**A Comparative Analysis of the Effectiveness**

**of Computer Appreciation Training Programme**

**in Colleges of Education in South-West Nigeria**

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**Abstract**

*This study was to elucidate the effect of the effectiveness of computer appreciation training programme in colleges of education. The study adopted a descriptive survey research design with a sample drawn from Federal college of education (Special), Federal college of education Abeokuta, Ogun state and Osun state college of education Ila Orangun, Osun state. The researchers made use of self-design structured questionnaire to elicit the information from the respondents. Data generated was analyzed with descriptive statistics involving frequency, count, simple percentage and Statistical package for the social sciences (SPSS). In the research, two hypotheses were tested at 0.05 level of significant. The finding revealed that, the introduction of ICT training is found to be effective in improving the academic performance of newly admitted students into college of education. Based on the findings some of the recommendations that are made are, parents should be more involved in the acquisition of computational skills for their wards at earlier age; this will enable them to be familiar with the technology before gaining admission into tertiary institutions, Government at all levels may consider making computer education compulsory in all level of elementary schools as well as provide computers and other equipment’s to facilitate practical.*

**Keywords:** ICT, Training, Effectiveness, Academic performance, Training

**Introduction**

The use of information technology has evolved along the years through continues innovations recorded in the field of STEM. Information and Communication Technology (ICT) is the use of computer and other communication media to process information. ICT is applied in all human endeavours and cuts across all disciplines irrespective of course of study. There is no level of exposure or activity that does not need ICT on daily basis nowadays. All spheres of live have incorporated ICT into their workspace thereby making it impossible to run any meaningful enterprise without it. Simply put, ICT now serves as backbone for societal development in all ramifications. (Tolorunleke et al, 2022). The use of modern ICT interventions in all fields of life has reduced the barrier of distance hereby bringing people from diverse backgrounds and geographical areas together by a simple click of a button. New research is being carried out on how Information and Communication Technology can be applied to all fields of human endeavours thereby making an adaptation for better quality in the education sector a necessity. Shazadi et al, (2022) opines that, it is not surprising to find increasing interest, attention, and investment being put into the adoption and utilization of ICT in all educational sectors around the world. It has therefore become essential to training students on the usage of the ICT tools. Currently, ICT is indispensable in the global education sector because of the interwoven nature of contemporary education and information gathering and analysis. This need has been echoed by educators, education planners and education counsellors in Nigeria. The importance of ICT in the education of higher education students cannot be overemphasized as stated by Obuezie, Osuchukwu and Ani (2018), ICT is the latest foundation for the development of Nations.

ICT has evolved to become a mainstay in the classroom. There are instances where both the students and their lecturer rely solely on ICT to complete the education process, it is now a common practice to have students scurrying the internet for materials to be used for their assignment, lecture notes and research works. The concept of ICT training refers to the use of ICT tools such as Microsoft Office Word, Microsoft Office Excel, Microsoft Office PowerPoint, and Microsoft Office Publisher to name a few as tools to prepare newly admitted students in Colleges of Education on the importance of ICT to education. Basically, it is virtually impossible to attain higher education qualification in Nigeria without knowing how to use some of the tools. Research has shown that a large percentage of high school graduates who constitute a bulk of newly admitted students into higher institutions in Nigeria have limited interaction with computer (Tolorunleke et al, 2022), however, most of them are only conversant with their smart phones. In view of this, Federal College of Education (Special), Oyo has introduced an introductory ICT training program for the newly admitted students to the College. The programme tagged, ‘Computer Appreciation Training Programme’ is meant to teach all the newly admitted students the basic computer operations and packages as well as taking them through practical sessions that shall be useful for them in their computer related courses like GSE (Introduction to Computer Studies: GSE 123 and Computer Networking: GSE 213) and when taking Computer-Based Test (CBT).

