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Innovative pedagogies for teaching block laying, bricklaying and concreting students on self-esteem in technical colleges in northern Nigeria

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Abstract

The study was carried out to determine innovative pedagogies for teaching block laying, bricklaying and concreting students on self-esteem in technical colleges in northern Nigeria. Survey research design was used for the study. The population for the study was 120 brick/block-laying and concreting teachers in technical colleges. Structure questionnaire was used as instruments for data collection. Two research questions and two null hypotheses were formulated. Cronbach alpha method was used for the reliability of the instrument which yielded a coefficient of 0.92. Mean was used to analyze the data for answering research questions while t- test was used to test the

hypotheses of no significant difference at 0.05 levels of significances. Recommendation: The skills identified in this study should be integrated into the curriculum of Block laying, Bricklaying and Concreting for training students, Training equipment, machines and books should be donated to schools offering Block laying, Bricklaying and Concreting by government and employers of labour in order to teach skills to students and Workshop and seminars should be organized for Block laying, Bricklaying and Concreting teachers on current technologies/issues in Block laying, Bricklaying and Concreting from time to time.

Keywords: Innovative Pedagogies, *Block laying*, *Bricklaying* and Concreting Students, Self-esteem, Technical Colleges

Introduction

The history reviewed that human begins of now a days have basic needs for shelter (building) the early men went into caves for shelter, but this could not protect them from wild animals, cool weather and hot weather. People in the process of time required an aspect of education that in involves in addition to general education, skills attitudes, understanding and knowledge relating to occupation in various sectors of economic and social life.

Technical Colleges are the institutions where students are trained to acquire relevant knowledge and skills in different occupation for employment in the world of work (NBTE 2007). According to the Federal Republic of Nigeria (FRG) (2004) Technical College is a segment of technical and vocational education (TVE) designed to produce craftsmen at the secondary school level and master craftsmen at the advance craft. The goals of Technical Colleges are to provide trained manpower in the applied science technology and business particularly at craft advanced craft and technician levels provide the Technical knowledge and vocational skills necessary and give training and impart the necessary skills necessary for agriculture, commercial and economic development and give training and import the necessary skills to individual who shall be self – reliant economically (Ogbuanya and Shetima, 2014) ^[5]. Technical Colleges are regarded as the principal vocational institution in Nigeria (Okoro 2006) ^[6]. According to Ndomi (2005) ^[4], Technical Colleges provide technical training in a number of courses which include General Education, Electrical/electronic trades, Woodwork trades, Printing trades, Motor Vehicle Mechanic Work and Block laying, Bricklaying and Concreting

Block laying, Bricklaying and Concreting is an aspect of vocational technical education. Vocational technical education is an education for work. According to Uwaifor (2009) vocational technical education is any form of education whose purpose is to prepare person(s) for employment in an occupation or group of occupations. Rolalrand (2004) stated that vocational technical education is the acquisition of skills and techniques in chosen occupation or profession to enable an individual earn a living. Adeyemi and Uko-Aviomoh (2004) viewed vocational technical education as an aspect of education which leads to the acquisition of practical and new pedagogical innovation.

Pedagogy is at the heart of teaching and learning. Preparing Block laying, Bricklaying and Concreting to meet new contemporary challenges means to review and update the pedagogies teachers use. However, despite the increased reporting of teachers of technical colleges that are innovating, technical colleges remain largely seen as very resistant places for innovation. To address the importance and challenges of implementing new pedagogies, this paper brings together leading experts to reflect on key areas of pedagogy of Block laying, Bricklaying and Concreting. In particular, each chapter addresses a pedagogical dimension that together offers a conceptual framework for action. This framework moves beyond a fragmented focus on specific innovations. In doing so, it helps explain how innovative pedagogies may be developed, applied and scaled. According to Peterson (2015) the first contribution shows how fundamental purpose is to pedagogy, while Hanna Dumont's section explores adaptive teaching as a cross-cutting concept over a range of different pedagogical approaches. Then the paper moves to discuss the importance of understanding pedagogies as combinations, which Amelia Peterson defines as two layers: one combining discrete teaching practices and another that combines approaches to meet long-term educational goals. Marc (2003) looks first at content domains (mathematics, non-native languages, and socio-emotional learning) and how they relate to pedagogies. He then contributes to the thinking on "new learners" and technology, as important context influencing pedagogical choices and implementation. The final section by Nancy Law is focused on change, through the particular prism of technology-enhanced pedagogical innovations. Also analysis moves towards a theory of change that takes account of the need for alignment at the self-esteem levels of the educational system.

