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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 the 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 all the college graduates from 2017 to 2022, lecturers, and laboratory technicians of the departments in the Federal College of Education, Yola. Due to the large number of college graduates from 2017 to 2022, lecturers and laboratory technicians in the individual departments in Federal College of Education, Yola, and the researchers selected a sample of 383 college graduates from 2017 to 2022, 69 lecturers and 23 laboratory technicians. The stratified, purposive, and simple random sampling (SRS) techniques were adopted to select the sampled population. The primary data used for the study was obtained through the use of a 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 teaching/learning facilities in the 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 the 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 the 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 can realize their potential. An important aspect and form of 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 aspiring students by improving and increasing the quality of educational facilities in an equitable manner towards comprehensive achievement of the graduates. The teaching facilities and physical environment in which learning takes place has a large impact on the outcome of the education of the graduates.

Availability, quality, and appropriateness are key matters in learning/teaching outcomes 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, and 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 through simulations that once more add to real learning/teaching situations. Teaching and learning facilities may be considered to act as 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 helps 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, the credibility of the performance of the graduates is challenging. Therefore, it is significant to investigate 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 this 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 a 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 a significant effect 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 by 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 a survey research design, the survey research design was adopted because all categories of information needed for descriptive and inferential use in research can be obtained through the use of a survey research design.

The population of the study comprises all the 9319 NCE graduates of the College between 2017 and 2022, all 84 lecturers in the individual departments of the various schools that are using Laboratory, and all the 25 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 techniques 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 an Eight (8) 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

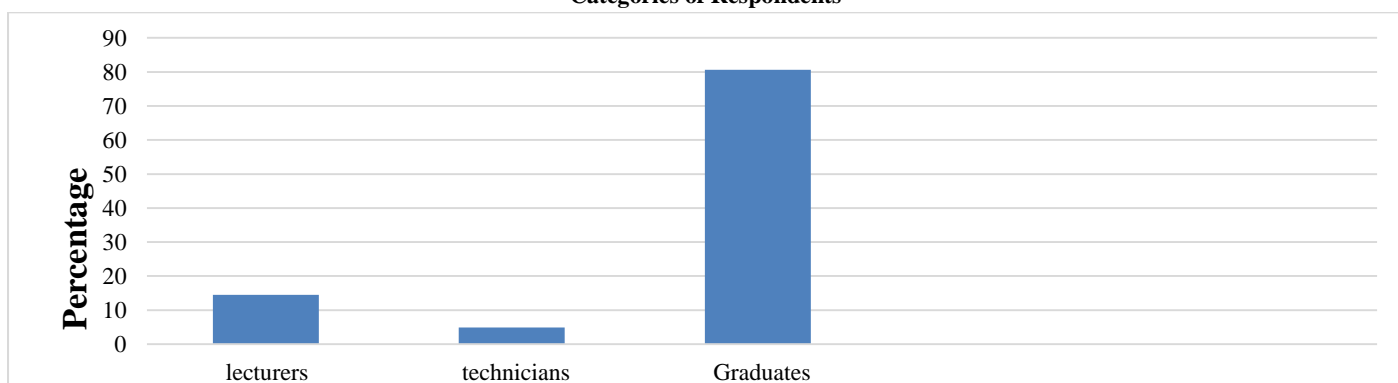
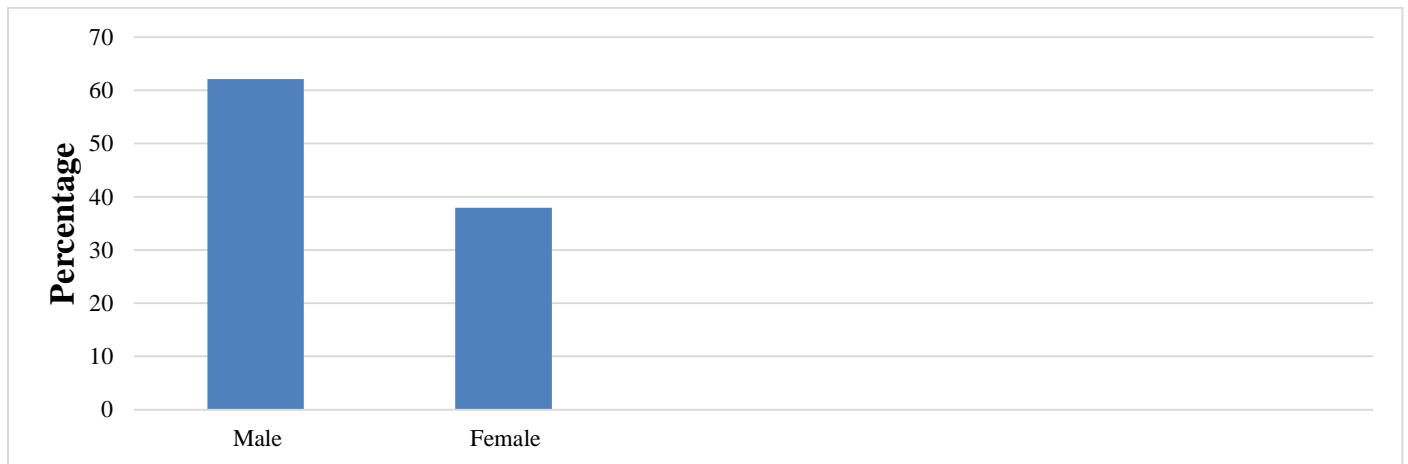


