**Availability, Quality, and Appropriateness of Instructional Facilities and Their Effects on the Performance of Nigerian Certificate in Education Graduates in Federal College of Education, Yola**

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**Abstract**

*This study is designed to assess the effects of the availability, quality, and appropriateness of instructional facilities on the performance of Nigerian Certificates in Education graduates in Federal College of Education, Yola. Two research questions were raised to guide the conduct of the study. The survey research design was adopted for the study. The population of the study comprises of all the graduates of the college from 2017 to 2022, lecturers and laboratory technicians of the departments in Federal College of Education, Yola. Due to the large number of graduates of the college from 2017 to 2022, lecturers and laboratory technicians in the individual departments in Federal College of Education, Yola, the researchers selected a sample of 383 graduates of the college from 2017 to 2022, 69 lecturers and 23 laboratory technicians. The stratified, purposive and simple random sampling (SRS) techniques were adopted for the selection of the sampled population. The primary data used for the study was obtained through the use of questionnaire designed by the researchers. The data collected for the study were analyzed using the simple percentage method of data analysis to analyze the respondent’s demographic data and to answer the research questions while ANOVA statistics was used to test the null and alternative hypotheses. The finding of the study revealed that, the instructional facilities for teaching and learning in the Federal College of Education, Yola are to some extent available, qualitative and highly appropriate to the level of the learners and relevant to the content of the courses where those instructional facilities are applied in teaching and learning. Similarly, the study concluded that the teaching / learning facilities in Federal college of Education, Yola has significant influence on the academic performance of the NCE graduates. Based on the above conclusions the paper recommended that Government should provide facilities like modern laboratories and comfortable classrooms for better academic performance and the government should strive and set aside a reasonable amount of education budget which will be directed to improve and construct libraries in the college.*

**KEYWORDS:** Availability, Quality, Appropriateness, Instructional Facilities and Performance

**Introduction**

Education is a fundamental human right and it is essential to ensure that all are able to realize their potentials. An important aspect and form education is to give all citizens the relevant skills and values to improve their quality of life. For the College to achieve this aim, it shall continue to work together to improve access to education of the aspiring students by improving and to increase the quality of educational facility in an equitable manner towards comprehensive achievement of the graduates. The teaching facilities and physical environment in which leaning takes place, has a large impact on the outcome of education of graduates.

Availability, quality and appropriateness are key matters in learning / teaching out come in our institutions of learning and these can be satisfactorily addressed through the use of functional materials in teaching. In class room teaching and learning process, the use of functional teaching facilities are imperative as they give chances to the teaching / learning process to operate, store, control and retrieve information to promote self-regulated learning for positive out-comes, (Ali, Haolader, Muhammad, 2013). Effective use of teaching facilities in schools, greatly improves the qualities of academic output of graduates. Qualified staff, computer facilities, have been confirmed as capable means to empower the users for learning chances and improvement by utilizing various information and facilities from different points of various learning situations and outcomes (Tinio 2003). Teaching and learning facilities help to make complicated things simple to comprehend by simulations that once more add to real learning / teaching situations. Teaching and learning facilities may be considered to act as a facilitator of dynamic teaching / learning of higher order thinking for better academic outcome (Alexander, 1999).

In a study by Cotton (2001), students who received learning / teaching through use of available and functional teaching facilities, retain learning and graduate better at the end of the academic programs. Although many students have reported different ways of using teaching or learning materials in relation to academic achievement of graduates, Yuen, Law & Wong (2003), Say, they have practical effect on graduates’ performance and retention, need to be better understood, for effective use.

Learning facilities allow learners to have practical experience, which help them to be effective and efficient through developed skills and concepts. With the disparity in the adequacy, quality and relevance of educational learning and learning facilities in colleges of education, obviously, the credibility in the performance of the graduates is challengeable. Therefore, it is significance to investigate into the effects of teaching/learning facilities on the academic performance of Nigeria Certificate in Education (NCE) graduates.

**Objectives of the Study**

The main objective of the study is to assess the effects of the availability, quality, and appropriateness of instructional facilities on the performance of Nigerian Certificates in Education graduates in the Federal College of Education, Yola. Specifically, the study is designed to:

1. Determine the Availability, quality, and appropriateness of educational facilities
2. Determine the effects of the Availability, quality, and appropriateness of educational facilities on the academic performance of Nigerian Certificates in Education graduates

**Research Questions**

Two research questions were raised to guide the conduct of the study, the research questions are;

1. What is the extent of availability, quality, and appropriateness of educational facilities in Colleges of Education?
2. What are the effects of the Availability, quality, and appropriateness of educational facilities on the academic performance of Nigerian Certificates in Education graduates?

