



LEVERAGING E-LEARNING FOR CIVIC EDUCATION: AN EMPIRICAL ANALYSIS OF STUDENT ACHIEVEMENT

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Abstract

This study explores the potency of e-learning activities in improving the improving student's achievement in civic education. A total of 86 students from two purposively selected schools in Lagos State education district V, ojo zone participated in the study. The Students Achievement Test in Civic Education (SATICE) which had a reliability coefficient of 0.73 was the instrument used to collect the quantitative data. Treatment lasted three weeks after the conduct of the pretest, the experimental group (42) was exposed to e-learning activities and the control group (46) was taught using the traditional lecture method. One-way ANCOVA was used to analyse the data. The result revealed that the experimental group outperformed the control group. Within the limitations of the study, we concluded that E-Learning activities is capable of promoting meaningful learning in chemistry. Implications of the study were highlighted.

Keywords: e-learning, Civic education, Achievement.

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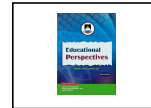


Introduction

Digital storytelling is one of the cutting-edge methods for teaching global citizenship (Brights, 2017). Digital storytelling is used in civic education to assist young people cooperate, express themselves, embrace creativity, and develop critical thinking skills. It also meets a range of requirements and learning styles (Dogan, B., Robin, B., 2009). Using internet-connected computers is not only a fad or way of life; rather, incorporating these devices into the educational process is both a challenge and a requirement.

Over the past decade, the marvel of e-learning, has revolutionized different instructive spaces. Its nearness has significantly affected the strategies of learning and instruction. One transcendent reason for the broad notoriety of online instructing is its improved availability. Learners are now not restricted by geological restrictions or the physical limits of instructive educate (Veletsianos and Houlden 2019). They can lock in with instructive substance from any area, given them with satisfactory web network (Cho and Yoo 2017). Moreover, e-learning has presented a noteworthy degree of adaptability into the domain of learning plans (Veletsianos and Houlden 2019). Understudies can tailor their consider times to adjust with their person needs and competencies (Wei and Chou 2020; Ragusa and Crampton 2018). The past Covid-19 widespread has constrained most educate of learning to move from 100 ce-to-face classes to unused scenarios with online classes or mixed learning frameworks (Adedoyin & Soykan, 2020; Rapanta et al., 2020). This has been a impressive challenge for the educating framework, which has had to execute mixed learning (a.k.a. b-learning, blended learning or the cross breed show) to combine the physical space of face-to-face learning with offbeat or synchronous virtual situations (Graham, 2019). In this setting of cross breed educating models, the improvement of viable e-learning instruments gets to be particularly critical within the virtual environment. With this point the display ponder examinations the adequacy of e-learning on scholarly accomplishment of government understudies in Lagos State senior auxiliary schools. As a result of the scourge, e-learning stages have played a basic part in encouraging understudy learning whereas schools and educate were closed (Subedi et al., 2020). Evaluating and supporting staff and students' availability to adjust to the unused improvements is basic. Understudies that have a development demeanor are way better able to adjust to unused circumstances within the classroom. No single directions show can satisfactorily serve the wide assortment of online instruction alternatives. Distinctive sorts of subjects have distinctive prerequisites. Online instruction must be adjusted for each subject and age extend (Doucet et al., 2020). Understudies with versatility issues have greater opportunities to take an interest in online courses since they require less physical action (Basilaia & Kvavadze, 2020).

Understudies, guardians, and instructors all all through the world have felt the unexpected undulating impact of the COVID-19 scourge as schools have been closed to bargain with the worldwide widespread. Instruction frameworks are working difficult to proceed giving a high-quality instruction for everyone in spite of the episode; whereas governments, cutting edge laborers, and wellbeing authorities do everything they can to contain it. A part of college understudies have mental health issues that anticipate them from being beneficial at domestic. Be that as it may, inquire about on what makes for the foremost successful homeschooling through theinternet is still in its earliest stages (Petrie, 2020). Both teachers' and students' nature with and consolation with ICT play a part in determining which academic approaches are most suitable for online learning. Microsoft Groups, Google Classroom, Canvas, and Blackboard are fair a number of illustrations of bound together communication and collaboration stages that have been sent



