

# Influence of The Availability and Utilization of Educational Resources on Students Academic Performance in Carpentry and Joinery Trade in Technical Colleges in Edo State, Nigeria

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**Abstract—** This study investigated the influence of the Availability and Utilization of Educational Resources on Students' Academic Performance in Carpentry and Joinery trade in Technical Colleges in Edo State, Nigeria. Two research questions were raised: the required resources available for teaching and learning of carpentry and joinery subject, available physical and material resources in teaching and learning of carpentry and joinery in technical colleges. The research instruments were administered to 143 respondents with the help of research assistants and trained research assistants. The instruments were collected back and analyzed with mean and percentages. The researcher adopted survey research design for the study. The findings revealed that there were enough teachers, students and workshop assistants in carpentry and joinery and the carpentry and joinery equipment/tools were grossly inadequate. The recommendations of this study are: Government and school authorities should provide adequate equipment/tools in carpentry and joinery workshops so as to improve the students' academic performance in technical colleges in Edo State, Nigeria.

**Index Terms—** Influence, Availability And Utilization, Educational Resources, Students' Academic Performance, Carpentry And Joinery Trade .

## I. INTRODUCTION

According to Adeyemi and Adu (2010), Education is one of the leading instruments for promoting economic development as it encompasses some processes individuals go through to help them develop and utilize their potentials. Okeke (2007) posited out that through education, individuals acquire knowledge, skills and attitude that are necessary for effective living. This is the reason why in all modern nations, investment in education of the youth is considered most vital. Onsomu et al (2006) opined that technical college is an important sub-sector of education geared towards the preparation of human capital for development and provision of life opportunities as it provides a vital link between basic education and the world of work on one hand and further training on the other hand. This can be achieved through the availability and utilization of educational resources. Hallack

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(2014) said that Educational resources include which include teachers, in terms availability and adequacy in quantity and quality teacher-student ratio, qualified teachers (quality and quantity) workshop assistants and equipment /tools in workshops. The federal ministry of education (2009) outlined the main objectives of technical education is to provide skillful manpower in applied sciences, engineering technology and commerce to operate, maintain and sustain economic activities for rapid solid economic development. It is designed to impact the necessary skills which leads to the production of craftsmen, technicians and technologists who will be enterprising and self reliant thus, having the greatest potential to generate employment reduces poverty and eliminate the "area boy syndrome" unfortunately, the objectives have not been realized due to the long period of systematic neglects and discrimination of technical education in Nigeria. According to Adeogun and Osifila (2008), educational resources can be categorized into four groups namely, human, material, physical and financial resources. Educational resources according to Usman (2007), are central to the educational process because they play an important role in the achievement of educational goals and objectives since they facilitate teachers' work and accelerate teaching and learning on the part of teachers and students in schools. Usman (2007) emphasized that the availability of relevant educational resources contribute to academic achievement and unattractive school building, crowded classrooms, non-availability of playing grounds and surroundings that have no aesthetic beauty can contribute to poor academic achievement. Akinsanya (2010) asserted that educational resources are important because the goal of any school depends on adequate supply and utilization of physical and material resources among others as they enhance proper teaching and learning in schools. Educational resources are necessary for carpentry and joinery because the dwindling provision of educational resources, declining academic performance of students in technical colleges and absence of functional workshops, equipment, tools and laboratories, buildings and so on in any technical college would create a problem as the teacher would not be able to teach the students practically. This would also negate the main objectives of technical/vocational education, which is the provision of technical knowledge and vocational skills. This is the reason why this study is important.

World Bank (2008) in a study on textbook and school library provision in technical colleges in Sub-Saharan Africa

revealed that textbooks and libraries were not only inadequate but unevenly distributed among rural and urban schools in the area of study. Asiabaka(2008) studied effective management of technical college in Nigeria, he noted that government fails to establish policy directives on minimum standards in relations to schools facilities had led to disparities in actions there are some 1 equipped laboratories, library and other facilities for effective teaching and learning. Others have none and where they exist such are poorly equipped. In the same vain, Olaniyan and Ojo(2008) noted that lack of textbooks and training manuals was one of the challenges facing successful implementations of technical students in Nigerian technical colleges.

Chirswa(2010) pointed out that effective teaching and learning depend on the qualified teachers, workshop assistance and utilization of suitable and adequate resource such as books, laboratories, library and host of other vital and audio teaching aids which aids performances of students in external examinations.

