2019). Pre-service Teachers' Awareness and Utilization of Virtual Learning in Colleges of Education in Ondo State Nigeria. *Studies in Education*, 18(1), 21-30
- Adu, E. O., Galloway, G., & Olaoye, O. (2014). Teachers' characteristics and students' Attitude towards Economics in secondary schools: Students' perspectives. *Mediterranean Journal of Social Sciences*, 5(16).
<https://doi.org/10.5901/mjss.2014.v5n16p455>

- AlAdwani, A., & AlFadley, A. (2022). Online Learning via Microsoft TEAMS During the Covid-19 Pandemic as Perceived by Kuwaiti EFL Learners. *Journal of Education and Learning*, 11(1), 132-146. <https://doi.org/10.5539/jel.v11n1p132>
- Denis, R., & Madhubala, P. (2021). Hybrid data encryption model integrating multi-objective adaptive genetic algorithm for secure medical data communication over cloud-based healthcare systems. *Multimedia Tools and Applications*, 80(14), 21165-21202. <https://doi.org/10.1007/s11042-021-10723-4>
- Ekinci, M., & Ekinci, E. (2021). Online-Based Grammar Instruction via Microsoft Teams: A Quantitative Study. *Pearson Journal of Social Sciences & Humanities*, 6(14), 32 <https://doi.org/10.46872/pj.276>
- Hai-Jew, S. (2020) Evaluating “MS Teams” for Teaching and Learning. *C2C Digital Magazine*, 1(13), 7.
- Liu, Y. (2021). The Application of Cloud Computing in College English Teaching. *In Journal of Physics: Conference Series*, 1748(2), 022002. *IOP Publishing*. <https://doi.org/10.1088/1742-6596/1748/2/022002>
- Martin, K., & Tapp, D. (2019). Teaching with Teams: An introduction to teaching an undergraduate law module using Microsoft Teams. *Innovative Practice in Higher Education*, 3(2), 58-66.
- Nji, I.A. & Idika E.O. (218) Utilising of ICT in Teaching and Learning of Economics in Secondary Schools in Nzuka Education Zone. *International Journal of Economics Education Research* 1(4) 43-57
- Oleabhie, E. O., & Oko, N. O. (2018). Economics curriculum implementation at the senior secondary education level. *Journal of Economics and Environmental education*, 3(1), 10- 20.
- Olugbade, D., & Olurinola, O. (2021). Teachers’ perception of the use of Microsoft Teams for remote learning in Southwestern Nigerian schools. *African Journal of Teacher Education*, 10(1), 265-281. <https://doi.org/10.21083/ajote.v10i1.6645>
- Rojabai, A. (2020). Exploring EFL students’ perceptions of online learning via Microsoft Teams: University level in Indonesia. *English Language Teaching Educational Journal*, 3(2), 163-173. <https://doi.org/10.12928/eltej.v3i2.2349>