RELATIONSHIP BETWEEN E-LEARNING RESOURCES, TEACHER PREPARATION AND STUDENTS' LEARNING OUTCOME IN PRIMARY SCHOOLS IN LAGOS STATE

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Abstract

There has been persistent complaint among stakeholders on students learning outcome; noting that it affects the quality of graduates in the modern school system. This study, therefore, investigated the relationship among e-learning resources, teacher preparation and students' learning outcome in public primary schools in Lagos State. The research design was descriptive survey research design. The population for this study was all the 1,458 teaching practice students at Adeniran Ogunsanya College of Education, Oto/Ijanikin, Lagos State while the sample was 314 participants determined using the Taro Yemane's formular and were selected using the multi-stage sampling approach. A self-designed, validated, and reliable questionnaire was used for data collection. The students' learning outcome was measured by collecting students result in Mathematics. The hypotheses were tested using Pearson Product-Moment Correlation statistics at .05 level of significance. The result of the analysis revealed that, there was a strong, positive, and significant relationship between instructional delivery, lesson Preparation, e-learning resource utilization, use of teaching aid and students' learning outcome in public primary schools in Lagos State. It was therefore recommended that; government should ensure that e-learning resources are adequately deployed and utilised in schools and teachers are regularly trained on effective instructional delivery using e-learning resources for effective preparation of teachers to improve students' learning outcome.
Keywords: *e-learning, resources, Learning outcome; primary School.*

Introduction

Students' learning outcome has always been a topic of interest to educators and researchers who have long been interested in identifying and understanding the variables that contribute to academic excellence. This is not unconnected with the fact that academic success has a great influence on a student's attitude to learning, self-esteem, motivation, and perseverance in further pursuing his/her educational programme. Students' learning outcome is one of the current educational problems of public interest based on students' poor attitude to learning and academic achievement especially at the primary school level in Nigeria. In fact, the issue of poor learning outcome at the primary level of education in Nigeria has been widely documented. Students' learning outcome is a good indicator of the quality of education offered in schools, quality of graduates at all levels of education and adequate management of fund. Ekundayo (as cited in Oladejo, 2020) stated that students' learning outcome is a concept that has attracted the

interest of educational managers and other stakeholders in the education system. Supporting this notion, Adu (2010) explained that educational managers are interested in students' learning outcome because it helps to determine the achievement of the objectives of the school system.

Students' learning outcome according to Christenson, Reschly, and Wylie (2012), has always been a topic of interest to researchers in education because there is hardly any forum where issues concerning this concept is not discussed. There had been several efforts geared towards addressing students' poor academic achievement around the world. These include the "Education for All Goals" (EFA), the Millennium Development Goals (MDG) (now Sustainable Development Goals (SDGs), the No Child Left Behind Act, among others. The Federal Government of Nigeria has also taken actions targeted at addressing students' poor academic performance by improving the quality and standard of education in the country. Similarly, the Lagos State government has been making concerted efforts to improve the quality of instruction in the state through recruitment of qualified teachers, prompt payment of teachers' salaries and allowances, among others. However, despite the efforts of the Lagos State government at promoting students' academic achievement in Lagos State, the percentage of students who progress to the next level is usually a serious issue among stakeholders. This shows there is a need for more concerted efforts by stakeholders towards addressing the issue of students' learning outcome. Similarly, the continuous complaints about the quality of graduates of the school system in terms of their ability to fit into the secondary school system and the society shows the need for this research on students' learning outcome in Lagos State.

Studies (Adeyemi&Adu, 2012; Arowolo, Arowolo, &Adaja, 2016; Yunas, 2014; Oosthuizen & Bhorat, 2006; Marzano, 2000) had been conducted with the aim of identifying the factors that influenced students' learning outcome to ensure the judicious use of resources devoted to the education system. These studies had reported a sharp decline in students' learning outcome. The presumed factors that affected students' academic achievement included poor quality of teachers, inadequate facilities, irrelevant curriculum, poor welfare packages of the teachers, instructional delivery, size and growth rate of schools, family, and community involvement. In the same vein, Velez (as cited in Yunas, 2014) documented school characteristics, which included class and school sizes, teacher/learner ratio, school location, funding, availability of educational materials and facilities, teacher preparation as factors influencing students' learning outcome. In support of the foregoing, Wilson (as cited in Yunas, 2014) reported a number of indicators such as lack of e-learning resources and materials, school mismanagement, insufficient and overcrowded classrooms that adversely affected students' learning outcome. Obviously, several factors had been identified as determinants of students' learning outcome. However, controversies still exist among researchers on the factors that affect students' learning outcome. As a result, this study, therefore, focused on e-learning resources, teacher preparation and students' learning outcome in primary schools in Lagos State.