## II. CONCEPT OF CARPENTRY AND JOINERY

The content of Carpentry and Joinery involves the types of timber, soft wood and hard wood, conversion of timber, veneer and types of veneer, advantages and disadvantages of veneer, adhesives and types of adhesives, comparison of all types of adhesives, properties of thermosetting adhesives, hand tools, types of hand tools, use of hand tools in Carpentry and Joinery, maintenance of hand tools, wood joints and classification of joints, application of each type of joint in carpentry and joinery work, construction of various joints, merits

and demerits of different types of joints use in carpentry and joinery, frame construction, basic principles of frame design, joints used in making standard frame, standard sizes of internal and external doors, names of the part and sizes of a door frame, construction of a standard door frames, definition and functions of different types of doors, description of types of doors, windows and types of windows, functions of windows, standard sizes of windows, window frames, window lining, purpose of lining and architrave in windows, joints between lining and frame, architrave and their purpose in doors and windows openings, suitable sections of architraves and plinth block and its purposes (Aina , 2015).

## III. STATEMENT OF THE PROBLEM

There are gross inadequacy of various resources meant to provide functional technical colleges in our educational system. There are replete with stories of unemployable graduates, half-baked ones and the falling standard of education. The nation's industrialists are becoming increasingly skeptical of the products from the programme. This ugly situation can be traced mainly to inadequacy of educational resources.

It is against this background that this study tried to investigate the availability and utilization of educational resources influencing students' academic performance in carpentry and joinery in technical colleges in Edo State, Nigeria.

It is hopeful that the findings of this study will help the government and the school authorities to take better decisions on the adequate and effective utilization of resources in various technical colleges. It will also provide the policy makers and educational planners with necessary statistical information for more effective educational planning and better policy formation on resource availability and utilization in various technical colleges. The findings of this study would also assist the accreditation panel of technical colleges to understand the problems faced by the technical colleges regarding the availability and utilization of educational resources in various technical colleges in Edo State, Nigeria.

## IV. PURPOSE OF THE STUDY

The purpose of the study is to investigate the influence of the availability and utilization of educational resources on students' academic performance in carpentry and joinery trade in technical colleges in Edo state, Nigeria. Specifically, the study seeks to determine the influence of :

- 1) Availability and utilization of resources for effective teaching of carpentry and joinery trade and students' academic performance in technical colleges in Edo State, Nigeria
- 2) Availability and utilization of equipment/tools in workshops and students' academic performance in carpentry and joinery trade in technical colleges in Edo State, Nigeria.

### **Research Questions**

The following research questions were raised for this study:

- 1) Availability and utilization of resources for effective teaching of carpentry and joinery trade and students' academic performance in technical colleges in Edo State, Nigeria
- 2) Availability and utilization of equipment/tools in workshops and students' academic performance in carpentry and joinery trade in technical colleges in Edo State, Nigeria.

## V. RESEARCH METHOD

### **Design of the Study**

The researcher adopted survey research design for the study because it enables the researcher to examine various data and relationship between various other unknown situations in the circumstances and also enables the researcher to collect data from a wide area in a short time.

### **Population of the Study.**

The targeted population of the study comprised of five technical colleges in Edo state with all students, teachers and workshop assistants in the various technical colleges.

### **Sample and Sampling Techniques**

Due to the small number of technical colleges in Edo state, Nigeria, the researcher used purposive sampling techniques for all the five technical colleges for the study.

### **Instrument of the Study.**

The percentages and mean were used to collect data from the teachers , students and the workshop assistants in all the

technical colleges in Edo state, Nigeria.

**Validity of the Instrument**

In other to validate the instrument, a panel of four lecturers in the Department of Vocational and Technical Education, Faculty of Education, Ambrose Alli University, Ekpoma ensured the validity of the instrument,

**Reliability of the Instrument.**

The reliability of the instrument was established through test-retest method. The instrument was administered on 20 teachers, 20 students and two workshop assistants at two

different occasions with an interval of 2 weeks. The scores recorded from the test was subjected to Pearson's Product Moment Correlation Coefficient of 0.75 which was high enough to achieve the objective of the study.

**Method of Data Collection and Analysis**

The instrument was administered to 143 respondents with the help of research assistants, the instruments were distributed to the respondents by the researcher's trained assistants. The instrument were collected back and analysed with mean and percentages.

VI. RESULTS AND DISCUSSION

**Table 1: Availability and Utilization of Resources for Effective Teaching of Carpentry and Joinery Trade and Students' Academic Performance in Technical Colleges in Edo State, Nigeria**

S/NO	Technical Colleges	Teachers	Students of Carpentry and Joinery Trade	Workshop Assistants	Remarks
1	Benin technical college, Benin city	3	10	1	Adequate
2	Afuze technical college, Afuze	1	7	-	Not Adequate
3	Igarra Technical college, Igarra	2	10	-	Not Adequate
4	Federal Science and Technical College, Uromi	3	14	1	Adequate
5	Usugbenu Technical College, Irrua	-	-	-	Not Adequate
Total	Total	9	41	2	Adequate

In Table 1 above, there were shortage of teachers, students and inadequate workshop assistants for effective teaching and learning of carpentry and joinery trade in technical colleges in Edo State, Nigeria.

