

## **AN ASSESSMENT OF THE AVAILABILITY OF WOODWORK PROGRAMME AND MATERIALS IN FEDERAL SCIENCE TECHNICAL COLLEGE IN BAYELSA STATE**

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### **ABSTRACT**

*The paper was based on the assessment of the availability of woodwork programme and materials in federal science technical college in Bayelsa State. Two research questions and one hypothesis were used for the study. Survey research method was used in the study. The population consists of 3 technical instructors in building technology in Federal Science Technical College, Tungbo, Bayelsa State. All the populations were used as sample for the study. The research instruments for the study were structured questionnaires titled the "Availability of Woodwork Programmes" [AWP] and "Availability of Woodwork Materials in Building Technology" [AWMBT]. The instruments were face validated by two experts from building technology in Federal Science Technical College in Ahoada, Rivers State. Test-retest procedure was used to determine the reliability of the instruments. Using Pearson Product Moment Correlation Coefficient, the reliability of the instrument was calculated to be 0.76 and 0.78 for AWP and AWMBT items respectively. The questionnaires were administered directly to the respondent by the researcher. The questions were answered using mean and standard deviation based on 4-point scale. The null hypothesis was tested using t-test at 0.05 level of significance. From the findings of the study it is evident that there are no woodwork materials in building technology workshop in Federal Science Technical College in Bayelsa State. Also, most of the woodwork programmes are not offered in the school. The null hypothesis showed that there is significant difference in the availability of woodwork materials and woodwork programmes in Federal Science Technical College in Bayelsa State. This is evident as t-tabulated value is less than t-calculated value at 0.05 level of significance. Therefore it was recommended that government and school management should establish and provide materials for woodwork unit in Federal Science Technical College Tungbo, Bayelsa State.*

**Keywords:** Woodwork, Programme, Materials.

## **INTRODUCTION**

Woodwork skill is that area of specialisation in building technology that involves the manipulation, construction and fabrication of woodwork parts in the workshop. Woodworking is the act, art or trade of working with wood. It is the process of building, making or carving something using wood [Omeje, 2013]. Woodworking is the activity or skill of making items from wood, cabinet making, joinery and general carpentry. Along with stone, clay and animal parts, wood was one of the first materials worked by early humans. Among early findings of wooden tools are worked sticks from Kalambo falls, Clacton-on-sea and Lehringes. The spears from Germany provide some of the first examples of wooden hunting spear and flat tools were used for carving. With the advances in modern technology and demand of industry, woodwork as a field has changed.

The development of computer numeric controlled [CNC] machines has made us able to mass produce and reproduce products, faster, with less waste, and often more complex in design than ever before. Naylor, [2013] in a similar report reveal that CNC routers can carve complicated and highly detailed shapes into flat stock, to create signs or art. Rechargeable power tools speed up creation of many projects and require much less body strength than in the past, when boring multiple holes. Aside the introduction of modern machines, other tools like hammer, saws, measuring tape, try-square, trammel, and so on, are also available in modern wood workshop.

Most technical institutions in Nigeria are not sufficiently equipped with trained personnel and modern woodwork materials. Ibeneme [2007] stated that the underfunding of technical institutions affects the supply of up to date facilities and equipment needed to train workers of the 21<sup>st</sup> century. He further stated that there are few trained technical teachers dedicated to the programme. Vocational training has been an integral part of national development strategies in many societies because of the impact on human resource development, productivity and economic growth [Dike, 2007]. A good workman must possess the right skill in woodwork for optimal productivity and creativity.

Basic skills are required in woodwork practice. Skill here is the ability to do something well, usually gained from experience. Okorie [2000] defined skill as ease, rapidly, precision usually of muscular action. The challenges faced by students in skill development are based on no provision of in-service training for teachers. Omeje [2013] stated that most TVE teachers lack the competencies and skill needed for woodwork training. Some common skill needed in woodwork are shaping and wedging, fitting table top, fitting and hinging doors, woven tops for chairs, stools and so on. There is therefore the need to assess the availability of woodwork programme and materials in federal science technical college in Bayelsa State.

## **PURPOSE OF THE STUDY**

The study is based on the assessment of the availability of woodwork programme and materials in federal science technical college in Bayelsa State. Specifically the study seeks to;

1. Find out the woodwork tools available in building workshop in federal science technical college Tungbo, Bayelsa State.
2. Find out the available woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State.

