Learning Influence Factors on Building Technology in Colleges of Education in Nigeria

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Abstract: **- The study assessed learning influence factors on building technology in colleges of education in Nigeria. Two research questions were raised to guide the study and two hypotheses were formulated and tested at .5 level of significant. The research design used for this study was the descriptive survey research design. The study was carried out in Nigeria. The population of the study consisted of all the 246 building technology lecturers in colleges of education in Nigeria. The sample for the study consisted of 73 building technology lecturers, 31 from federal colleges of education and 42 from State colleges of education. Stratified random technique was used to select one each federal and State colleges of education from the six geopolitical zones in Nigeria to represent the population. The instrument for data collection was a structured questionnaire. The instrument was content validated by three building technology experts, two from Federal University of Technology, Minna and one from Niger State college of education, Minna. Cronbach Alpha statistical technique was used to determine the reliability of the instrument and yielded .88 and .89 coefficients. The study employed the use of mean to answer the research questions and Z-test to test the null hypotheses. Findings revealed among others that, intelligence, learning style, students' needs, interest, aptitude, attitude, motivation, mental health, inspiration to achieve learning and emotional condition of students were found to be learning influence factors associated to students on building technology in colleges of education in Nigeria. The study recommended that, lecturers should give attention to the identified learning influence factors associated to students and environment in order to promote learning of building technology in colleges of education in Nigeria.**

Keywords: **Colleges of Education, Building Technology, Learning &Influence Factors**

I. INTRODUCTION

Colleges of education are tertiary educational institutions established to give professional training for the production of highly qualified classroom teachers. These institutions are of paramount importance in the production of teachers for Junior and Senior secondary school levels of education. Nwite and Nwuche (2016) revealed that, **c**olleges of education are specially designed to develop, pursue and improve regular and liberal courses of study for the training of various categories of teachers and promote the advancement of learning and educational research. Colleges of education in Nigeria are either regular, special or technical (Ezeukwu, 2016). Among the technical courses in colleges of education include building technology.

Building technology is one of the technical education courses in colleges of education in Nigeria designed to equip students with the technical methods, skills, processes, techniques, needed for the design, construction and maintenance of buildings. According to National Commission for Colleges of Education (NCCE), (2012), the aim of building technology in colleges of education is to produce teachers with the technical and instruction competencies to practice in educational field to impart knowledge, skills and attitude to learners as well as to practice in construction industry as technicians. Anaele and Okoro (2014) noted that, the achievement of building technology aim depends on several factors including students' ability to learn.

Learning could be seen as a change in behavior that is due to experience. Learning is about a change: the change brought about by developing a new skill, understanding a scientific law, changing an attitude. Dave (2018) defined learning as a relatively permanent change, usually brought about intentionally. Learning is an act of acquiring experience, knowledge, skills and values by understanding what to do and how to do any task by synthesizing the different types of information perceived by individual. Bouton (2017) argued that, learning as a process of acquisition of knowledge is determined by learning influence factors that include students and environmental related factors.

Students related factors are physiological individual difference among learners that influence learning. Bradley (2009) disclosed that, students associated factors influence learning in science subjects include but not limited to intelligence, learning style, needs, interest, aptitude, attitude, motivation, mental health and inspiration to achieve learning goals and emotional condition of students. Nevertheless, environmental related factors influence learning are components of the surrounding that affect learning. Domjan (2010) revealed that, environmental related factors influence learning in engineering include conducive classroom, learning materials, cultural and social demand, time required in learning, culture, religion and workshop facilities. Nevertheless, students and environmental factors influence learning determine the level of achievement of educational goals of a course of study such as building technology. Hence, there is need to ascertain learning influence factors on building technology in colleges of education in Nigeria.

Statement of the Problem

Building technology in colleges of education is aimed at producing teachers with the technical and instruction competencies to practice in educational field to impart knowledge, skills and attitude to learners as well as to practice in construction industry as technicians. It is unfortunate that, performance of building technology students in colleges of education in Nigeria is not reflecting the realization of the aim of the course. Anaele (2018) attributed the poor performance of building technology students to learning influence factors. There is need to identify learning influence factors on building technology. Hence, this study geared towards identifying learning influence factors on building technology in colleges of education in Nigeria.

Aim and Objectives of the Study

The aim of the study was to identify learning influence factors on building technology in colleges of education in Nigeria. Specifically, objectives of the study sought to identify the following:

1. Learning influence factors associated to students on building technology in colleges of education in Nigeria.
2. Learning influence factors associated to environment on building technology in colleges of education in Nigeria.

