IMPACT OF ICT TO THE EDUCATIONAL AND ECONOMIC DEVELOPMENT OF STUDENTS IN SELECTED UNIVERSITIES IN SOUTH EASTERN NIGERIA

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Abstract
This study investigated the impact of ICT to the educational and economic development of students in selected universities in South Eastern Nigeria. The study adopted a descriptive survey method. The sample size is eight hundred (800) university students selected systematically from four Universities – University of Nigeria Nsukka, Enugu State University of Science and Technology, Nnamdi Azikiwe University, Awka and Anambra State University Uli. Questionnaire was the instrument for data collection. Two research questions guided the study. Mean and Standard deviation were used to analyze the two research questions. The findings of the study revealed that ICT has contributed adequately to the educational and economic development of students in South Eastern Nigeria. The use of ICT in schools is useful to the students in different ways. For instance; through ICT resources, the university students easily have access to academic materials for their researches. Some of the students who have ICT resources such as computers and printers also use them for business in school and use the money to assist themselves in solving other financial demands, such as payment of school fees. The researcher recommended that students should be encouraged to embrace ICT resources because of its significant role in assisting them academically and also financially. However, the students should be prudent in utilizing ICT resources. They should scrutinize information they source especially from the internet because not all the materials published in the internet are good for academic research. The researcher further recommended that university students who use ICT resources for business should moderate their engagement towards it, otherwise, it will affect their academic performance in the university.

Globalization and technological change have created a new global economy powered by technology, fuelled by information and driven by knowledge. Development is partly determined by the ability to establish a synergistic interaction between technological innovation and human values. The rapid rate at which Information and Communication Technology (ICT) has evolved since the mid 20th century, the convergence and pervasiveness of it gave them a strong role in development and globalization (Nwagwu, 2006). Conceptually, ICT is a composite term, which embodies three important concepts: Information, Communication and Technology. Wilson (2009) defined ICT as the set activities which facilitate by electronic means the processing, transmission and display of information. Esen and Gundogbu (2010) defined ICT as technologies that people use to share, distribute, gather information and to communicate through computers and computer networks. ICT is also described as a complex varied set of goods, applications and services used for producing, distributing, processing, transforming information which can be done via telecoms, TV and radio broadcasting, hardware and software, computer services and electronic media (Marcelle, 2000). According to Ogbu (2012), ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning.

The elements of ICTs include internet, satellite, cable data transmission and computer assisted equipment. Within the domain of ICT, Internet is one of the most profound resources in use both in developed and developing countries.
ICTs have a significant impact on all areas of human activity including education. Thornburg (2000) noted that as the half-life of information continues to shrink and access to information continues to grow exponentially, schools cannot remain mere venues for the transmission of a prescribed set of information from teacher to student over a fixed period of time. Rather, schools must promote the acquisition of knowledge and skills that make possible continuous learning over the lifetime. ICT also helps in expanding access to education, strengthen the relevance of education to the increasingly digital workplace and raise educational quality by helping make teaching and learning into an engaging, active process connected to real life when used appropriately.

The provision of Information and Communications Technology (ICT) to schools and its use for educational purposes can increase students’ achievement in at least two ways. First, the availability of ICT in the classroom shifts the level of educational inputs and could thus affect students’ learning outcomes. Secondly, exposure to ICT may increase the cognitive abilities of students, allowing them to learn faster. Computer-aided instruction may be more relevant in a context in which teacher quality is poor, which is the case in most developing countries. When they are well implemented, instructional courseware, digital content and other electronic learning resources can help meet intermediary goals that can lead to improved student achievement, making technology an essential tool in teaching and learning in the 21st century. According to UNESCO (2005), Quality electronic learning resources, in addition to being learner appropriate, aligned to state and local standards, and built around effective pedagogy and instructional design, can provide many educational benefits, including:

- Engaging students through multi-media, interactive content;
- Strengthening understanding and thinking skills through exploration, collaboration and creation;
- Adapting to support differentiated or personalized learning for students who have a specific learning style, pace or needs;
- Keeping knowledge current and information accurate;
- Enhancing accessibility for physical or learning disabled students through assistive technologies and presentation of content in alternative modalities; and
- Integrating testing and classroom management tools, thus allowing realtime tracking of student performance to inform instruction and provide accountability

Information and Communication Technology (ICT) is not only gainful in academic, but is also prerequisite for developing countries’ economic success. The ability of developing countries to thrive in global economy depends on the nations’ objectives of ICT policies and their ability for proper implementation of such policies. ICT can be gainful economically if it could reduce the expenses one would have incurred where ICT was not available.