## **RESEARCH QUESTIONS**

The following research question guided the study;

1. What are the woodwork tools available in building workshop in federal science technical college Tungbo, Bayelsa State?
2. What are the available woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State?

## **HYPOTHESIS**

The following hypothesis guided the study and was tested at 0.05 levels of significance.

1. There is no significant difference between the availability of woodwork materials and woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State.

## **SCOPE OF THE STUDY**

The study is limited to instructors/ teachers in Federal Science Technical College in Bayelsa State. They are in the department of building technology and they operate with NABTEB curriculum.

## **METHODS**

Survey research method was used in the study. The population consist of 3 technical instructors in building technology in Federal Science Technical College, Tungbo, Bayelsa State. All the populations were used as sample for the study. The research instruments for the study were structured questionnaires titled the ‘‘Availability of Woodwork Programmes’’ [AWP] and ‘‘Availability of Woodwork Materials in Building Technology’’ [AWMBT]. This was developed to collect data based on the research questions that guided the study, with the response mode of Highly Available [HA], Moderately Available [MA], Sparingly Available [SA] and Not Available [NA] for AWP and AWMBT items. The response modes are weighed as 4, 3, 2 and 1 respectively. The instruments were face validated by two experts from building technology in Federal Science Technical College in Ahoada, Rivers State.

Test- retest procedure was used to determine the reliability of the instruments. Using Pearson Product Moment Correlation Coefficient, the reliability of the instrument was calculated to be 0.76 and 0.78 for AWP and AWMBT items respectively. The questionnaires were administered directly to the respondent by the researcher. The questions were answered using mean and standard deviation based on 4-point scale. Items with a mean value of 2.5 above was agreed to be highly available, while items with mean value below 2.5 signifies not available. The null hypothesis was tested using t-test at 0.05 level of significance.

## **RESULTS**

### **RESEARCH QUESTION 1**

What are the woodwork tools available in building workshop in Federal Science Technical College in Bayelsa State?

**TABLE 1: Woodwork Tools available in building workshop in Federal Science Technical College Tungbo, Bayelsa State.**

S/NO	ITEMS	MEAN	STANDARD DEVIATION	REMARK
1	MEASURING TOOLS METRIC RULE	1.6	1.7	NOT AVAILABLE
2	CALIPER	1.0	2.2	NOT AVAILABLE
3	MICROMETRE	1.0	2.2	NOT AVAILABLE
4	DIVIDER	2.0	1.4	NOT AVAILABLE
5	SETTING OUT AND MARKING TOOLS TRY- SQUARE	1.0	2.2	NOT AVAILABLE
6	SLIDING BEVEL	1.0	2.2	NOT AVAILABLE
7	MITRE SQUARE	1.0	2.2	NOT AVAILABLE
8	MARKING GUAGE	1.0	2.2	NOT AVAILABLE
9	WING COMPASS	1.0	2.2	NOT AVAILABLE
10	TRAMMEL	1.0	2.2	NOT AVAILABLE
11	PENCIL	1.0	2.2	NOT AVAILABLE
12	DRIVING TOOLS HAMMER	1.0	2.2	NOT AVAILABLE
13	MALLETS	1.0	2.2	NOT AVAILABLE

14	SCREW DRIVER	1.0	2.2	NOT AVAILABLE
15	BORING TOOLS RATCH BRACE	1.0	2.2	NOT AVAILABLE
16	DRILL BIT	1.0	2.2	NOT AVAILABLE
17	WHEEL BRACE	1.0	2.2	NOT AVAILABLE
18	CENTRE BIT	1.0	2.2	NOT AVAILABLE
19	HOLDIN AND SUPPORTING DEVICE WORK HOLDING VICES BENCH VICE	1.0	2.2	NOT AVAILABLE
20	MACHINE VICE	1.0	2.2	NOT AVAILABLE
21	HAND VICE	1.7	1.6	NOT AVAILABLE
22	WORK HOLDING CLAMP G-CLAMP	1.0	2.2	NOT AVAILABLE
23	F-CLAMP	1.0	2.2	NOT AVAILABLE
24	SASH-CLAMP	1.0	2.2	NOT AVAILABLE
25	PLIERS	1.0	2.2	NOT AVAILABLE
26	BENCH HOOK	1.0	2.2	NOT AVAILABLE
27	BENCH STOP	1.0	2.2	NOT