Self-esteem is related to personal beliefs about skills, abilities, and social relationships. Rosenberg (1965), one of the pioneers in this domain, stated that self-esteem refers to an individual overall positive evaluation to the self. also added, that high self-esteem consists of an individual respecting himself and considering himself worthy. In a similar vein, Sedikides and Gress (2003) stated that self-esteem refers to individual's perception or subjective appraisal of one's own self-worth, one's feelings of self-respect and self-confidence and the extent to which the individual holds positive or negative views about self.

Self-esteem is also defined as a global barometer of self-evaluation involving cognitive appraisals about general self-worth and affective experiences of the self that are linked to these global appraisals (Murphy, Stosny and Morrel, 2005) [2]. By the same token, Wang and Ollendick (2001) [7] stated that self-esteem involves an evaluation of oneself followed by an emotional reaction towards oneself. The evaluative and affective elements are present in all extant definitions and theories of self-esteem for graduated of Block laying, Bricklaying and Concreting.

The teachers of Block laying, Bricklaying and Concreting in Technical College is to equip students with necessary theoretical knowledge and practical skills that will enable the graduates of Block laying, Bricklaying and Concreting to set up their own workshops, self-employed and even employ others. Block laying, Bricklaying and Concreting exposes students to various skills in Block laying, Bricklaying and Concreting graduates need to be familiar with before graduation.

It is a common observation that Block laying, Bricklaying

and Concreting students today do not want to work but want to become millionaires overnight. The reason is simply because they do not possess necessary skills in the area that they were trained, and as a result they have no confidence in themselves to set up business. Good possession of relevant building skills that will enable Block laying, Bricklaying and Concreting students set up businesses or become self – employed may reduce joblessness and social vices among them after graduation. Therefore, there is need for carrying out a study to determine innovative pedagogies for teaching brick/block-laying and concreting students on self-esteem in technical colleges in Northern Nigeria.

Purpose of the Study

The major purpose of this study is to determine the innovative pedagogies for teaching brick/block-laying and concreting students on self-esteem in technical colleges in northern Nigeria.

Specifically; the study determined;

1. Innovative pedagogies for teaching strategies of Brick/Block-Laying and concreting theory to improve skill acquisition of Brick/Block-Laying and concreting students in technical colleges in Northern Nigeria
2. Innovative pedagogies for teaching practical strategies of Brick/Block-Laying and concreting that will enhance skill acquisition of Brick/Block-Laying and concreting students in Northern Nigeria.

Research Questions

The following research questions guided the study:

1. What are the innovative pedagogies for teaching strategies of Brick/Block-Laying and concreting theory to improve skill acquisition of Brick/Block-Laying and concreting students in technical colleges in Northern Nigeria?
2. What are the innovative pedagogies for teaching practical strategies of Brick/Block-Laying and concreting that will enhance skill acquisition of Brick/Block-Laying and concreting students in Northern Nigeria?

Hypotheses

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

1. There is no significant difference between the mean response of qualified and unqualified teachers of Brick/Block-Laying and concreting on the innovative pedagogies for teaching strategies that can enhance skill acquisition of Brick/Block-Laying and concreting students' in Technical Colleges in Northern Nigeria.
2. There is no significant difference between the mean responses of qualified and unqualified Brick/Block-Laying and concreting teachers on the innovative pedagogies for strategies for teaching practical's to improve skill acquisition of Brick/Block-Laying and concreting students' in Technical Colleges in Northern Nigeria.

Presentation of the Result

Research Question One

What are the innovative pedagogies for teaching strategies of Brick/Block-Laying and concreting theory to improve skill acquisition of Brick/Block-Laying and concreting students in technical colleges in Northern Nigeria?

Table 1

S/no	Items	Mean	SD	Remark
1	Giving tests or assignments to students at the end of lessons.	3.83	0.89	Agree
2	Using intelligent students to teach other students some building concepts	4.06	0.77	Agree
3	Varying teaching styles, techniques or methods from time to time during lessons	3.80	0.62	Agree
4	Visiting Brick/Block-Laying and concreting industries at the end of each lesson for better understanding of some building concepts	3.90	0.97	Agree
5	Inviting Brick/Block-Laying and concreting personnel from industries to deliver lessons on new innovations in building industry	3.51	0.63	Agree
6	Allowing each student to demonstrate what has been learnt after each lesson	3.58	0.81	Agree
7	Using students' centered teaching method for teaching Brick/Block-Laying and concreting	3.74	0.96	Agree

Table 1 shows the mean responses of 3.51 to 4.06 that items number 1, 2, 3, 4, 5, 6 and 7 are above 3.50 meaning the items are needed. While standard deviation ranges from 0.62 to 0.89 meaning there is close relationship in the means responses.

