

## Skills Required for Building Technology Capacity Building as Perceived By Technical Educators in Nigeria South-West Colleges of Education

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### Abstract

This study examines skills required for building technology capacity building as perceived by technical educators in Nigeria South-West Colleges of Education. Two objectives were raised for the study alongside with two research question. The study employed descriptive survey research design. The population for this study consisted of 72 building technology educators in South-West Colleges of Education. Census study was adopted because of the population is small and manageable. The instrument used for data collection was 20 items structured questionnaire which was designed on a modified 4-point Likert scale titled: 'Required Building Technology Skills for Capacity Building Questionnaire (RBTSCBQ)'. The instrument was validated by three research experts from Department of Technical Education, Emmanuel Alayande College of Education, Oyo. Reliability co-efficient (r) value of 0.89 was obtained through Cronbach alpha method. 72 copies of the questionnaire were retrieved by the researchers with the help of two research assistants and analysed using weighted mean and Improvement Need Index. It was found out that lecturers perceived trade skills in building technology are required for proper capacity building in building technology. Therefore, it was recommended that the identified training procedures towards capacity building in building technology should be package by schools into training and retraining programmes to enhance lecturer's capacity building.

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**Keywords:** Building Technology, Skills, Technical Educators and Capacity Building

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### INTRODUCTION

Building technology is one of the academic programmes in colleges of education in Nigeria. Building Technology, as a vocational programme is aimed at producing technicians who will be able to perform basic functions in building technology practice both in the private and public sectors (National Board for Technical Education - NBTE, 2001). Building technology imparted through quality instruction is not only for good grades alone but also for the acquisition of the right values, skills and competences to make an individual a useful member of the society. In other to achieve this objective, it must be of high quality which should not only consist of passing examinations (which is usually the first priority) but also include the acquisition of skills (in the cognitive, affective and psychomotor domains) through improved schools' ability to facilitate and support the work of lecturers and students. The school can only achieve this lofty objective through the use of the services of qualified and competent lecturers who have all it takes to give quality instruction through interaction with students in the teaching-learning process.

One of the most significant element in the school settings is the lecturers and he is the pivot of the education process. The lecturer is the most important

person in the entire education programme and he can make or mar the best educational programme in the world. Thus, competent, devoted and professionally qualified lecturers are part of essential foundation for a good education system. In other words, the attainment of national objectives for the adequate preparation of students for their examinations and achievement of educational objectives depend largely on quality lecturers. Uche (2012) in a study indicated that the students rated the quality of the academic staff high, especially in terms of professional competence and skills.

Skill according to Okorie (2001) is defined as a manual dexterity that is acquired through repetitive performance of an operation. He further described skill as expertness, practical ability, dexterity and tact. Skill is, therefore, a well established habit of doing something. It involves the acquisition of performance capability. Ogbuanya and Bakare (2017) defined building technology skills as skills required not only to gain employment but also to progress within an enterprise so as to achieve one's potentials and contribute successfully to the enterprise strategic directions. In the other hand, Uche (2012) explained capacity building as a set of activities that expand the scale, reach, efficiency or effectiveness of an individual, organization or a programme. These

activities may expand services, enhance delivery of services, or generate additional resources for the individual or organization.

Capacity is the ability of individuals, institutions, and societies to perform functions, solve problems and achieve the set objectives in a sustainable manner (Ogbuanya&Bakare, 2017). One tends to perform better when he is or her capacity is fully developed or built. Capacity building is a retraining given to serving workers to develop a certain skill or competence, or for general upgrading of performance ability. Capacity building as contained in the report of United Nation Development Program (UNDP, 2018), is an ongoing process through which individuals, groups, organizations and societies enhance their ability to identify and meet development challenges. Capacity building requires the development of conditions that allow individual participants to build and enhance existing knowledge and skills. Capacity- building remains one of the most challenging functions of development.

The fundamental goal of capacity building according to Miller, Bakthe and Ikatule (2010) is to enhance the ability of building technology lecturers based on perceived needs. Uche (2012) described capacity building as the process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in the fast-changing world.

Capacity building, therefore, refers to organized activities directed towards improving competencies and capacities of building technology lecturers for effective teaching learning. In order to improve the capacity of the lecturers, the saleable skills they required in building technology must be identified through a need assessment.