Figure 1 Distribution of Respondents by Categories

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



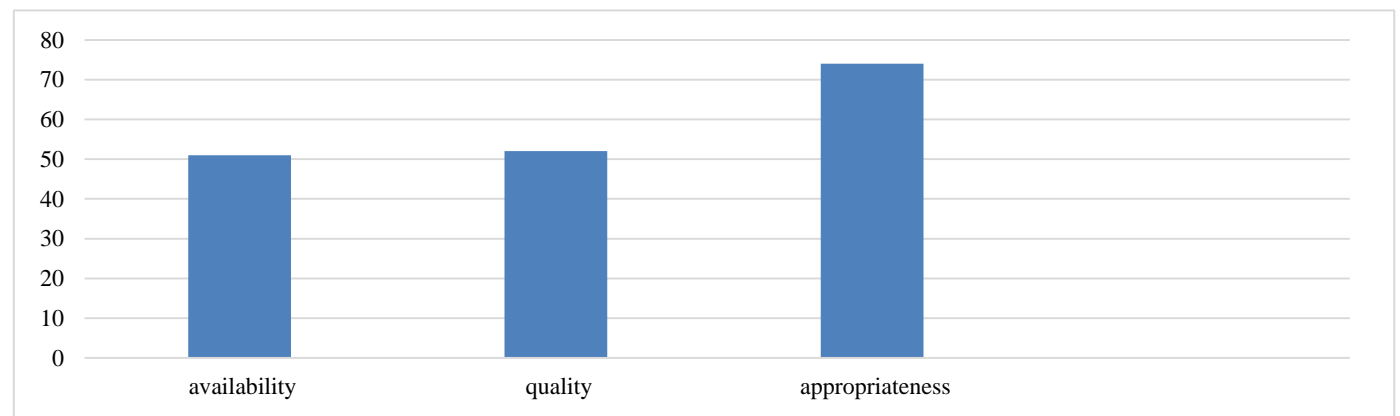
Source: Survey, September 2023

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

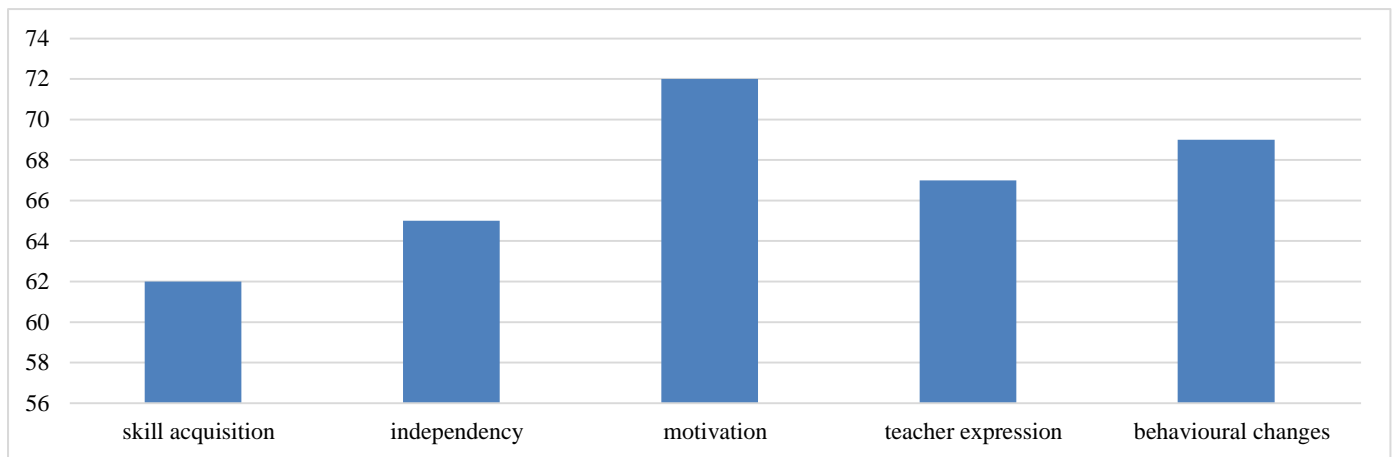


Source: Survey, September 2023

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 was accepted. 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, 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. Maintenance of teaching and learning facilities in the various department of the college should be encouraged and sustained by teachers, laboratory technicians and students
2. Appropriateness and qualities of the teaching and learning facilities should be a guide base for making supplies of facilities.
3. As the population of students is always increasing in the school systems, Government and management of schools should expand the existing teaching and learning facilities to take care of the population explosion

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