**Research Hypotheses**

The following research hypotheses were tested at 0.05 level of significance;

**Ho1:** The quality, Availability, and appropriateness of instructional facilities have no significant effects on the performance of Nigerian Certificates in Education graduates at Federal College of Education, Yola.

**Ha1:** The quality, Availability, and appropriateness of instructional facilities have significant effects on the performance of Nigerian Certificates in Education graduates at Federal College of Education, Yola.

**Review of Related Literature**

According to Adeyemi, (2011), Students’ Academic Performance is seen as a measure of the main outputs in education as expressed in terms of learning. This means changes in knowledge, skills, and attitudes of individuals as a result of their experiences within the school system. Students’ academic performance refers to the standard that students should be able to know and be able to do. On their part, Daniels and Schouten (1970) described academic performance as the scholastic standing of a student at a given moment.

Instructional facilities refer to those tools, equipment, machines, and consumable materials used for teaching/learning (Bello and Shu’aibu, 2013; Akpabio and Ogiriki, 2017). The term instructional facilities means the entire scope of human, physical, and social infrastructure provided in the school for the teaching/learning process (Okokoyo, Nwaham & Ikpeba, 2002). Teaching and Learning facilities are those materials and resources that enable a skillful teacher to achieve a level of instructional objectives that far exceeds what is possible when these resources are not provided (Adeidiple, 2007).

Longman, as cited in Jessa (2017), explains availability as something that can be used or can easily be found and used. Availability of instructional facilities refers to the condition of being obtainable or accessible at a particular point in time. It expresses how the material can easily be gotten and used for a particular purpose and time Uzuegbu, Mbadiwe, and Anulobi (2013). Owoeye (2011) explains that the availability of school facilities is a potent factor in qualitative education. The provision of adequate and appropriate school physical facilities is determined to a large extent by the location of the school. The school should be accessible to instructional facilities. The environment of the school should stimulate, motivate, and reinforce students' attendance in school (Ibrahim, Lawson & Saad, 2023). In his study, Adesola (2005) found out that the level of availability of resources is indeed a plus to the teachers and goes to show the level of ingenuity and commitment of the teachers toward the effective delivery of lessons.

Ibrahim, Lawson, and Sa’ad (2023) examined the influence of availability, adequacy, and accessibility of instructional facilities on teachers' job satisfaction in colleges of education, Adamawa and Taraba States. The results obtained show that the availability, accessibility, and Adequacy of instructional facilities will ensure quality education. The findings have shown that availability, accessibility, and adequacy influence teachers' job satisfaction which in turn will have an impact on the students’ performances.

Innocent (2021) examined the impact of educational facilities on student’s academic achievements in selected government-owned secondary schools in Rivers State. Based on the results and findings, the study concluded that the availability of educational facilities in the teaching and learning process is very important and has numerous advantages in students’ rate of retention and assimilation thereby enhancing students’ academic achievement.

Usen (2016) conducted a study in Akwa Ibom State to examine the relationship between teachers’ utilization of school facilities and the academic achievement of student nurses in Human Biology in schools of Nursing. The findings of the study show that there is a positive relationship between teachers’ use of school facilities and the academic achievement of student nurses in Human Biology.

Ogbu (2015) in his study investigated the availability and utilization of instructional facilities and materials for the effective teaching of Basic Electricity in Ebonyi State Technical Colleges. Based on the findings of the study it is clear that many vital facilities and materials are not available while some available ones are not even effectively utilized by the teachers.

**Methodology**

The study adopted the survey research design, the survey research design was adopted because of the fact that all categories of information needed for descriptive and interferential use in research can be obtain through the use of survey research design.

The population of the study comprises of all the 9319 NE graduate of the College between 2017 and 2022, all the 84 lecturers in the individual departments of the various schools that are using Laboratory, and all the 25 the laboratory technicians of the departments in the various schools in the Federal College of Education, Yola. Due to the large number of NCE graduates between 2017 and 2022, lecturers and the laboratory technicians of the departments in the various schools in the Federal College of Education, Yola. The researchers selected a sample of 475 respondents using the Taro Yamane method of determining sample size. The 475 respondents comprises of 383 graduates, 69 lecturers and 23 laboratories technicians. The stratified sampling technique, simple random sampling (SRS) and purposive sampling were adopted for the selection of the sample population.