### **Statement of the Problem**

Building technology lecturers are saddle with the responsibilities of impacting the necessary saleable skills into learners for self-reliant and survival. It has been observed that some of these lecturers are not competent or updated with the trend of innovations in building industries. This effect has been a significant one at the receiving end as most graduating students are still struggling to get fitted in the world of work. Therefore, there is need for capacity building in other to enlighten building technology lecturers taking the students. Hence, this study examine the skills required for building technology capacity building as perceived by technical educators in Nigeria South-West Colleges of Education.

### **Purpose of the Study**

The main purpose of this study was to examine the skills required for building technology capacity

building as perceived by technical educators in Nigeria South-West Colleges of Education. Specifically, the study sought to:

1. Identify the required trade skills in operating concrete mixer towards capacity building in building technology.
2. Establish the available procedures towards capacity building in building technology.

### **Research Questions**

The following research questions guided the study.

1. What are the required trade skills in operating concrete mixer towards capacity building in building technology?
2. What are the available procedures towards capacity building in building technology?

### **METHODOLOGY**

Survey descriptive research design was adopted for the study. The study was carried out in all the entire colleges and universities in South-West of Nigeria. The population for the study was 80 building technology lecturers made up of 40 lecturers of building technology in South-West Colleges of Education and 32 building technology lecturers in South-West Universities. Census research was adopted to select all the 72 building technology lecturers as study sample because the number is small and manageable. 20 items structured questionnaire titled: 'Required Building Technology Skills for Capacity Building Questionnaire (RBTSCBQ) developed by the researcher. It has two parts A and B.

Part A sought the demographic data of the respondents. While part B was further divided into two sections which contained items based on research questions developed to guide the study with two components of needed and performance. It was based on modified 4-point rating scale of Highly Needed (HN), Average Needed (AN), Slightly Needed (SN) and Not Needed (NN) Also, Highly Performance (HP), Average Performance (AP), Low Performance (LP) and No Performance (NP) with corresponding value of 4, 3, 2 and 1 for both needed and performance components respectively. The questionnaire was face and content validated by three (3) experts from Department of Technical Education, Emmanuel Alayande College of Education, Oyo, Oyo State and pilot tested on 10 woodwork technology lecturers of University of Benin, Benin City, Edo State using Cronbach alpha method of reliability. The internal consistency of the questionnaire was established to be 0.76. The questionnaire was administered to the respondents by the researchers with the aid of two research assistants who were briefed on the questionnaire before administration and all the 72 copies of the questionnaire administered to the respondents were retrieved given a return rate of 100%.Weighted Mean and

Improvement Need Index (INI) was used to answer the research questions. The formula used for weight mean was:

$$N1 + N2 + N3 + N4 + \dots =$$

$$\frac{\text{Weighted mean for } X_n}{\text{No of Needs}}$$

$$P1 + P2 + P3 + P4 + \dots$$

$$= \frac{\text{Weighted mean for } X_p}{\text{No of Performance}}$$

Key: where N stand for needed component grade while P stand for performance component grade.

To determine the performance gap of the lecturers of woodwork technology South-West Colleges of Education and Universities the following steps were taken:

1. The weighted mean of each item under the need component which is  $X_n$  was calculated
2. The weighted mean of each item under the performance component which is  $X_p$  was calculated
3. The difference between the two weighted mean for each item ( $X_n - X_p = NG$ ) was determined.

i. Where the difference (NG) was zero (0) for each item, there was no need for capacity building because the level at which the competency item was needed was equal to the level at which the lecturers could perform the competency.

ii. Where the difference (NG) was negative (-) for each item, there was no need for capacity building because the level at which the competency item was needed was lower than the level at which the lecturers could perform the competency.

iii. Where the difference (NG) was positive (+) for each item the lecturers needed capacity building because the level at which the competency item was needed was higher than the level at which the lecturers could perform the competency.

## RESULT AND DISCUSSION

### Research Question 1

What are the required trade skills in operating concrete mixer towards capacity building in building technology?

Table 1: Performance gap of mean rating of the respondents on the required trade skills in operating concrete mixer towards capacity building in building technology.