An important variable in this study is e-learning resources and it refers to those tools used by people to communicate and exchange information. There has been an explosion in the number of e-learning resources available for educators to use with their students. The open, collaborative, and contribution-based nature of the e-learning resources and its associated tools holds great promise for the future of education. It appears that there is finally accord between the design of technology and the student-centred and interactive approaches being advocated by contemporary educational leaders. However, with such a variety of e-learning resources continually emerging, it is hard for teachers to keep pace with the technologies at their disposal, let alone conceptualise them into a framework for application (Bower, Hedberg & Kuswara, 2009).

Obviously, growing up with unprecedented access to technology has changed the way young people communicate, interact, process information, and learn (Oblinger & Oblinger, 2005; Prensky, 2001). Thus, many new teachers entering 21st century classrooms are digital natives teaching digital natives (Prensky, 2001). Lei's (2009) study of a group of digital native pre-service teachers suggests that, although future teachers may hold strong positive beliefs about technology and may be proficient with a variety of software applications, they may be unable to translate this knowledge to their teaching. "Digital natives," Lei argued, need to develop a systematic understanding of the technology, subject matter, pedagogy, and how these aspects work together.

Griesemer (as cited in Sayan, 2016) stated that e-learning resources are rapidly changing the communication landscape and their emergence has significant impact on students learning and the way instructors teach. Communication between groups of students and between students and teachers has become popular during the last decade through various channels such as Email, SMS, Facebook groups, Twitter, Youtube, WhatsApp among others. Each one of

these tools has different characteristics that influence its suitability for learning purposes (Calvo, Arbiol & Iglesias, 2014). These educational mobile tools have emerged and show great potential to help students construct and share information and knowledge for learning through computers or mobile devices (Pence, 2007). E-learning resources offers teachers the ability to transform the quality of instruction—to achieve a more student-centered learning environment, have more differentiated instruction, and develop problem or project-based learning, and demand higher order thinking skills. For education to reap the full benefits of ICTs in learning, it is essential that pre- and in-service teachers can effectively use these new e-learning resources for learning and teaching (Minshew & Anderson, 2015).

E-learning resources have been subject to much recent debate within the educational community. Whilst growing numbers of educators celebrate the potential of social networking to (re)engage learners with their studies, others fear that such e-learning resources compromise and disrupt young people's engagement with 'traditional' education provision. The arguments among educators in teacher preparation process which involves lesson preparation, delivery of quality instruction and the use of teaching aid necessitates the use of e-learning resources for training pre-service teachers. From the foregoing, it can be deduced that e-learning resources has been of immense benefit to the people and as a result of the contributions of the e-learning resources to the education system, this study posed this question; would there be improvement in students' learning outcomes when the pre-service teachers are exposed to instructional strategies through the e-learning resources as a way of preparing the teachers for the world of work? This study therefore, investigated the relationship between e-learning resources, teacher preparation and students' learning outcome in primary schools in Lagos State.

Statement of the Problem

The advancement in technology and familiarization with e-learning resources in contemporary culture is changing what it means to be literate in the process of preparing teachers in the 21st century. It is very easy to get and to circulate information today through various e-learning resource platforms. The emergence of several e-learning resources is redefining the boundaries of the classroom in teacher training institutions in many ways that have not been before (Gambari, Gbodi & Yaki, 2008). Yet, the prevalence of information which is made available by e-learning resources does not necessarily mean that students and teachers are critically using it to enhance educational process. It appears teachers and learners do not maximize the functionality of the e-learning resources for educational purposes. In fact, we are in an era where developing technological literacy in students can no longer be viewed as an optional aspect of education but rather as an essential objective (Bybee, 2000). If a student graduates from teacher training institution without a comprehensive understanding of how to comfortably navigate e-learning resources, they will face significant disadvantages when competing against their tech savvy peers whether they pursue higher education or enter the modern workforce (Wang, 2012).

In fact, students' learning outcome is important to stakeholders in the education system because the complaints by stakeholders about poor students' learning outcome has been on the increase and is expressed at different fora. Stakeholders perceive that the attitude of students towards academic activities keeps reducing and they are not as committed as their counterparts in the past. It appears students' interest and effort in school is directed at other non-academic activities and this has serious implications on students' learning outcome. Similarly, the poor students' learning outcome at the end of their programme seems not to satisfy the yearnings and aspiration of Nigerians as rightly observed by Ogunsaju (2004) who asserted that the academic standard in all Nigerian educational institutions has fallen considerably below societal expectations.

