Application of E-Learning in Colleges of Education and Students Academic Performances in Social Studies in Ondo State Nigeria

Dr. Abidoye J. A.¹ and Fakokunde, J. B.²

¹Department of Educational Technology, Adeyemi College of Education Ondo, Ondo State, Nigeria
dove10@yahoo.com

²Osun State University, Ipetu Ijesa Campus, Osun State

Abstract
This study investigated the availability of E-learning infrastructures and the influence of application of E-learning infrastructures in teaching and learning of social studies in the academic performance of students in Colleges of Education in Ondo State, Nigeria. A descriptive survey research design was adopted in this study. A sample of 190 social studies students and 10 lecturers were randomly selected from two colleges of education in Ondo State. The study was guided by two research questions and two hypotheses tested at 0.05 level of significance. A research instrument (E-learning infrastructures in Teaching and Learning of Social Studies (ELITLSS), which was 8 items questionnaire was used to collect data for the study. The mean and standard deviation statistics were used to answer the research questions, while t-test was used to test the two hypotheses formulated in the study. The finding of this study showed that the availability of e-learning infrastructures in Colleges of Education is very low and students have low competence on the application of e-learning infrastructures in learning of social studies. Also it was found out that students taught with e-learning infrastructures had significantly better academic performance than those taught with conventional method, significant difference was found between the academic performance of private and public school students exposed to social studies with e-learning infrastructures. Finally, the paper concludes by proffering some recommendations among which e-learning competence should be incorporated into the curriculum of social studies education in Colleges of Education in Nigeria was included.

Key words: E-learning, ICT, private and public schools, social studies, College of Education.

Introduction
In the age of Information and Communication Technology (ICT), there is growing concern for the use of ICT resources such as the computer, scanner, printer, internet, e-mail, videophone system, teleconferencing device, wireless application protocols (WAP) radio and microwave, television and satellites, multimedia computer and multimedia projector in curriculum implementation. In E-learning curriculum content in the form of tests, visuals e.g. pictures, posters, videos, audio sound, monitor, image, maps and graphic can be simultaneously present online to students in the classroom.

E-learning (EL) is a unifying term used to describe the field of online learning, web-bass training and technology delivered instruction (Oye, Salleh and Laheed2010). E-learning is also define as a learning process, created by the interaction with digitally delivered content, network-based service and tutoring support Ezeasomba (2010). E-learning is any technologically medicated learning using computer whether from a distance or in face to face classroom setting (computer Assisted learning). It is shift
from traditional education or training to ICT based personalised, flexible, individual, self organised, collaborative learning based on a community of learning, teaching, facilitator and experts.

In recent time, there has been intensive advocacy nationally and internationally for the application of EL in teaching and learning process. Abimbade (2010), observed that the application of EL in the school subject is to make learner learn better and teacher to teach well. It is not a hindrance to teacher-student relationship. It rather ensure transactional instructional communication where the teacher manage the human materials, time and place to make that instructional event (game attention simulation) recall present stimulus thinking elicit performance provide feedback, provide generalizing experience performance) occur leading to change in behaviour of people.

It has been noted that EL is an effective medium in contributing towards education in general and social studies in particular. The inherent cross-circulation nature of electronic learning technology makes it ideal medium that can be used not only during social studies lessons but also other school subjects E-learning can be an excellent medium for training young people in learning about and appreciating the culture heritage in its diversity. Computers and internet facilities are now in place in many state owned and private schools. It is envisaged that educator will see E-learning as a major teaching and learning device across all education institutions especially colleges of education. With its power of interactivity, multimedia and communication, the computer provides an excellent tool for social studies education. The idea is that students (pre-service teachers / teachers in training) will be active “participants” rather than “spectator” in teaching and learning process.