**Table 2: Availability and Utilization of Equipment/Tools in Workshops and Students' Academic Performance in Carpentry and Joinery Trade in Technical Colleges in Edo State, Nigeria.**

S/No	Technical Colleges	No of Students in Carpentry and Joinery Trade	Available Equipment/Tools in Carpentry and Joinery Trade	Required Equipment/Tools in Carpentry and Joinery Trade	Total Required Equipment/Tools in Workshops of Carpentry and Joinery Trade	Total Available Percentage of Equipment/Tools in Workshops of Carpentry and Joinery Trade	Mean Scores of Students' Academic Performance in Carpentry and Joinery Trade
1	Benin Technical College, Benin City.	10	1400	4685	3009	64.23 %	37.57

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2	Afuze Technical College, Afuze	7	140 0	4685	2716	57.9%	<b>29.47</b>
3	Igarra Technical College, Igarra	10	140 0	4685	2503	53.43 %	<b>29.01</b>
4	Federal Science and Technical College, Uromi	14	140 0	4685	1395	29.78 %	<b>36.66</b>
5	Usugbenu Technical College, Irrua	9	140 0	4685	1216	25.96 %	<b>23.04</b>
<b>Total</b>		<b>50</b>	<b>7,0 00</b>	<b>23,425</b>	<b>10,839</b>	<b>231.3 %</b>	<b>155.75</b>

In table 2 above, Benin technical college, Benin city had 64.23% of equipment/tools in workshop and the mean performance of students was 37.57, Afuze technical college, Afuze had 57.9% equipment/tools in workshop and 29.47 mean students academic performance, Igarra technical college, Igarra had 53.43% of equipment/tools in workshop and 29.01 mean score of students' academic performance, Federal science and technical college, Uromi had 29.78% of equipment/tools in workshop and 36.66 mean score of students academic performance and Usugbenu technical college Usugbenu had 25.96% of equipment/tools in workshop and 23.04 mean score of students' academic performance in school..

On the whole, the equipment/tools in carpentry and joinery trade in technical colleges in Edo State, Nigeria were grossly inadequate and the students' of carpentry and joinery performed very poor in various technical colleges in Edo State, Nigeria.

The finding revealed that the equipment/tools in carpentry and joinery trade in the various technical colleges in Edo state, Nigeria was grossly inadequate.

### VII. DISCUSSION OF FINDINGS

On the issue of Carpentry and Joinery trade and students' Academic Performance in Technical Colleges, this was in line with Olaniyan and Ojo (2008) who reported that the lack of textbooks, lack of qualified teachers, workshop assistants was one of the challenges facing the successful implementation of carpentry and joinery subjects in various technical colleges in Edo State Nigeria.

This was not in line with Chirswa(2010) who stated that effective teaching and learning depends on the availability of qualified teachers, workshop assistants and utilization of adequate resources such as books, laboratories, library materials and audio teaching aids enhance good performance of students in external examinations.

On the issue of availability and utilization of equipment/tools in Workshops and Students' Academic Performance in Carpentry and Joinery trade in Technical Colleges, this was in agreement with Asiabaka (2008), World bank (2008), Akinsanya (2010) and Hallack (2014) who reported that relevant educational resources such as equipment/tools teachers, workshop assistants and so on contributed to students' academic achievement and contractiveschool buildings, crowded class rooms, non- availability of play-ground and surroundings that had no aesthetic beauty and lack of textbooks, laboratories were not only inadequate but

they were unevenly distributed to rural and urban technical colleges in Edo State, Nigeria and this has led to poor students' academic performance in various technical colleges used for the study.

### Major Findings of the Study

The major findings are as follows:

- (1) There were inadequate teachers, no enough students and inadequate workshop assistants in carpentry and joinery trade in various technical colleges.
- (2) The Carpentry and joinery equipment/tools found in technical colleges in Edo State Nigeria were grossly inadequate.

### VIII. CONCLUSION

From the findings of this study, it can be concluded that the teachers, students and workshop assistants were available in technical colleges studied, but the equipment/tools were grossly inadequate in the various technical colleges in Edo state, Nigeria

### IX. RECOMMENDATIONS

Based on the findings and conclusions of this study, the following recommendations were made: Government and School authorities should provide enough and qualified teachers, workshop assistants and adequate equipment /tools in Carpentry and Joinery workshops so as to improve the students' academic performance in technical colleges in Edo State, Nigeria.

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