Today, most students utilize ICT to minimize their financial problems in schools. Some of the students in various institutions engage in ICT business that fetch them money. Some of these students sponsor themselves in the universities or tertiary institutions using ICT facilities. Some of them have business centres in schools which are operated throughout the session. Some of the university students are website designers, some are programmers, and some teach other ICT related programmes like Statistical Package for Social Sciences (SPSS).

Our concern here is to investigate, how the emergence of ICT has contributed to the academic cum economic development of some selected university students in the South Eastern Nigeria.

Statement of the Problems

Some years ago, some university students in most developing countries are befell with academic problems. At times these problems are fueled with lack of finance to adequately support their academic programme. Some of these students drop out of school as a result of economic problems, hence, they were not able to pay their school fees. However, the emergence of ICT in the field of education seems to have brought in a change in the aforementioned situations. There is evidence from previous research that students now have access to research materials easier than the way they have it before the arrival of ICT. Students also seem to have been utilizing ICT resources in providing finance to support their academic activities. Some students have business centres in schools which are operated throughout the session. Some of the students are website designers, and design
Impact of ICT to the Educational and Economic Development of Students in Selected Universities in South Eastern Nigeria

website for schools, faculty and other organizations for financial gain. Some students are programmers, and utilizes ICT resources for programming. Some teach various ICT programmes to support their academic. Bearing this in mind, this study wants to investigate how ICT has contributed to the academic cum economic development of students in various universities in the South Eastern Nigeria.

Purpose of the Study

The main purpose of this study is to investigate the Impact of ICT to the educational and economic development of students in selected Universities in South Eastern Nigeria. Specifically, the study determined;
1. The impact of ICT on educational development of students in selected universities in South Eastern Nigeria
2. The impact of ICT on economic development of students in selected universities in South Eastern Nigeria

Research Questions

The following research questions guided the study:
1. What are the impacts of ICT on educational development of students in selected universities in South Eastern Nigeria?
2. What are the impacts of ICT on economic development of students in selected universities in South Eastern Nigeria?

Population for the Study

The population of the study comprises all the 98,216 students from the four selected public universities (University of Nigeria Nsukka, Enugu State University of Science and Technology, Nnamdi Azikiwe University Awka and Anambra State University Uli) in the South East Nigeria.

Sample and Sampling Technique

The researcher employed simple random sampling technique in selecting 250 students from each of the four universities. Stratified random sampling was used in selecting five hundred and fifty (550) males and four hundred and fifty (450) female students from the four universities given the sample size a total of one thousand (1000) respondents.

Instruments

A researcher-developed questionnaire titled Impact of ICT to the educational and economic development (IICTEED) was the instrument for data collection. It consisted of two sections. Section I gave demographic information about the respondents while section II contained 15 items built into clusters A and B. Cluster A provided information on the contributions of ICT to the educational development of students in South East Nigeria, while cluster B provided information on the contributions of ICT to the economic development of students in South East Nigeria. The instrument contains 20 items that addressed the two research questions formulated to guide the study. Weights were assigned to responses as follows:

Strongly Agree (SA) = 4
Agree (A) = 3
Disagree (SD) = 2
Strongly Disagree (D) = 1

\[ \frac{10}{4} = 2.50 \]

Criterion Mean: The cut-off Mean is 2.50. Therefore, any Mean score of 2.50 or above will carry the mark agree as it is above the Mean score, while any Mean score below 2.50 will carry the mark disagree as it is below the cut-off Mean score.
Validation of the Instrument

The instrument was face-validated by three experts, two from the Department of Education Technology and one from Measurement and Evaluation, all of the Faculty of Education, University of Nigeria Nsukka. The experts were asked to examine the drafts in relation to the purpose of the study and research questions to enable them determine if the items will elicit the required information. The experts’ comments, criticisms as well as suggestions were used in the production of final copy of the questionnaire for the study.