S/N	Item Statements	$X_n$	$X_p$	$X_n - X_p$ (PG)	Remark
1	Architectural stonemasonry	2.65	2.54	0.11	CNN
2	Bricklaying	3.00	2.98	0.02	CNN
3	Concrete construction work	3.42	3.32	0.10	CNN
4	Landscape gardening	2.78	2.67	0.11	CNN
5	Plastering	3.43	3.32	0.11	CNN
6	Plumbing heating	3.34	3.78	0.44	CNBN
7	Refrigeration and air conditioning	3.09	3.12	0.03	CNBN
8	Wall and floor tiling	3.01	3.11	0.10	CNBN
9	Land surveying	2.75	2.55	0.20	CNN
10	Painting and drywall systems	3.12	3.11	0.01	CNN

Keys:  $X_n$  = Mean Needed;  $X_p$  = Mean Performance; CBN = Capacity Building Needed; CBNN = Capacity Building Not Needed.

Data presented in Table 1 reveals that the performance gap values of 7 out of 10 items ranged from 0.01 to 0.20 and were positive. This shows that lecturers needed capacity building in the 7 competency items in required trade skills towards capacity building. Three out of the 10 items had a performance gap value of -0.03 and -0.44, indicating that lecturers do not need capacity building on the

item because the level at which the item is needed was lower than the level at which lecturers could perform the item for required trade skills towards capacity building in building technology.

### Research Question 2

What are the available procedures towards capacity building in building technology?

Table 2: Performance gap of mean rating of the respondents on the available procedures towards capacity building in building technology

S/N	Item Statements	$X_n$	$X_p$	$X_n - X_p$ (PG)	Remark
1	Ability to draw a building plan	3.42	3.33	0.09	CNN
2	Ability to read a building plan	3.12	3.10	0.02	CNN
2	Ability to set out building plan	2.67	2.50	0.17	CNN
3	Ability to batch a concrete	2.98	2.78	0.20	CNN
4	Ability to mix a concrete	3.65	3.56	0.09	CNN
5	Ability to use building tools	3.45	3.42	0.03	CNN
6	Ability to use machines and equipment	3.74	3.66	0.08	CNN
7	Ability to make bonding with bricks	3.13	3.01	0.12	CNN
8	Ability to render a wall	3.32	3.30	0.02	CNN
9	Ability to plaster a wall	2.98	2.90	0.08	CNN
10	Ability to apply finishing materials to a building	3.22	2.89	0.33	CNN

Keys:  $X_n$  = Mean Needed;  $X_p$  = Mean Performance; CBN = Capacity Building Needed; CBNN = Capacity Building Not Needed.

The data in Table 2 reveals that the performance gap values for all the 10 items ranged from 0.02 to 0.33 and were positive. This indicates that the lecturers need capacity building in the entire competency items on the available procedures towards capacity building in building technology.

### DISCUSSION

Data presented in Table 1 reveals that lecturers are ready to receive training on the required trade skills towards capacity building in building technology. Result also shows that most of the lecturers in the university perceived that trade skills in building technology are required for proper capacity building. It is also found that if these skills are impacted into learners it will definitely makes them fitted in the world of work and relevant. This finding is in line with the work of Esu (2010) and Omeje (2013).

The result of this study also shows that building technology lecturers in the colleges needed the appropriate procedures towards retraining and competency needed in building technology. It therefore means that woodwork technology lecturers are not adequately trained on the method to be employed in imparting the right saleable skills into learners. This findings is supported with the findings of (Uche, 2012; Ogbuanya,&Bakare, 2017).

### CONCLUSION

Building technology is an organised learning activity design to facilitate the acquisition of practical and applied skills which contributes to the successful economic growth. The inability of the programme to meet the needed requirements in the world of work has been blamed on the deficient of lecturers to meet up with trend of innovation in the world. It can also be said that lecturers are ready to receive the appropriate procedures in acquiring trade skills towards building their capacity in building technology.

### RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made.

- i. The college management should ensure that lecturers are expose to the right saleable skills needed in the building industries.
- ii. The identified training procedures towards capacity building in building technology should be package by schools into training and retraining programmes to enhance lecturers capacity building.

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