The researchers used primary data in the study. The primary data was obtained through the use of questionnaire designed by the researchers. The instrument is a 15 item questionnaire designed using the modified 4 points Likert scale of strongly agree 4, agree 3, disagree 2, strongly disagree 1,to elicit responses from the respondents on the availability, quality and appropriateness of instructional materials and the academic performance of NCE graduates in Federal College of Education, Yola.

The data collected for the study were analyzed using the simple percentage method of data analysis to analyze the respondent’s demographic data and to answer the research questions while ANOVA statistics was used to test the null and alternative hypotheses.

**Result and Discussion**

This section discussed the categories of respondents and their characteristics in relation to information obtained through the use of research instrument. The data for the analysis of the respondents’ demographic data were obtained from a TETfund Institution Based Research 2023 research work titled “*Teaching / Learning Facilities and Academic Performance of Nigeria Certificate of Education Graduates Federal College of Education Yola, Adamawa State, Nigeria***”**

**Analysis of Demographic Characteristics of Respondents**

**Categories of Respondents**

**Figure 1 Distribution of Respondents by Categories**

**Source: Survey, September 2023**

In the figure above, there are three categories of respondents to the research instrument for data collection and these are: the lecturers in the various department and schools, the Laboratory technicians in the department where laboratories and resource centers are available and NCE graduates who graduated between 2017 and 2022 who were taught using the teaching and learning facilities. The analysis shows that, 80.6 percent of the respondents are the NCE graduates who graduated between 2017 and 2022, 14.5 percent are lecturers of the various schools and departments who teach and assess the graduates through the application of the teaching and learning facilities, and who are also conversant with the availability, quality and appropriateness of the facilities. The technicians constitute 4.9 percent of the respondents because of their closeness with the facilities in the laboratories and resource rooms, equally instructors to learners in the utilization of the laboratory facilities during practical lessons.

**Distribution of Respondents by Sex**

**Figure 2 Sex of Respondents**

**Source: Survey, September 2023**

In figure 2 above, majority of the respondents are male which is 62.1 percent while 37.9 percent are female. The male are majority because most of the lecturers in the departments of the school are male. There are few female lecturers in all the sample departments of the schools similarly most of the graduates within the period of study are male with female relatively associated.

**Answering the Research Questions**

**Research Question One:** What is the extent of the availability, quality and appropriateness of educational facilities in Colleges of Education?

**Figure 3: Availability, quality and appropriateness of educational facilities on the performance of NCE graduates**

**Source: Survey, September 2023**

In figure 3 above, the responses of the respondent, in all the departments the instructional facilities are appropriate to the level of the learners and relevant to the content of courses where those instructional facilities are applied in teaching and learning. This is consented 74 percent. Similarly, the simple percentage of the responses of the respondents is at 51 percent on instructional facilities availability in all the departments in all the schools. This indicated that not all of the facilities required for teaching and learning are available. In addition, the quality of the instructional facilities according to the responses of the respondents which is at 52 percent are of standard. This indicates that the instructional materials in all the departments in all the schools are to some extent available, qualitative and highly appropriateness.

**Research Question Two:** What are the effects of the Availability, quality and appropriateness of educational facilities on the performance of Nigerian Certificate in Education graduates?

**Figure 4:** effects of the Availability, quality and appropriateness of educational facilities on the performance of Nigerian Certificate in Education graduates

**Source: Survey, September 2023**

In fig 4 above, the result revealed the relationship between instructional facilities and the skill acquisition, independency, motivation, teacher expression and behavioral changes. These attributes are analyzed and describe using the simple percentage. Based on the responses of the respondents, the level of skill acquisition by the graduates’ stands at 62 percent which is above average influence on the relationship. Similarly, graduate independency having used instructional facilities during teaching and learning is 65 percent which is above average in terms of relationship. The motivational influence of instructional facilities on the graduate is high at 72 percent. This indicate that teaching and learning is highly motivational when instruction facilities are used.

Similarly, the expression skills of graduates also correlates with the use of instructional facilities in teaching and learning, it is above average at 67 percent. In addition, instructional and learning facilities has as relationship with graduate behavioral change that is most of the graduates that used instruction facilities in learning has a changed in behavior as a result of the influences of instructional materials as indicated in the figure with a simple percentage of 69 percent. Finally, there is a little variation in the relationship of the attributes in fig 4 as acquired by the graduates in all the departments in the schools of the college. In a similar vein the finding of the study of revealed that the quality, Availability and appropriateness of instructional facilities have significant influence on the performance of NCE graduates in Federal College of Education, Yola.