Method of Data Collection

The instrument was administered directly to the respondents using two research assistants. The researcher thoroughly briefed the research assistants to get them acquainted with the modality of administering the instrument in appropriate and friendly ways. The use of the research assistants helped to ensure that the actual respondents are indeed those who completed the questionnaire. At the end, the researcher and his research assistants collected the administered questionnaires on the spot from the respondents. This idea helped to ensure high return rate of the instrument for the study. Out of 1000 copies of questionnaire distributed, 800 copies of the were duly returned, thus indicating 80% return rate.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Names of the Institutions</th>
<th>Number of Questionnaire Distributed</th>
<th>Number of Questionnaire Returned</th>
<th>Percentage Rate of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Nigeria, Nsukka (UNN)</td>
<td>250</td>
<td>190</td>
<td>76%</td>
</tr>
<tr>
<td>2</td>
<td>Enugu State University of Science and Technology (ESUT)</td>
<td>250</td>
<td>210</td>
<td>84%</td>
</tr>
<tr>
<td>3</td>
<td>Nnamdi Azikiwe University Awka</td>
<td>250</td>
<td>208</td>
<td>83%</td>
</tr>
<tr>
<td>4</td>
<td>Anambra State University Uli</td>
<td>250</td>
<td>192</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>1000</td>
<td>800</td>
<td>80%</td>
</tr>
</tbody>
</table>

Method of Data Analysis

The data collected were analyzed using weighted mean. The formula for the weighted mean is shown below as:

\[
\bar{x} = \frac{\sum x}{\sum f}
\]

Where: \(\bar{x}\) = Mean Score

\[
\sum x = \text{Total Score}
\]

\[
\sum f = \text{Total Frequency}
\]

Results

The results of this study are presented in tables 1-2 below according to the research questions that guided the study.

Research Question 1

What are the impacts of ICT on educational development of students in selected universities in South Eastern Nigeria?

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Table 2: The Table below shows the Impacts of ICT on Educational Development of Students in Selected Universities in South Eastern Nigeria

<table>
<thead>
<tr>
<th>S/N</th>
<th>The impacts of ICT on educational development of students in South Eastern Nigeria</th>
<th>Mean score</th>
<th>Standard Deviation</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT promotes easy access to research materials such as textbooks, journals, Magazines</td>
<td>3.88</td>
<td>.51</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>ICT enhances students research work, writing of term paper  and projects</td>
<td>3.94</td>
<td>.34</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>ICT promotes students participation in online academic forum</td>
<td>3.88</td>
<td>.51</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>ICT promotes distance learning among students</td>
<td>3.92</td>
<td>.39</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Through ICT, Educational researchers have easy access to current literature materials</td>
<td>3.88</td>
<td>.51</td>
<td>Agree</td>
</tr>
<tr>
<td>6</td>
<td>ICT gives learners easy access to various kinds of research information, which would necessitate a link to the libraries group</td>
<td>3.93</td>
<td>.37</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>ICT promotes learning new methods for disseminating knowledge.</td>
<td>3.89</td>
<td>.42</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>ICT reduces time and cost of conducting educational investigation.</td>
<td>3.94</td>
<td>.29</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>ICT Strengthens understanding and thinking skills through exploration, collaboration and creation.</td>
<td>3.84</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Through ICT, students have access to foreign books.</td>
<td>3.86</td>
<td>.58</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Table 2 above shows that the students were of the view that ICT contributes adequately in educational development. The students responds on the use of ICT in promoting easy access to research materials such as textbooks, journals, Magazines had a mean score of 3.88; the students response that ICT enhances students research work, writing of term paper  and projects had a mean score of 3.94; the students response that ICT promotes students participation in online academic forum had a mean score of 3.88; students response that ICT promotes distance learning among students had a mean score of 3.92; the students response that through ICT, educational researchers have easy access to current literature materials, had a mean score of 3.88; the students response that ICT gives learners easy access to various kinds of research information, which would necessitate a link to the libraries group had a mean score of 3.93; students response that ICT promotes learning new methods for disseminating knowledge, had a mean score of 3.89; students response that ICT reduces time and cost of conducting educational investigation had a mean score of 3.94; students response that ICT Strengthens understanding and thinking skills through exploration, collaboration and creation had a mean score of 3.84, and finally, the students response that through ICT, students have access to foreign books, had a mean score of 3.86.

From the results it is obvious that ICT has contributed adequately to the educational development of students in universities in South Eastern Nigeria.