**Statement of the Problem**

The effective use of the computer is an illusion to most students of higher institutions in Southwest Nigeria because of their limited educational and social background, whereas, the global educational space is now fully digitalized, hence the disadvantage. It has been noted that most of the freshly admitted students struggle especially when taking Computer-Based Test (CBT) and computer related courses like GSE (Introduction to Computer Studies: GSE 123 and Computer Networking: GSE 213)**.** Also, from experience during their training, most of the newly admitted students into Colleges of Education in Nigeria are not practical oriented, thereby finding it difficult to identify basic parts of a computer and application. Furthermore, many of them could not perform basic functions in some Microsoft office applications. It is therefore imperative that a holistic approach is made to address the situation and proffer lasting solutions to the use of Computer Appreciation Training Programme in Nigerian Colleges of Education. This study contributes to the cumulative body of knowledge in this area by carrying out a comparative analysis of the effectiveness of Computer Appreciation Training Programme on the academic performance of freshly admitted students of Colleges Education in Southwest Nigeria.

**Objective of the study**

The objectives of the study include:

1. To investigate the availability and accessibility of ICT resources in the College of Education by newly admitted students.
2. To investigate the effect of introducing ICT to the newly admitted students in Colleges of Education.
3. To find out if students that take Computer Appreciation training programme are more motivated in computer related courses in General Studies.

**Research Hypothesis**

The study aims at testing the following hypothesis at 0.05 significant level:

**Ho1:** There is no significant relationship between Computer Appreciation Training Programme and academic performance of freshly admitted students of selected Colleges of Education in Southwest Nigeria.

**Ho2**There is no significant difference between academic performance of freshly admitted students that took part in Computer Appreciation Training Programme and the academic performance of students that did not take part in the Computer Appreciation Training Programme in selected Colleges of Education in Southwest Nigeria.

**Information and Communication Technology**

Information and Communication Technology (ICT) includes computers, the Internet, and electronic delivery systems such as radios, televisions, and projectors among others, and is widely used in today’s education. Kent and Facer (2004) indicated that, school is an important environment in which students participate in a wide range of computer activities, while the home serves as a complementary site for regular engagement in a narrower set of computer activities. Increasingly, ICT is being applied successfully in instruction, learning, and assessment. ICT is considered a powerful tool for educational change and reform.

Realizing the immense importance of equipping students with ICT literacy that meets the demands of the 21st century, the ministry of education in Malaysia implemented various training and ICT courses to in-service teachers and pre-service teachers (Rosonain and Mohd, 2010). ICT training is conducted to pre-service teachers through subjects or courses by respective institutions of higher learning. By 1994, ICT is taught as a core course in all teacher training programs (Rosonain and Mohd, 2010)**.** To cater for the needs of in-service teachers, Ministry of Education conducted ICT- related courses such as one-year special teacher certificate course in Information Technology, 14 weeks’ in-service course in Computer Education and Computer in Education **(**Lowther, et al.,2008**).** Parallel to these efforts, the ministry also conducted computer trainer-of-trainer courses, smart school teacher training courses and basic computer literacy to in-service teachers nationwide (Rosonain and Mohad 2010).

However, as of the first quarter of 2023, there are 152 Colleges of Education: 21 federal, 82 privates and 49 state Colleges of Education in Nigeria (Doris, 2023). Most of the researches have not catered for the newly admitted students into the Colleges of Education; therefore, this research is investigating the effect of ICT training on newly admitted Colleges of Education students in southwest Nigeria.

**Methodology**

This study conducted a comparative analysis of the effectiveness of computer appreciation training programme in colleges of education in Southwest Nigeria. The research was carried out using a quantitative approach. It was quantitative since the research was based on collecting and analyzing numerical data: it concentrated on measuring the response to a graduate scale in terms of frequency; and of course, was intended to be detailed and structured, so result can be easily collated and presented statistically.

**Research Design**

The study will have adopted descriptive survey research design to determine the extent to which colleges of education in South-west Nigeria adopt Computer Appreciation Training Programme for their newly admitted students. The study also examined the influence of ICT on the academic performance of Colleges of Education students in southwest Nigeria. Descriptive survey design was adopted for this study because of the study’s intention to assess the extent to which freshly admitted students are exposed to ICT tools in Colleges of Education.

**Sampling**

A total number of 1000 students were randomly selected from the three selected colleges of education in South West Nigeria; namely, Federal College of Education (Special), Oyo, Oyo State and Federal College of Education Abeokuta combined with College of education Ila Orangun to meet up with the number.

**Research Instrument**

The instrument used for data collection was self-constructed questionnaire. The questionnaire titled: Comparative analysis of the effectiveness of computer appreciation training programme in Colleges of education in Southwest Nigeria (QCAECATPCE). The questionnaire contains two sections (section A and section B).