The Use of E-Learning Tools for Teaching and Learning of Social Studies

Social studies as one of the core subjects in school curriculum was designed to inculcate in learners right attitudes, values, knowledge and skills for effective citizenry and enable the understanding the way to manage the environmental resources for maximum utilization. This is why Chikwelu (2007) defines social studies as an interdisciplinary study of man and interaction with his environment and inculcation of right attitudes values, knowledge and skills for developing effective citizenry who contribute positive to the development of his society. While Abimbade (2010) sees it as a discipline through which man studies and learns about the problem of interaction and adjustment to the changing world. The status of a core subject accorded social studies at all levels of education in Nigeria is also given credent by the National policy on education (FRN 2004).

In spite of the important place of social studies in our educational system, literatures such as Falade (2007) and Fagbemi, Gambari, Oyedum, and Gbodi (2012) had revealed that there had been sharp fall in the interest and performance of student and pupils in social studies owing to an unbridled use to conventional lecture method in teaching and learning of social studies. This has resulted in high rate of moral bankruptcy, corruption and poor management of environment resources. Yusuf (2007) corroborates this view when he acknowledges the poor performance of students in social studies to poor teaching methods employed by teachers.

The teaching of social studies lesson in college of education in Nigeria are usually carried out in the classroom during school hours, but a time entails going for an excursion or field trip to an environment different from usually school environment. This enable student (pre-service teacher) under the guidance of their teacher to discover the riches of a particular situation, site, surrounding, historic and artistic feature and the roles they serve. Visit to nearby areas may be easier but a trip to far place or another country to witness the heritage richness it possesses will be difficult. This is where electronic learning can be employed to assist. All students can be given the opportunity to sample other ethnic group and countries heritage through the effective power of interactive multimedia. Multimedia is the embodiment of test, graphic, animation, pictures, sound and videos clip and cab be easily used in social studies education. Graphics play an extreme important role in the learning process. A look at existing teaching method will show the wide spread of use of graphic device and sound, movement and interactivity on a multimedia CD-ROM. It should also be noted that
student can be provided with fact by using virtual reality system that transport them into an environment created by the computer that generate there dimensional realistic scenes with which the student can interact.

Abidoye, (2010) noted that introduction of computer disc (CD-ROM) has revolution the way information stored, retrieved and disseminated. Similar is flash drive, radio and television broadcasts with social of social studies content can equally be used in teaching and learning of social studies topics. A teacher can obtain educational software with social content from major publishers of books, educational software developers, public domain, software packages, computer club, users group and educational institution that have established electronic production units.

The internet is the largest network in the word. It consists of millions of connected network around the word the word. The million of computer are connected to each other through the telephone system like spider’s web thus achieving instant communication. Through the internet, large amount of education information can assessed. The use of internet during social studies lessons could result in breaking down boundaries, getting young people to know each other and to appreciate each other views and cultural background. This will foster an interest in the heritage of other ethnic groups and countries. Sometime it is the exposure to the heritage other place and that makes people realise that they also have a heritage of their own worth discovering, enjoying and preserving.

Computer Assisted Instruction (CAI) is the use of computer to deliver instruction to learner. It is direct 2 way interaction or communication between an individual student and programmed instructional materials stored in a computer. The use of CAI in social studies class not only help the student to receive immediate feedback but also help them to actively involved in the learning of the of the object. Instructional slides and tutorial are teaching and learning aids made and written into compact disk with graphic and text. It is made possible by the use of an application package such as power point tutorial which are components of this are mainly learning aid recommended for self-paced learner. Using the instructional shell and tutorial in social studies class will allow the leaving of various social studies to be real and interactive to the learners.

Virtual teaching is a teacher/ learning situations in which interactive video conference technology is use to facilitate effective teaching and learning of social studies. The interaction is similar to that present during face to face learning session.

**Statement of the Problem**

Little empirical researches are available on the application of E-learning technology on social studies in colleges of education in Nigeria. This study therefore investigated to the level of availability of e-learning tools in colleges of education, the extent the social studies student have acquired e-learning skills and how the use of e-learning innovation can influence the academic performance of student in social studies.

**Research Question**

The following research questions were raised and answered in this study:

1. To what extent have the social study teachers and students acquired electronic learning skill?
2. What is the level of availability of e-learning infrastructure in College of Education in Nigeria?