Research Question Two

What are the innovative pedagogies for teaching practical strategies of Brick/Block-Laying and concreting that will enhance skill acquisition of Brick/Block-Laying and concreting students in Northern Nigeria

Table 2

S/no	Items	Mean	SD	Remark
1	Using modern hand tools for teaching during practicals	4.06	0.86	Agree
2	Using well equipped and organized workshop for practicals	4.16	0.89	Agree
3	Grouping students into small groups during practicals for monitoring	4.09	0.87	Agree
4	Emphasis should be laid on how to use a particular tool or equipment/machine	4.22	0.58	Agree
5	Always inviting building experts from building industries to give lectures to students on practical innovations	4.00	0.89	Agree
6	Always teaching practicals in a well-organized and equipped workshop	4.00	0.80	Agree
7	Visiting relevant building industries for practical skill acquisition (field trip)	3.87	0.72	Agree

Table 2 shows the mean responses of 3.87 to 4.22 that items number 1, 2, 3, 4, 5, 6 and 7 are above 3.50 meaning the items are needed. While standard deviation ranges from 0.58 to 0.89 meaning there is close relationship in the means responses

Hypothesis One

There is no significant difference between the mean response of qualified and unqualified teachers of Brick/Block-Laying and concreting on the innovative pedagogies for teaching strategies that can enhance skill acquisition of Brick/Block-Laying and concreting students' in Technical Colleges in Northern Nigeria.

Table 3: The t-test Analysis of the Mean Responses of the Respondents on the innovative pedagogies for teaching strategies that can enhance skill acquisition of Brick/Block-Laying and concreting students' in Technical Colleges in Northern Nigeria

S/N	Items	X	SD	T- cal	Rmk
1	Giving tests or assignments to students at the end of lessons.	3.83	0.89	0.10	Sign
2	Using intelligent students to teach other students some building concepts	4.06	0.77	0.45	Sign
3	Varying teaching styles, techniques or methods from time to time during lessons	3.80	0.62	0.11	Sign
4	Visiting Brick/Block-Laying and concreting industries at the end of each lesson for better understanding of some building concepts	3.90	0.97	0.51	Sign
5	Inviting Brick/Block-Laying and concreting personnel from industries to deliver lessons on new innovations in building industry	3.51	0.63	0.58	Sign
6	Allowing each student to demonstrate what has been learnt after each lesson	3.58	0.81	0.34	Sign
7	Using students' centered teaching method for teaching Brick/Block-Laying and concreting	3.74	0.96	0.80	Sign

Table 3 shows that the calculated t-value for items 1, 2, 3, 4, 5, 6, and 7 had their calculated t-value above 0.05. Therefore, there is significant difference in the mean responses of the respondents on those items. The null hypothesis was therefore rejected for those items.

Hypothesis Two

There is no significant difference between the mean responses of qualified and unqualified Brick/Block-Laying and concreting teachers on the innovative pedagogies for strategies for teaching practical's to improve skill acquisition

of Brick/Block-Laying and concreting students' in Technical Colleges in Northern Nigeria.

Table 4: The t-test Analysis of the Mean Responses of the Respondents on the innovative pedagogies for strategies for teaching practical's to improve skill acquisition of Brick/Block-Laying and concreting students' in Technical Colleges in Northern Nigeria

S/N	Items	X	S	T-cal	Rmk
1	Using modern hand tools for teaching during practicals	4.06	0.86	0.35	Sign
2	Using well equipped and organized workshop for practicals	4.16	0.89	0.48	Sign
3	Grouping students into small groups during practicals for monitoring	4.09	0.87	0.40	Sign
4	Emphasis should be laid on how to use a particular tool or equipment/machine	4.22	0.58	0.34	Sign
5	Always inviting building experts from building industries to give lectures to students on practical innovations	4.00	0.89	0.08	Sign
6	Always teaching practicals in a well-organized and equipped workshop	4.00	0.80	0.29	Sign
7	Visiting relevant building industries for practical skill acquisition (field trip)	3.87	0.72	0.30	Sign

Table 4 shows that the calculated t-value for items 1, 2, 3, 4, 5, 6, and 7 had their calculated t-value above 0.05. Therefore, there is significant difference in the mean responses of the respondents on those items. The null hypothesis was therefore rejected for those items.

Conclusion

Block/Bricklaying and Concreting at Technical College level is all about teaching skills self-reliance to students for employment and wealth creation after graduation. In order for students to have skills attain, teachers are required to teach relevant skills to students by employing appropriate innovative pedagogies teaching and evaluation emerging technologies and innovative pedagogies in skill attainment of Block/Bricklaying and Concreting Students in Technical Colleges.

Recommendations

The following recommendations are made:

1. The skills identified in this study should be integrated into the curriculum of Block/Bricklaying and Concreting for training students in Technical Colleges.
2. Training equipment, machines and books should be donated to schools offering Block/Bricklaying and Concreting by government and employers of labour in order to teach skills to students
3. Workshop and seminars should be organized for Block/Bricklaying and Concreting teachers on current technologies/issues in Block/Bricklaying and concreting from time to time.

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