Students' learning outcome is being discussed by stakeholders at virtually every forum because of the need to address the mystery behind academic excellence in the school system. Poor students' learning outcome is noticed not only at the primary school level but at every level of the education system in Nigeria. Obviously, stakeholders complain about the quality of graduates produced by our teacher training institutions and other learners in the education system. Umaru (2017) stated that the pre-service teachers lack the necessary skills and competence needed to work in the 21st century organizations. This is because of their inability to cope in the modern era of global technology revolution driven by Information and Communication Technology (ICT). It seems pre-service teachers are finding it difficult to both explore the uses of technology and evaluate their effectiveness in supporting education despite recognizing that there is easy access to a great deal of information from the confines of a classroom and comfort of a home via the internet. This study therefore investigated the relationship between the e-learning resources, teacher preparation and students' learning outcome in primary schools in Lagos State.

Purpose of the Study

The general purpose of this study was to investigate the relationship between the e-learning resources, teacher preparation and students' learning outcome in primary schools in Lagos State. Specifically, the study sought to:

1. investigate the relationship between e-learning resource utilization and students' learning outcome.
2. determine the relationship between instructional delivery and students' learning outcome
3. examine the relationship between lesson preparation and students' learning outcome.
4. examine the relationship between use of teaching aid and students' learning outcome.

Research Hypotheses

The following research hypotheses were tested in the study.

1. E-learning resource utilization is not significantly related to students' learning outcome.
2. There is no significant relationship between instructional delivery and students' learning outcome.
3. Lesson preparation and students' learning outcome are not significantly related.
4. Use of teaching aid is not significantly related to students' learning outcome.

Methodology

The research design was descriptive survey research design. The population for this study was all the 1,458 teaching practice students at Adeniran Ogunsanya College of Education, Oto/Ijanikin, Lagos State while the sample was 314 participants who were selected using the Taro Yemane's formular for determining the minimum sample size. The stratified random sampling technique was used to stratify the college into the existing Six Schools after which the proportionate stratified random sampling technique was used to determine the number of participants that are qualified to be chosen in each school based on the total population of students in each of the schools. Thereafter, the simple random sampling technique was used to select the actual participants of the study. A self-designed questionnaire was used for data collection. The questionnaire had two sections (Sections A & B) and items relate to the stated research questions and Hypotheses of the study. The students' learning outcome was measured by collecting students result in Mathematics as at the current term. The face and content validity was assured by expert in instrument construction in Adeniran Ogunsanya College of Education while reliability was ensured by administering the instrument on 30 participants who did not participate in the main study and dta collected was analysed using the Cronbah alpha reliability technique. A reliability coefficient of .84 proved the instrument was reliable. The hypotheses were tested using Pearson Product-Moment Correlation statistics at .05 level of significance.

Results

H_{o1}: E-learning resource utilisation is not significantly related to students' learning outcome.

Table 1

E-learning Resource Utilisation and Students' Learning Outcome

Variable	N	Mean	SD	df	r	P	Rmk	Decision
E-learning Resource Utilisation		11.12	4.12					
	314			312	.74	.002	Sig	Ho_3 Rejected
Students' Learning Outcome		8.06	2.11					

 Sig @ P<0.05

Information on Table 1 shows that there was a strong, positive and significant relationship between e-learning resource utilisation and students' learning outcome in public primary schools in Lagos State (r(314)= .74; df =312; P<.05). Thus, the hypothesis which stated that e-learning resource utilisation is not significantly related to students' learning outcome was rejected. This implies that there was a significant relationship between e-learning resource utilisation and students' learning outcome in public primary schools in Lagos State.

H_{o2}: There is no significant relationship between instructional delivery and students' learning outcome.

Table 2
Instructional Delivery and Students' Learning Outcome

Variable	N	Mean	SD	df	r	p	Rmk	Decision
Instructional delivery		12.01	3.14					
	314			312	.84	.001	Sig	Ho_1 Rejected
Students' Learning Outcome		8.06	2.11					

Sig @ P<0.05

Information on Table 2 shows that there was a strong, positive and significant relationship between instructional delivery and students' learning outcome in public primary schools in Lagos State (r(314)= .84; df =312; P<.05). Thus, the hypothesis that stated that there is no significant relationship between instructional delivery and students' learning outcome was rejected. This implies that there was a significant relationship between instructional delivery and students' learning outcome in public primary schools in Lagos State.

H_{o3}: Lesson Preparation and Students' Learning Outcome are not significantly related.

Table 3
Lesson Preparation and Students' Learning Outcome

Variable	N	Mean	SD	df	r	P	Rmk	Decision
Lesson Preparation		13.32	4.16					
	314			312	.75	.001	Sig	Ho_2 Rejected
Students' Learning Outcome		8.06	2.11					

Sig @ P<0.05

Information on Table 3 shows that there was a strong, positive and significant relationship between lesson Preparation and students' learning outcome in public primary schools in Lagos State (r(314)= .75; df =312; P<.05). Thus, the hypothesis that stated that there is no significant relationship between lesson Preparation and students' learning outcome was rejected. This implies that there was a significant relationship between lesson Preparation and students' learning outcome in public primary schools in Lagos State.

Ho4: Use of teaching aid is not significantly related to Students' learning outcome.