Research Question 2

What are the impacts of ICT on economic development of students in selected universities in South Eastern Nigeria?
Table 3: The Table below shows the Impacts of ICT on Economic Development of Students in selected Universities in South Eastern Nigeria

<table>
<thead>
<tr>
<th>S/N</th>
<th>The impacts of ICT on economic development of students in South Eastern Nigeria</th>
<th>Mean score</th>
<th>Standard Deviation</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT reduces cost of procuring research materials by the students</td>
<td>3.94</td>
<td>.34</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>ICT provides students with skilled work such as website designing and video editing which aids their study financially.</td>
<td>3.88</td>
<td>.51</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Through ICT, the students own printers and computers at a very cheap rate.</td>
<td>3.86</td>
<td>.58</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>Availability of ICT resources minimizes cost of researching.</td>
<td>3.92</td>
<td>.39</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Through ICT, some students own business centre which aid them financially, such as; having money for payment of school fees.</td>
<td>3.84</td>
<td>.64</td>
<td>Agree</td>
</tr>
<tr>
<td>6</td>
<td>Through ICT, most students enrolls in distance learning, thus, having time to do their business.</td>
<td>3.93</td>
<td>.37</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Through ICT, students easily get information from their colleague in school while they participate in other skilled activities.</td>
<td>3.89</td>
<td>.42</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>ICT offers students sense of business transaction.</td>
<td>3.94</td>
<td>.29</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>ICT provides business opportunities for the students</td>
<td>3.89</td>
<td>.42</td>
<td>Agree</td>
</tr>
<tr>
<td>10</td>
<td>Through ICT, students easily become trained in entrepreneurship skills</td>
<td>3.92</td>
<td>.39</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Table 3 above shows that the students were of the view that ICT contributes adequately in economic development. The students responds on the use of ICT reduces cost of procuring research materials had a mean score of 3.94; the students response that ICT provides students with skilled work such as website designing and video editing which aids their study financially had a mean score of 3.88; the students response that through ICT, they own printers and computers at a very cheap rate had a mean score of 3.86; students response that availability of ICT resources minimizes cost of researching had a mean score of 3.92; the students response that through ICT, some students own business centre which aid their study financially had a mean score of 3.84; the students response that through ICT, most students enrolls in distance learning, thus, having time to do their business had a mean score of 3.93; students response that through ICT, students easily get information from their colleague in school while they participate in other skilled activities had a mean score of 3.89; students response that ICT offers students sense of business transaction had a mean score of 3.94; students response that ICT provides business opportunities for the students had a mean score of 3.89, and finally, the students response through ICT, students easily become trained in entrepreneurship skills had a mean score of 3.29.

From the results it is obvious that ICT has contributed adequately to the educational development of students in universities in South Eastern Nigeria.

Discussion of finding and conclusion

The finding of research question one revealed that ICT has contributed adequately to the educational development of students in South Eastern Nigeria. The findings of research question two revealed that ICT has contributed adequately to the economic development of students in South Eastern Nigeria.
Eastern Nigeria. This implies that ICT has contributed to both educational and economic development in Nigeria, and has benefited university students in diverse ways.

**Conclusion**

The aim of this work was to find out the impact of ICT on educational and economic development of students in South Eastern Nigeria. The population of the study covers all the students in the ten public universities in South Eastern Nigeria. Eight hundred students selected systematically from four public universities in South Eastern Nigeria participated in study. The universities selected include: University of Nigeria Nsukka, Enugu State University of Science and Technology (ESUT), Nnamdi Azikiwe University Awka and Anambra State University Uli. Based on the findings of the study, the following conclusions are reached: ICT has contributed adequately to both educational and economic development of universities in South Eastern Nigeria. The use of ICT in schools is useful to the students in different ways. For instance; through ICT resources, the university students easily have access to academic materials for their researches. Some of the students who have ICT resources such as computers and printers also use them for business in school and use the money to assist themselves in solving other financial demands, such as payment of school fees.

**Recommendations**

The following recommendations are made:

1. Students should be encouraged to embrace ICT resources because of its significant role in assisting them academically and also financially. It is obvious from the findings of the study above that ICT resources have aided the students in having easier access to academic materials thereby fostering their researches in school. It is also obvious that through the use of ICT resources, some students train themselves in the universities.
2. However, students should be prudent in utilizing ICT resources. They should scrutinize information they source especially from the internet because not all the materials published in the internet are good for academic research.
3. Students should be encouraged to combine textbooks from their school libraries together with what they source from the internet in writing term papers, seminars works and projects.
4. The lecturers should encourage the students to use mostly articles that are scrutinized (for instance; journals) from the internet and to reference properly materials they got from the internet.
5. Time spent using ICT resources could substitute away time allocated for reading, therefore, students should be careful about the hours they spent using these resources for other purpose other than for academics.
6. The researcher further recommends that university students who use ICT resources for business should moderate their engagement towards it, otherwise, it will affect their academic performance in the university.
References


Marcelle, G. (2002). Information and communication technologies and their impact on the advancement and empowerment of women: Report from the online conference conducted by the division of the advancement of women