**Testing the Research Hypotheses**

**Ho1:** The quality, Availability, and appropriateness of instructional facilities have no significant effects on the performance of Nigerian Certificates in Education graduates at Federal College of Education, Yola.

**Ha1:** The quality, Availability, and appropriateness of instructional facilities have significant effects on the performance of Nigerian Certificates in Education graduates at Federal College of Education, Yola.

**Table 1: Influence of Availability, Quality, and Appropriateness of instructional Facilities on NCE graduates**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sources** | **D.F**  | **Sum of Square** | **Mean Square** | **F. Statistics** | **P. value** | **Decision** |
| **Between Group** | 2 | 25648.2365 | 12824.1183 |  |  |  |
| **Within Group** | 6 | 99787.2247 | 16631.2041 | 0.7711 | 0.5035 | Rejected |
| **Total** | 8 | 125435 | 15679.4327 |  |  |  |

F-Ratio Statistics on the Influence of Availability, Quality, and Appropriateness of instructional Facilities on NCE graduates

Table 1 shows the influence of the Availability, quality and appropriateness of instructional facilities have significant influence on the performance of NCE graduates in Federal College of Education, Yola. The result obtained from the analysis shows that the value of F-statistics (0.7711) is greater than the P. value of 0.5035 at 0.05 level of significance. This means that the null hypothesis one is rejected while alternative hypotheses one. This suggests that the quality, Availability and appropriateness of instructional facilities have significant influence on the performance of NCE graduates in Federal College of Education, Yola.

**Discussion of the Findings**

The result of the study revealed that, in all the departments the instructional facilities are appropriate to the level of the learners and relevant to the content of courses where those instructional facilities are applied in teaching and learning. Similarly, the finding revealed that even though the instructional facilities for teaching and learning are available in all the departments, not all of the facilities required for teaching and learning are available. In addition, the quality of the instructional facilities are of standard. This indicates that the instructional materials in all the departments in all the schools are to some extent available, qualitative and highly appropriate for effective teaching and learning. This finding agreed with the findings of Owoeyi (2011), and Ibrahim Lawson & Saad, (2023). The finding also disagree with the findings of Ogbu (2015).

The result of the study also revealed that availability, quality and appropriateness of instructional facilities was found to positively play a role in in the performance, skills acquisition and behaviours change of NCE graduates. The study found a larger number of NCE graduates that are performing greatly due to the availability of teaching and learning facilities. A considerable similarity assessment in relation to the availability by Cottan (2021) affirmed that availability of teaching and learning facilities encourages functionality, in teaching, the quality of teaching and learning facilities was also found to be effective in the performance of NCE graduates in Colleges of Education. Jess (2017) affirmed that the quality of facilities motivate learners to learn and even engage happily in practical activities in the laboratories. This is not far from the findings of the study that NCE graduates that made use of quality and standard facilities excel greatly in their educational achievement. On the other side unavailability, poor quality and inappropriateness of teaching and learning facilities affected greatly the achievement of NCE graduates as they could not be able to understand that are supposed to explain by the facilities usage.

**Conclusion and Recommendations**

From the study findings it is apparent that, the instructional facilities for teaching and learning in the Federal College of Education, Yola are to some extent available, qualitative and highly appropriate to the level of the learners and relevant to the content of the courses where those instructional facilities are applied in teaching and learning. Similarly, the study concluded that the teaching / learning facilities in Federal college of Education, Yola has significant influence on the academic performance of the NCE graduates.

Based on the above conclusions the following were recommended;

1. Government should provide facilities like modern laboratories, functional libraries, and comfortable classrooms for better academic performance;
2. The government should strive and set aside a reasonable amount of education budget which will be directed to improve and construct libraries in the colleges.
3. There is the need for effective maintenance or renovation of old buildings, chairs, desks, recreational equipment among others should be part and parcel of the schools system.

**References**

Adediple, L. M. (2007). *School facilities conditions and students’ academic achievement*. Los Angeles: UNCLA’s Institute for Democracy Education and Access (IDEA).