**Research Hypotheses**

The following research hypotheses were formulated and tested at 0.05 level of significance in this study;

1. There is no significant different between the academic performance of social studies students taught with e-learning infrastructures and those taught with conventional method of teaching.
2. There is no significance difference between the academic performance of social studies students taught with e-learning infrastructures in public and private college of education.
Methodology

The research design adopted for this study was the descriptive survey design. The study investigated the application of e-learning resources in social studies education in Colleges of Education in Ondo State. The population of the study comprises of 190 Nigeria Certificate of Education (N.C.E) two social studies students and 10 lecturers in two college of education in Ondo State. Out of three Colleges of Education in the state simple random technique was used to select one private and one public school. Adeyemi College of Education, Ondo was selected as a public school while all state College of Education Ero was selected as a private school.

The instrument used for the data collection was a structured questionnaire developed by the researcher, based on the research questions. The instrument was faced validated by two experts in research methods in the Department of Educational foundation and Counselling at Adeyemi College of Education Ondo. Two seasoned and experienced social studies lecturers and two experts in Educational Technology Unity of Faculty of Education University of Ibadan were also involved in the validation process. The reliability of the instrument was also ascertained by administering the instrument to 42 social studies students and 3 lecturers in another school that was not used for the study. The reliability coefficient of 0.82 was obtained using corronach Alpha method.

The questionnaire was finally administered to the respondents. The whole 200 questionnaire administered was returned. The data collated were analysed using weighted means. The item with a mean of 2.50 and above was regarded as accepted while item with mean rating below 2.50 was regarded as rejected. Also t-test was used for the analysis of the research hypotheses at 0.05 level of significance.

Research Question 1: what is the level of availability of e- learning infrastructure in colleges of education in Ondo State?

Table I showing mean rating of the availability of e- learning infrastructure in colleges of Education in Ondo State

<table>
<thead>
<tr>
<th>S/N</th>
<th>ITEMS</th>
<th>Mean(x)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer set are available</td>
<td>2.54</td>
<td>0.37</td>
</tr>
<tr>
<td>2</td>
<td>Internet facilities are available</td>
<td>2.52</td>
<td>0.36</td>
</tr>
<tr>
<td>3</td>
<td>Digital camera, printer, Scanner, DVD player, CD- Roms and flash are provided appropriately</td>
<td>1.56</td>
<td>0.45</td>
</tr>
<tr>
<td>4</td>
<td>Interactive board and multimedia projector are provided</td>
<td>1.95</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Result in table 1 shows that the mean scores of the items 2- 4 fall below 2.50 with the expectation of item 4 that has mean score of 2.56. This shows that there is deficiency in the availability of many e-learning infrastructures in schools. The standard deviation SD values of respondents rating for different questionnaire items show a generally fair degree of closeness of the responses. This indicates homogeneity in responses.

Research Question 2: to what extent social studies teachers and students acquire e- learning skills?

Table II: showing rating of extent to which social studies teachers and students acquire e- learning skills.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Mean (x)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>The students can use computer system</td>
<td>2.50</td>
<td>0.55</td>
</tr>
<tr>
<td>6</td>
<td>The students can use internet, flash, CD-Rom and memory card</td>
<td>2.34</td>
<td>0.37</td>
</tr>
<tr>
<td>7</td>
<td>The students can use data processing analysis and run programs on computer</td>
<td>2.34</td>
<td>0.39</td>
</tr>
<tr>
<td>8</td>
<td>They can use multimedia projector</td>
<td>2.03</td>
<td>0.32</td>
</tr>
</tbody>
</table>
Results in table 2 show that 6-8 have mean score below 2.50. these responses indicate that the student find difficult to utilize the few available e-learning infrastructures for social studies education except computer system in item 5.

Hypothesis 1
There is no significant difference between the performance of students who were taught social studies with e-learning resources and those taught with conventional method of teaching. Table III shows the t-test statistics on the difference in the academic performance between students taught with e-learning resources and those taught with conventional method of teaching.