Section A relates to the respondents Bio-data, while section B shall contain question items for respondents to provide answers to. A 4 scale Likert scale option of Strongly agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD) shall be used to gather responses from the respondents.

**Method of Data Collection**

The questionnaire would be administered to the randomly selected students with the help of two research assistance. The questionnaire would be collected immediately after completion.

**Method of Data Analysis**

Data collected would be collated for quantitative analyses. The data would be analyzed to compare the effectiveness of Computer Appreciation Training Programme in colleges of education in southwest Nigeria. All the hypotheses would be tested at 0.05 – level of significance. Data generated from the study would be analyzed using (SPSS) Research questions would be analyzed using Frequency count and simple percentages

**Data Analysis and Discussion of findings**

**Section A.**

**Table 1: Response of respondent based on their age**

|  |  |  |
| --- | --- | --- |
| Age | Frequency | Percentage |
| 16-20 years | **255** | **25.5** |
| 21-25 years | **658** | **65.8** |
| 26-30 years | **87** | **8.7** |
| Grand Total | **1000** | **100** |

**Figure 1:** Age Distribution

**Table 1** discussed theanalysis of the respondent based on their age, that the age ranged 16 – 20 years was observed with the total number of 255 respondents out of the total 1000 with 25% of the total population, while ages ranging from 21-25years has the total respondent of 658 with percentage of 66% of the total population and the last range of age 26-30yearrs has 87 respondents with 8.7% of the total population. Making a total of 1000 respondent with the percentage as illustrated in figure 1

**Table 2: Response of respondent based on their gender**

|  |  |  |
| --- | --- | --- |
| Gender | Frequency | Percentage |
| Male | **221** | **22.1** |
| Female | **779** | **77.9** |
| Grand Total | **1000** | **100** |

**Figure 2:** Gender Distribution

Table 2 discussed the gender distribution of the respondent, a total of 1000 respondent was used, in which 221 were male, making 22% of the population and 779 were female, also making 78% of the total population of the study.

**Section B**

**Hypothesis one:** There is no significant relationship between computer appreciation training programs and academic performance of freshly admitted students of selected colleges of education in southwest Nigeria.

**Table3.**

**Decision Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Group** | **Size** | **x-level** | **Df** | **X2 tab** | **X2 cal** | **Significance** |
| Agree | 854 | 0.05 | 9 | 16.92 | 21.21 | Significant  Reject H01 |
| Disagree | 146 |

The result obtained in table three shows that the hypothesis one was rejected due to fact that X2 cal. (21.21) is greater than the X2 tab (16.92) value. Hence, there is a significant relationship between computer appreciation training programs and the academic performance of freshly admitted students of some selected colleges of education in southwest Nigeria. Null hypotheses one is rejected

**Hypotheses two.**

There is no significant difference between academic performance of freshly admitted students that took part in computer appreciation training programmes and the academic performance of those that do not took part in selected colleges of education.

**Table 4.**

**Decision table 2.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Group** | **Size** | **x-level** | **Df** | **X2 tab** | **X2 cal** | **Significance** |
| Agree | 792 | 0.05 | 9 | 16.92 | 25.58 | Significant  Reject H02 |
| Disagree | 208 |

The result obtained in table four shows that hypothesis two was also rejected due to fact that X2 cal (25.588) is greater than the X2 tab (16.92) value. Hence, there is a significant difference between academic performance of freshly admitted students that took part in computer appreciation training programmes and the academic performance of those that do not took part in the computer appreciation training programmes in colleges of education in southwest Nigeria. Therefore, the null hypotheses two is rejected.

**Discussion**

The study investigated the effectiveness of computer appreciation training programme in colleges of education in southwest Nigeria. Two hypothesis were tested using Statistical package for social sciences (SPSS). The findings of the study were discussed hypothesis by hypothesis as follows. The first hypothesis states that, there is no significant relationship between computer appreciation training programs and academic performance of freshly admitted students from selected colleges of education in southwest Nigeria. At the degree of freedom (df) = 9 statistical analysis at 0.05 level. The result from table 2 shows that, *X2 tab* = 16.92 and *X2 cal* = 21.21 and from this, it is showed that the value of *X2 cal.* > *X2 tab.*, implies that the null hypothesis does not hold and the researcher concluded that there is significant relationship between computer appreciation training programs and academic performance of freshly admitted students from selected colleges of education in southwest Nigeria. This has related to the words of (Lowther, et al.,2008); Weert and Tatnall 2005). In Weert and Tatnall (2005) words, learning is an ongoing lifelong activity where learners change their expectations by seeking knowledge, which departs from traditional approaches. As time goes by, they will have to expect and be willing to seek out new sources of knowledge. Skills in using ICT will be an indispensable prerequisite for these learners.