Research Question

The following research questions were raised to guide the study:

1. What are the learning influence factors associated to students on building technology in colleges of education in Nigeria?
2. What are the learning influence factors associated to environment on building technology in colleges of education in Nigeria?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance**:**

Ho_1: There is no significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to students on building technology.

Ho_2: There is no significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to environment on building technology.

II. METHODOLOGY

Descriptive survey research design was used for this study. Mulki*et al.* (2016) defined descriptive survey research design as design aimed at casting light on current issues or problem through a process of data collection. The study was carried out in Nigeria. The population of the study consisted of all the 246 building technology lecturers in colleges of education in Nigeria. The sample for the study consisted of 73 building technology lecturers, 31 from federal colleges of education and 42 from State colleges of education. Stratified random technique was used to select one each federal and State colleges of education from the six geopolitical zones in Nigeria to represent the population. The instrument for data collection was a structured questionnaire developed by the researcher and designed on five-points Likert's scale of Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SD) with numerical values of 5, 4, 3, 2, and 1, respectively was used to collect data for the study. The instrument contained two sections, A, and B. Section A comprises of learning influence factors associated to students on building technology in colleges of education in Nigeria and section B comprises of learning influence factors associated to environment on building technology in colleges of education in Nigeria. The instrument was content validated by three building technology experts, two from Federal University of Technology, Minna and one from Niger State college of education, Minna. Cronbach Alpha statistical technique was used to determine the reliability of the instrument and yielded .88 and .89 coefficients. The study employed the use of mean to answer the research questions and Z-test to test the null hypotheses. Decision on research questions was based on real limit of numbers and decision on the hypotheses was based on comparing Z-value with P-value.

III. RESULT

Research Question One

What are the learning influence factors associated to students on building technology in colleges of education in Nigeria?

Table 1: Mean Responses of Building Technology Lecturers from Federal and State Colleges of Education on Learning Influence Factors Associated to Students

NS/N	Items	$\overline{X}_1$	$\overline{X}_2$	$\overline{X}_A$	Remark
1	Intelligence	4.23	4.37	4.30	Agreed
2	Learning style	3.92	3.94	3.93	Agreed
3	Students' needs	3.53	3.79	3.66	Agreed
4	Students' interest	3.91	3.93	3.92	Agreed
5	Students' aptitude	3.98	3.92	3.95	Agreed
6	Students' attitude	3.81	3.69	3.75	Agreed
7	Motivation	3.88	3.82	3.85	Agreed
8	Mental health	4.32	4.10	4.21	Agreed
9	Inspiration to achieve learning goals	3.61	3.98	3.29	Agreed
10	Emotional condition of students	3.87	3.93	3.90	Agreed
	Grand Means	**3.86**	**3.82**	**3.89**	**Agreed**

Keys: N_1 = Numbers of Lecturers from Federal Colleges of Education, N_2 = Numbers of Lecturers from Federal and State Colleges of Education, $\bar{X}_1$ = Mean of Lecturers from Federal Colleges of Education, $\bar{X}_2$ = Mean of Lecturers from State Colleges of Education, $\bar{X}_A$=Average mean of Lecturers from Federal and State Colleges of Education.

Table 1 revealed that all the 10 items had average mean value above 3.49 and below 4.50. This indicate that, the respondents were of the opinion that all the 10 items are learning influence factors associated to students on building technology in colleges of education in Nigeria.

Research Question Two

What are the learning influence factors associated to environment on building technology in colleges of education in Nigeria?

Table 2: Mean Responses of Building Technology Lecturers from Federal and State Colleges of Education on Learning Influence Factors Associated to Environment

S/N	Items	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_A$	Remark
11	Conducive classroom	3.73	3.50	3.62	Agreed
12	Learning materials	3.52	3.64	3.58	Agreed
13	Religion	3.53	3.79	3.66	Agreed
14	Cultural demand	1.71	1.63	1.67	Disagreed
15	Time required in learning	3.78	3.52	3.65	Agreed
16	Language	4.32	4.10	4.21	Agreed
17	Workshop facilities	3.81	3.69	3.75	Agreed
18	Social demand	3.68	3.82	3.75	Agreed
19	Weather	2.61	2.90	2.76	Undecided
20	Mass/social media (ICT)	3.61	3.98	3.80	Agreed
	Grand Means	**3.51**	**3.55**	**3.53**	**Agreed**

Table 2 revealed that 8 items had average mean value above 3.49 and below 4.50, one item had average mean value of 2.7 and one item had average mean value of 1.67. This indicate that, the respondents were of the opinion that 8 items are learning influence factors associated to environment on building technology in colleges of education in Nigeria.