				AVAILABLE
28	CUTTING AND PAIRING TOOLS SAWS BENCH SAWS CROSS CUT SAW	1.0	2.2	NOT AVAILABLE
29	PANEL SAW	1.0	2.2	NOT AVAILABLE
30	RIP SAW	1.0	2.2	NOT AVAILABLE
31	TENON SAW	1.0	2.2	NOT AVAILABLE
32	DOVETAIL SAW	1.0	2.2	NOT AVAILABLE
33	BOW SAW	1.0	2.2	NOT AVAILABLE
34	COPING SAW	1.0	2.2	NOT AVAILABLE
35	KEYHOLE SAW	1.0	2.2	NOT AVAILABLE
36	COMPASS SAW	1.0	2.2	NOT AVAILABLE
37	BENCH PLANE JACK PLANE	1.0	2.2	NOT AVAILABLE
38	SMOOTHING PLANE	1.0	2.2	NOT AVAILABLE NOT AVAILABLE
39	TRYING PLANE	1.0	2.2	NOT AVAILABLE
40	PLOUGH PLANE	1.0	2.2	NOT AVAILABLE
41	SPOKESHAVE.	1.0	2.2	NOT AVAILABLE

The result from table 1 in research question 1 showed that all the mean responses made for the various items were below 2.5, indicating that woodwork items stated were not available in the school.

## RESEARCH QUESTION 2

What are the available woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State?

**TABLE 2: Available woodwork programmes in Federal Science Technical College in Bayelsa State.**

S/NO	ITEMS	MEAN	STANDARD DEVIATION	REMARKK
42	CARPENTRY AND JOINERY	1.0	2.2	NOT AVAILABLE
43	INTERIOR WORKING	1.0	2.2	NOT AVAILABLE
44	PRACTICALS OF WOODWORK JOINTS	1.0	2.2	NOT AVAILABLE
45	FITTING AND HINGING DOORS	1.0	2.2	NOT AVAILABLE
46	DRAWER CONSTRUCTION	1.0	2.2	NOT AVAILABLE
47	RE-SHAPENING SURFACE	1.0	2.2	NOT AVAILABLE
48	FILLING	1.0	2.2	NOT AVAILABLE
49	PRACTICAL SIMPLE UPHOLSERY	1.0	2.2	NOT AVAILABLE
50	FITTING TABLE TOP	1.0	2.2	NOT AVAILABLE

The result from table 2 of research question 2 reveals that all the responses made for the various items were below 2.5, indicating that the programmes stated were not available.

## HYPOTHESIS

There is no significant difference between the availability of woodwork materials and woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State.

**TABLE 3: T-test analysis of the availability of woodwork materials and woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State.**

ITEMS	N	MEAN	STANDARD DEVIATION	DEGREE OF FREEDOM	T-TAB.	T-CAL.	REMARK
WOODWORK MATERIALS	3	1.1	2.2	5	2.015	2.8	REJECT
WOODWORK SKILLS	3	1.0	2.2				

The result from table 3 of the null hypothesis was rejected as t-calculated value was greater than t-tabulated value at 0.05 level of significance. This implies that there is significant difference in availability of woodwork materials and woodwork programmes in Federal Science Technical College Tungbo, Bayelsa State.

### SUMMARY OF THE FINDINGS

The following are summary of the findings;

1. The result of research question 1 reveals that woodwork items stated were not available in the school. This is in agreement with the statement made by Odu,[2007] that hand tools, machine tools and training materials are lacking in most Nigeria's secondary schools offering technical and vocational subjects.
2. The result of research question 2 reveals that most of the woodwork programmes stated in table 2 were not available. This is in line with challenges faced by FRN [2004] on the inadequate resource input in vocational education.
3. The null hypothesis was rejected in table 3 indicating that there is significant difference in the availability of woodwork materials and woodwork programmes in Federal Science Technical College, Tungbo, Bayelsa State.

### CONCLUSION AND RECOMMENDATION

From the findings of the study it is evident that there are no woodwork materials in building technology workshop in Federal Science Technical College in Bayelsa State. Also, most of the woodwork programmes are not offered in the school. The null hypothesis showed that there is significant difference in the availability of woodwork materials and woodwork programmes in Federal Science Technical College in Bayelsa State. This is evident as t-tabulated value is less than t-calculated value at 0.05 level of significance. Therefore it is recommended that government and school management should establish and provide materials for woodwork unit in Federal Science Technical College Tungbo, Bayelsa State.

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