hence distant, empowering teachers to plan online lessons, instructional exercises, and other shapes of proficient advancement (Petrie, 2020). The request of e-learning and e-resources are fundamental components in online learning framework. In any case, libraries are the fore front of information store when it comes to frameworks and administrations which suits to the learners, e-learning is continuously advantageous at organization, national and universal level to both learners and instructors. In this age of computerized natives/computer technology, the work of libraries have changed and due to electronic intervened library administrations, versatile technologies/computers are being utilized within the libraries to process, spare, recover and broadcast data. Hence, the conventional concept of library is being redefined from place to get to books from one 'house' to 'screen' with progressed media of Web, (Jagdish and Joshi, 2016). The got to give online library back have made libraries decipher their routines from conventional library framework into virtual or computerized situations, whereas customizing their administrations and assets for e-learners, which have provide outline of e-learning and e-services in higher instruction with uncommon reference to online Library Back Administrations. The library give bolster to e-learners through electronic or online interface, the library is seen as a source of preparing and direction to a community of learners who are concerned with exploring the complexities of finding and utilizing advanced assets and administrations. Additionally, the move toward an internet environment has come about in a move from the precise one-to-one data stream of the past to a unused demonstrate in which the clients and the suppliers of data are able to relate in a many-to-many, energetic relationship, (Kay, Houda and Tony, 2019). Scholastic performance, also called scholastic accomplishment, is an marker of instructive victory or disappointment. It is by and large decided taking into consideration subjective and quantitative variables that permit deciding whether understudies, instructors and instructive teach have been successful in their teaching and learning forms. In higher education it is one of the foremost important quality pointers and could be a point of extraordinary organization, financial and social interest (García Tinisaray, 2016). One of the critical components that impact students' scholarly accomplishment within the instructive system is the quality of the schools. Some of the time the accessibility and utilize of instructive offices is ascribed to a critical parcel of learner's scholastic victory. In any case, instructive educate offer a few comforts that move forward educating and learning. These assets are utilized to clarify thoughts, donate hands-on encounter, conduct tests and shows, development scientific research, and disclosure, empower a differing qualities of perspectives, encourage perception and request, cultivate the development of logical states of mind and capacities, and defend and consolation the client (Akinyemi, 2020). Agreeing to Capper (2018) It was found that not all instructors would utilize innovation in their classes since they needed the specialized ability and weren't experienced with the hardware. Also, Capper (2018) pointed out that teachers who are not usual to utilizing innovation will discover it challenging to do so which they would not have sufficient time to acquire all the data approximately the lessons that will be advertised.

Olusegun et al (2023) it is becoming more fundamental to assess ICT tools' effects on students' scholastic achievement as they are employed in instruction more regularly. This is often due to the truth that it is pivotal to illustrate the associations between understudy scholastic accomplishment and innovation utilize. Moreover, it must be illustrated how educational innovation improves instruction, fosters understudy imagination, and makes competent issue solvers who are arranged for victory within the modern world. This subject has been the center of various hypothetical and observational scholarly considers Olusegun et al, (2023). It is from



the forgoing that the study seeks to examine the effect of E-learning activities on students' achievement in civic education.

Methods

This study adopted quasi experimental design. The population of the study consisted of all senior secondary school students offering civic education in Ojo Local Government Area. Two intact classes of eighty-eight students was involved in the study. Forty-two students were in the experimental group (e-learning group) while, forty-six students were in the control group (lecture group). An instrument titled Students Achievement Test in Civic Education (SATICE) was used for data collection. The content and face validity of both achievement test were established by presentation a copy of the draft each to experts in the field of test and measurement for further scrutiny and modification. Necessary adjustments were made thereafter. The reliability of the instrument was determined using a test-retest technique. A sample of the achievement test was administered to a set of student outside the research population. The data obtained from each of the achievement test yielded a reliability co-efficient of 0.73. Data were coded and analyse using descriptive and inferential statistics.

Results

Research Question

What is the difference in the academic achievement of students exposed to e-learning activities and those exposed to conventional lecture method?