Adeyemi, T. O. (2011). A comparative study of students’ academic performance in public examinations in secondary schools in Ondo and Ekiti State, Nigeria. *Current Research Journal of Economic Theory.* 3(2): 36 - 42

Akpabio, M. E. and Ogiriki, I. B. (2017). Teachers use of Information and Communication Technology (ICT) in Teaching English language in Senior Secondary Schools in Akwa Ibom State. Equatorial Journal of Education and Curriculum Studies, 2 (2): 28-33.

Anwo A. O (2021) Teaching Facilities, Teachers’ Quality And Students’ Academic Performance In Physics In Ilorin Metropolis’ Secondary Schools, Kwara State International Journal of Contemporary Education Research Published by Cambridge Research and Publications 20 (8) 139-153

 Bello, H. and Shu’aibu, B. (2013). State of Facilities for Teaching Electrical Installation and Maintenance Work Trade in Technical Colleges in Bauchi State, Nigeria. International Journal of Vocational and Technical Education, 5(5), 82-91. http://www.academicjournals.org/IJVTE

DFID (2007) in, Bontoux V and Buchan A (2007) Secondary Textbook and School Library Provision in Sub-Saharan Africa: A Review based on 19 National Case Studies World Bank, Washington (www.worldbank.org )

Ibrahim A.B, Lawson L and Sa’ad M (2023) Influence of the Availability, Adequacy and Accessibility of Instructional Facilities on Teachers Job Satisfaction in Colleges of Education in Adamawa and Taraba States, Nigeria ***International Journal of Research Publication and Reviews,*** Vol 4, no 3, pp 4004-4009, March 2023

Jessa M. O. (2017). Availability, Adequacy and Utilization of Educational Facilities and School Administrators’ Effectiveness in Colleges Of Education In Delta State. Retrieved from academia.Edu/35596759/availibility\_adequacy\_and\_utilization\_of\_educational\_faciliti es\_and\_school\_administrations’\_effectiveness.

Ogbu, J. E. (2015). Availability and Utilization of Instructional Facilities for the Teaching of Basic Electricity in Ebonyi State Technical Colleges. Developing Country Studies, 5(21), 162-168. ISSN 2224-607X (Paper), ISSN 2225-0565

Okokoyo, I. E., Nwaham, C. O. & Ikpaba, V. A. (2004). *Principles and practice of school organization and classroom management*. Agbor: Kerisbee Publications.

Owoeye, J. S. (2011). School Facilities and Academic Achievement of Secondary School Agricultural Science in Ekiti State, Nigeria. Kampala: Kampala International University

Usen, O. M (2016) Teachers’ Utilization of School Facilities and Academic Achievement of Student Nurses in Human Biology in Schools of Nursing in Akwa Ibom State, Nigeria Journal of Education and Practice Vol.7, No.16

Uzuegbu C.P.,. Mbadiwe, H. C Anulobi J. C. (2013) Availability and utilization of instructional materials in teaching and learning of library education in tertiary institutions in Abia state Wudpecker Journal of Educational Research 2(8), pp. 111 – 120

Adesola, A. A. (2005). Resource Provision and Utilization, Mathematics Ability and learning Environment as prediction of learning Outcome in Undergraduate Practical Geography. Unpublished Ph.D Thesis, University of Ibadan, Ibadan.

Innocent H.A (2021) Educational Facilities And Students’ Academic Achievement In Selected Secondary Schools In Port Harcourt Local Government Area Of Rivers State International Journal of Innovative Education Research 9(4):126-135,

Tinio, V. L. (2002). ICT in Education: UN Development Programme. (Retrieved on April 2016 from http:www.eprmers.org).

Yuen, A., Law, N., & Wong, K. (2003). ICT implementation and school leadership case studies of ICT integration in teaching and learning. Journal of Educational Administration, 41(2), 158-170.

Alexander, J. O. (1999). Collaborative design, constructivist learning, information technology immersion and electronic communities: A case study. Interpersonal Computing and Technology: An Electronic Journal for the 21st Century, 7, 1–2.

Cotton, K. (2001). Computer assisted instruction. North-west regional educational laboratory. Retrieved fromhttp://www.nwrel.org/ scpd/sirs/5/cu10.html

Daniels, M. and Schouten, J. (1970) Education in Europe: The Screening of Students, Problems of Assessment and Prediction of Academic Performance. Council for Cultural Co-Operation of the Council of Europe, London.

Ali, G. Haolader, F. A., & Muhammad, K. (2013). The role of ICT to make teaching-learning effective in higher institutions of learning in Uganda. International Journal of Innovative Research in Science, Engineering and Technology, 2(8), 61-73