Also, the finding of Shahzadi and Shabbir (2021), that stated that, ICT can be used to improve teaching materials and make lessons more comprehensive, appealing, and interactive. They noted further that the use of ICT will boost teaching outcomes as teachers will be better equipped to face new and existing challenges in the education sector.

The second hypothesis state that, there is no significant difference between academic performance of freshly admitted students that took part in computer appreciation training programmes and the academic performance of those that do not took part in selected colleges of education. The result obtained in table four, hypothesis two was tested at statistical analysis 0.005 , degree of freedom (df) = 9, the value of *x2 cal. (25.588)* > *x2 tab. (16.92)*. This implies that, the null hypothesis does not hold. Therefore, this result revealed that, there is a significant difference between academic performance of freshly admitted students that took part in computer appreciation training programmes and the academic performance of those that do not took part in the computer appreciation training programmes in colleges of education in southwest Nigeria. Result in table 3 therefore shows that the newly admitted NCE students exposed to ICT training have significant improvement in their academic performance while those that are not exposed to it do not have. There are few researches carried out on the influence of ICT on academic performance of students of higher institutions. Among one of such is research carried out by Effiom et al (2023), the study examined the impact of information and communication technology (ICT) usage on student’s academic performance with particular reference to the University of Nigeria, Usukka, Enugu state Nigeria. A total of 500 students were sampled and data was analyzed using Pearson Product Moment Correlation Analysis, the findings of the study showed that there is significant improvement in the academic performance of student of the University of Nigeria Nsuka, their results also showed a significant relationship between e-learning and academic performance in students of the University.

**Conclusion**

The study examined the effectiveness of computer appreciation training programme in colleges of education in south-west Nigeria. The study found that, the exposure of ICT training to the newly admitted students of college of education improved their academic performance compare with the newly admitted students that are not exposed to the training.

**Implication of the findings**

The findings of the study have certain far-reaching implications. It is evidence that the exposure of ICT training to the newly admitted students has a great benefit. The study therefore has a lot of implications for the students, lecturers, education policy maker and all the stakeholders as well as the parents.

The implication of the findings to the lecturers in charge of computer related course is that, this ICT training programme should be explore to open new orientation using necessary ICT devices and appropriate teaching method which should serve as foundation for the newly admitted students. Therefore, the need to develop effective intervention of ICT training in the school curriculum for the newly admitted students into the colleges of education will go a long way in assisting them in all their computer related courses.

**Limitation of the Study**

The main challenge we experienced has to do with finance. The budget for the project was grossly reduces and with the current increase in the fuel pump price, this has negatively impacted our field trip. Also, in the course of achieving the objectives of the study, limited sample of one thousand (1000) participant were involved due to logistic, time and financial constrain even though larger sample could have been preferred. The analysis should have been done using t-test but the chosen school failed to release their students result for comparison, it was decided to use SPSS.

**Recommendation**

1. Parents should be more involved in the acquisition of computational skills for their wards at earlier age; this will enable them to be familiar with the technology before gaining admission into tertiary institutions.
2. Government at all levels may consider making computer education compulsory in all level of elementary schools as well as provide computers and other equipment’s to facilitate practical.
3. Teachers/ educators in all levels of education must be adaptable and well versed with computer education, as they serve as the first introduction of practical understanding of technology to the students.
4. There is need to create an enabling environment in all colleges of education where all freshly admitted students in colleges of education in southwest Nigeria can learn.
5. Policy makers should design appropriate computer practical specific curricula to complement the existing conventional curricula.
6. Government at all levels should provide schools with necessary infrastructure and equipment’s that will improve the teaching and learning of computer appreciation programmes in all colleges of education in Nigeria.
7. All stakeholders in education should mandate other colleges of education who are yet to imbibe the culture of introducing their freshly admitted students to computer appreciation training programmes to do so.

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