Table 1: Mean and Standard Deviation showing the post-test achievement of students exposed to e-learning activities and those exposed to conventional lecture method

GROUP		Mean	Std. Deviation	N
e-learning Group		13.55	2.64	42
Lecture Method Group		10.27	3.52	46
Total		11.94	3.50	86

Table 4.2 reveals that students exposed to e-learning activities had the higher post-test mean score of 13.55 and standard deviation of 2.648, while the students taught with the conventional method had the mean and standard deviation values of 10.27 and 3.528. To determine whether the effect is significant the null hypothesis one was tested.

Hypothesis

There is no statistically significant difference in the academic achievement of students exposed to e-learning activities and those exposed to conventional lecture method

Table 4.3: ANCOVA showing the effect of e-learning on senior secondary school students' achievement

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	516.49 ^a	2	181.88	35.73	.000	.424
Intercept	367.14	1	367.14	50.79	.000	.344
PRETEST	247.03	1	247.03	34.18	.000	.261
GROUP	44.32	1	44.32	6.13	.015	.059
Error	701.15	86	7.23			

a. R Squared = .424 (Adjusted R Squared = .412)

As shown in the table above, the results of the ANCOVA reveals that there is a statistically significant difference in the achievement of students taught using the e-learning activities and conventional method [$F(1,86) = 0.015$; $P < .05$], therefore, the null hypothesis is rejected.

Discussion of Findings

The first research question points to the difference in the academic achievement of students taught biology using e-learning activities and those taught using conventional lecture method. The results revealed that e-learning group had higher mean (13.55) and standard deviation (2.64) than that of the conventional lecture method. This infers that e-learning had a positive effect on students' achievement when compared to the conventional lecture method. To buttress the basis of the findings and guide the tone of discussion on the result obtained in answering research question one, hypothesis one was tested. The inferential statistics in hypothesis one revealed that there was a statistically significant difference in the achievement of students exposed to e-learning activities and those taught using the conventional lecture method [$F(1,86) = .015$; $P < .05$].

This finding, is in agreement with that of Yildirim (2021) who found statistically significant difference between the post-test mean scores of the groups exposed to e-learning activities (virtual lab). It also agrees with the findings of Akhigbe & Ogufere (2019) who found that there was significant impact of computer simulation on students' academic achievement in biology. It also in agreement with Olalekan & Oludipe, (2016) which showed that there was a significant difference between the virtual laboratory and traditional method in students' academic achievement in favor of V-lab. Tüysüz (2010) also found that students who were taught the topic through the virtual laboratory used in this study in the experimental group were more successful than those students who received the topics through traditional chalk and talk method in the control group.

It can be argued that improvement in performance of the students in the experimental group is as a result of the effective use of multimedia, it offers a high degree of interaction and attractiveness to the students. E-learning activities provides students with flexibility in terms of when and where they can access learning materials and complete assignments. This flexibility allows students to learn at their own pace, which can lead to improved understanding and retention of

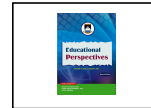


information (Aripin, 2020). The e-learning platforms employed in this study incorporated interactive elements such as multimedia presentations, simulations, and discussion forums. These interactive features engage students in active learning, encouraging them to explore concepts more deeply and apply their knowledge in practical contexts (Means et al., 2009). Further, the e-learning platforms adapted the lesson content and activities to suit individual student needs and learning styles. Through this, students receive customized feedback and resources tailored to their strengths and weaknesses, which facilitated more effective learning outcomes (VanLehn, 2011).

Conclusion and recommendation

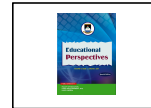
The study employed e-learning activities to improve the achievement of students in civic education, which is a major contribution to the civic education education literature. The success achieved in testing the effectiveness of e-learning activities to improve the achievement of students in civic education adds to existing teaching methods that enable students' understanding of the subject, especially in the Africa region. This study will also reduce the stress civic education educators go through in communicating concepts to learners by improving the understanding of the subject and help to reduce examination malpractice. Based on the findings, it was recommended that:

1. Teacher should adopt the usage of e-learning platforms to teach civic concepts
2. Policy makers and curriculum planners should revisit the curriculum and encourage the use of teaching approaches that incorporate e-learning.
3. Teachers should strive to change from traditional method of instruction to 21st century method of instruction that can drive 21st century skills for national development and technological advancement.



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