Table 4
Use of Teaching Aid and Students' Learning Outcome

Variable	N	Mean	SD	df	r	P	Rmk	Decision
Use of Teaching Aid		14.42	4.26					
	400			398	.78	.002	Sig	Ho_3 Rejected
Students' Learning Outcome		10.06	3.17					

Sig @ P<0.05

Information on Table 4 shows that there was a strong, positive and significant relationship between use of teaching aid and students' learning outcome in public primary schools in Lagos State (r(314)= .74; df =312; P<.05). Thus, the hypothesis which stated that use of teaching aid is not significantly related to students' learning outcome was rejected. This implies that there was a significant relationship between use of teaching aid and students' learning outcome in public primary schools in Lagos State.

Discussion of Findings

The findings of research hypothesis one showed that there was a strong, positive, and significant relationship between e-learning resource utilisation and students' learning outcome in public primary schools in Lagos State. From this finding, we can conclude that the availability and utilization of technology in lesson delivery will have a positive influence on the students' learning outcome. This finding agrees with the work of Ibukun, Akinfolarin, and Alimi (2011) who found that a significant relationship exists between e-learning resources and students' learning outcome. It is also in agreement with the findings of a study by Eze, Chinedu-Eze, and Bello (2018) where it was established that a significant relationship exists between e-learning resources and students' learning outcome. On the contrary, it negates the findings of a study by Yinusa (2015) who confirmed that no significant relationship exists between e-learning resources and students' learning outcome.

The findings of hypothesis two showed that there was a strong, positive, and significant relationship between instructional delivery and students' learning outcome in public primary schools in Lagos State. This implies that quality delivery of instruction will have a positive influence on students learning outcome. In other words, the learning outcomes of students will greatly improve when teachers can deliver effective and quality instruction in the school system. This finding agrees with the work of Oyebiyi (2015) who found that a significant relationship exists between instructional delivery and students' learning outcome. It also supports the findings of Adeshina and Abioro (2011) who confirmed that a significant relationship exists between instructional delivery and students' learning outcome. However, it negates the findings of a study by Dike (2015) who found that no significant relationship exists between instructional delivery and students' learning outcome.

The result of analysis of research hypothesis three revealed that a strong, positive, and significant relationship exists between lesson preparation and students' learning outcome in public primary schools in Lagos State. This implies that students learning learning outcome will improve when teachers adequately prepare for lessons because it will aid effective instructional delivery and boost students' understanding of lessons. This finding agrees with the work of Alabi (2011) who found that a significant relationship exists between lesson preparation and students' learning outcome. It is also in agreement with the findings of a study by Bello (2016) where it was established that a significant relationship exists between lesson preparation and students' learning outcome. On the contrary, it negates the findings of a study by Gyan (2017) who confirmed that no significant relationship exists between lesson preparation and students' learning outcome.

The result of hypothesis four showed that a strong, positive, and significant relationship exists between use of teaching aid and students' learning outcome in public primary schools in Lagos State. It can be deduced from this finding that; use of teaching aid will make learning meaningful to learners which will improve their understanding and learning outcomes. This finding agrees with the work of olaniran (2014) who found that a significant relationship exists between use of teaching aid and students' learning outcome. It is also in agreement with the findings of a study by Smith (2008) where it was established that a significant relationship exists between use of teaching aid and students' learning outcome. On the contrary, it negates the findings of a study by Akinduro and Adejumo (2012) who confirmed that no significant relationship exists between use of teaching aid and students' learning outcome.

Conclusion

The advancement in technology and familiarization with e-learning resources in contemporary culture is changing what it means to be literate in the process of preparing teachers in the 21st century. It is very easy to get and to circulate information today through various e-learning resource platforms which is redefining the boundaries of the classroom in teacher training institutions. Thus, the need for this study on e-learning resources in teacher preparation and students' learning outcome. Obviously, students' learning outcome has a great influence on a student's attitude to learning, self-esteem, motivation, and perseverance in further pursuing his/her educational programme. Students' learning outcome is one of the current educational problems of public interest based on students' poor attitude to learning and academic achievement especially at the primary school level in Nigeria.

Recommendations

The study has found that effective utilization of e-learning resources in teacher preparation would help improve students' learning outcome. Based on this finding, it was therefore, recommended that,

1. Government should ensure that e-learning resources are adequately deployed and utilised in schools for effective preparation of teachers to improve students' learning outcome.
2. Government and institutional managers should ensure that teachers are regularly trained on effective instructional delivery using e-learning resources in schools.
3. Teachers should adequately prepare for lessons in order to deliver quality lessons and improve students' learning outcome.
4. Teachers should be encouraged to use teaching aid to facilitate learning and improve students learning outcome in schools.
5. Government should sign policies to ensure continuous utilization of e-learning resources in teacher preparation in schools.

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