Hypothesis One

Ho_1: There is no significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to students on building technology

Table 3: Z-test Analysis for the Test of Significant Difference Between the Mean Responses of Federal and State Colleges of Education Lecturers on Learning Influence Factors Associated to Students on building Technology

Respondents	N	$\bar{X}$	SD	Df	z-value	p-value	Remark
Federal Colleges of Education Lecturers	31	3.86	0.82	71	0.056	0.956	Not Significant
State Colleges of Education Lecturers	42	3.82	0.78				

Table 3 revealed that the p-value > 0.5, which implies that there is no significant difference between the mean responses of federal and state colleges of education lecturers on learning influence factors associated to students on building technology in colleges of education in Nigeria. Hence, hypothesis one was retained.

Hypothesis Two

Ho_2: There is no significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to environment on building technology

Table 4: Z-test Analysis for the Test of Significant Difference Between the Mean Responses of Federal and State Colleges of Education Lecturers on Learning Influence Factors Associated to Environment on building Technology

Respondents	N	$\bar{X}$	SD	Df	z-value	p-value	Remark
Federal Colleges of Education Lecturers	31	3.51	0.74	71	0.256	0.845	Not Significant
State Colleges of Education Lecturers	42	3.55	0.70				

Table 4 revealed that the p-value > 0.5, which implies that there is no significant difference between the mean responses of federal and state colleges of education lecturers on learning influence factors associated to environment on building technology in colleges of education in Nigeria. Hence, hypothesis two was retained.

IV. FINDINGS

1. Intelligence, learning style, students' needs, interest, aptitude, attitude, motivation, mental health, inspiration to achieve learning and emotional condition of students were found to be learning influence factors associated to students on building technology in colleges of education in Nigeria.
2. Conducive classroom, learning materials, religion, time required in learning, language, workshop facilities, social demand and mass/social media were found to be learning influence factors associated to environment on building technology in colleges of education in Nigeria.
3. There is no significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to students on building technology

4. There is no significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to environment on building technology

V. DISCUSSION OF FINDINGS

Findings on learning influence factors associated to students on building technology in colleges of education in Nigeria revealed intelligence, learning style, students' needs, interest, aptitude, attitude, motivation, mental health, inspiration to achieve learning and emotional condition of students. The findings concords with Bradley (2009) that confirmed intelligence, learning style, needs, interest, aptitude, attitude, motivation, mental health and inspiration to achieve learning goals and emotional condition of students as learning influence factors associated to students in science subjects.

Nevertheless, the z-test analysis for the test of significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to students on building technology revealed not significant. this finding is similar to the findings of Mitchell *et al.* (2009) that revealed no statistical significant difference between the mean responses of male and female teachers on factors influence students learning habits.

Findings on learning influence factors associated to environment on building technology in colleges of education in Nigeria revealed conducive classroom, learning materials, religion, time required in learning, language, workshop facilities, social demand and mass/social media. The finding is in agreement with Domjan (2010) that revealed conducive classroom, learning materials, cultural and social demand, time required in learning, culture, religion and workshop facilities as environmental related factors influence learning in engineering subjects.

Nevertheless, the z-test analysis for the test of significant difference between the mean responses of Federal and State colleges of education lecturers on learning influence factors associated to environment on building technology revealed no significant. The finding is in harmony with the findings of Mineka and Zinbarg (2006) that revealed no statistical significant difference between the mean responses of clinical and industrial psychology on factors that stimulates learners' interest in learning.

VI. CONCLUSION

Based on the findings that emerged from the study, it is concluded that learning influence factors associated to students and environment on building technology in colleges of education were identified based on the perception of lecturers. This implies that, if positive attention is given to the identified learning influence factors on building technology, learning among students will be positively enhanced.

VII. RECOMMENDATIONS

Based on the findings emerged from the study, the following recommendations were made:

1. Lecturers should give attention to the identified learning influence factors associated to students in order to promote learning of building technology in colleges of education in Nigeria.
2. Lecturers should give attention to the identified learning influence factors associated to environment in order to promote learning of building technology in colleges of education in Nigeria.

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