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>t.critical</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students taught with e-learning</td>
<td>100</td>
<td>2.34</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students taught with conventional method</td>
<td>100</td>
<td>2.19</td>
<td>0.03</td>
<td>98</td>
<td>8.23</td>
<td>1.98</td>
<td></td>
</tr>
</tbody>
</table>

0.05 level of Significance
The above table indicates that students taught with e-learning infrastructure performed significantly better than those students not taught with e-learning infrastructure. Considering calculated t= 8.23 and t-critical 1.98 t-calculated is greater than t-critical. Based on this result the null hypothesis one is rejected, which means that, there is a significant difference between the academic performance of social studies students taught with e-learning infrastructure and their counter-part not taught with e-learning infrastructure.

Hypothesis 2
There is no significant difference between the academic performance of students from public and private schools taught with e-learning infrastructures. Table IV: Shows the t-test statistics on the difference in the academic performance between students from private and public school taught with e-learning infrastructures.

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>X</th>
<th>SD</th>
<th>t-cal</th>
<th>t.critical</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private school</td>
<td>50</td>
<td>59.3</td>
<td>12.8</td>
<td>7.8</td>
<td>2.0</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>Public school</td>
<td>50</td>
<td>41</td>
<td>7.8</td>
<td>7.8</td>
<td>2.0</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>

Table IV above indicate that students from private school perform significantly better than their counterparts from public school, considering calculated t = 9.6 df = 98 p = 0.05. Based on this result, the null hypothesis is rejected.

Discussion
The results in table I show that the level of availability of e-learning infrastructures in College of Education is low. The finding is in line with the finding of Abimbade (2010) who noted inadequate e-learning infrastructures in Nigerian tertiary institutions especially Colleges of Education and then calls for improvement and inclusion of e-learning infrastructures in Nigerian school curriculum at all level. The results in table II show that students have low competence in application and utilization of e-learning infrastructures. The reason for this can be attributed to inadequate supply of e-learning infrastructures in schools. The results in table III reveal that there is significant difference between the performance of students taught social studies with e-learning infrastructures and those taught with conventional method of teaching. This study is in line with Arinze, Okonkwo and Iwunor (2012) who noted that the application of ICT in social studies classes brought about an improvement in students academic performance. The results in table IV reveal that there is a significant difference between the academic performance of students from public and private schools exposed to social studies through e-learning resources. This result is in agreement with Acedoja and Abidoye (1999) who noted a sharp improvement in academic achievement of students in private schools as a result of their proficiencies in internet utilization. It was also noted that private schools are more equipped with ICT infrastructures than the public schools.
Conclusion
The Information and Communication Technology (ICT) revolution has transformed the ways in which ideas and information are recorded and communicated and in the process, has brought far-reaching changes to teacher education programmes. In most countries of the world both developed and developing, citizens are consistently being expected to acquire computer literacy to enable them cope with the technological complexities of everyday life. The acquisition of necessary ICT skills especially e-learning aspect is essential for both social studies teachers and students since this will bring about much improvement in the performance of the students in social studies.

Recommendation
Based on the findings of the study and conclusion thereof, the following recommendations are made:

1. E-learning competence should be incorporated into the curriculum of social studies at all levels of education.
2. Government can give soft loan to teachers who want to acquire personal ICT. On the other hand the government can procure computers and supply to the teacher at a subsidized cost or at hire purchase. This will help the teachers of different subjects procure and ICT appropriately.
3. Development of Computer Education in the University and Colleges of Education should be adequately equipped with human and material resources to train and equip students with needed competence and skills.
4. The Federal Ministry of Education in Nigeria should mandate the NUC, NCCE and NBTE to establish information center to enable teachers exchange ideas with their counterpart all over the world.
5. Libraries in the Universities and Colleges of Education should be provided to create information centers whereby users can retrieve information as required. Multimedia systems facilitate the reaching and they can be updated just as the hard copies on shelves.

References