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EXPLORING EMPLOYABILITY COMPETENCIES IN CONSTRUCTION TRADES: A COMPARATIVE ANALYSIS OF BRICKLAYING/BLOCK LAYING AND CONCRETING GRADUATES IN DIVERSE SPECIALIZATIONS IN GOMBE STATE, NIGERIA

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Abstract

The purpose of this study was to Explore the Employability Competencies in Construction Trades: A Comparative Analysis of Bricklaying/Block Laying and Concreting Graduates in Diverse Specializations in Gombe State, Nigeria. The study was guided by three research questions and three null hypotheses guided the study. The study's population comprised 85 respondents, including 21 administrators, 48 teachers, and 16 building supervisors, making sampling unnecessary due to the manageable size of the population. Data collection utilized a structured questionnaire titled "Perceived Employability Competencies Questionnaire (PECQ)," specifically designed by the researchers to align with the research questions. The questionnaire featured two sections, A and B, and underwent face validation by three experts in the Department of Technology Education at Modibbo Adama University, Yola, Adamawa State. The instrument demonstrated a high reliability coefficient of 0.83, determined through Cronbach Alpha. Data analysis for the research questions involved

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calculating mean and standard deviation, while ANOVA was employed to test null hypotheses at a 0.05 level of significance. Findings of the study revealed among others that 24 employability competencies in bricklaying/block laying possessed and required by Graduate Students of BBC trade. 15 employability competencies in concreting were possessed and required by Graduate Students of BBC trade. It is recommended that Students of BBC trade should be exposed to activities that involve bricklaying and block laying works so that the students can improve their competencies when performing blocklaying work. And administrators of Technical Colleges should ensure that materials for concrete practice are provided to ensure adequate skill acquisition during practical lessons.

Keywords: Employability Competencies, Construction Trades, Bricklaying/Block Laying, Graduates, Diverse Specializations

INTRODUCTION

The construction industry in Nigeria stands as a dynamic and critical component of the nation's economic landscape, making substantial contributions to job creation, infrastructure enhancement, and overall economic prosperity (Oladokun et al., 2018; Owoyemi et al., 2019). As the largest economy on the African continent, Nigeria has experienced a notable surge in construction activities, propelled by factors such as rapid urbanization, population growth, and robust government-led infrastructure initiatives (Ogunsemi et al., 2017; Oyediran et al., 2020). This sector encompasses a myriad of trades, among them bricklaying, block laying, and concreting, each playing a distinctive role in meeting the diverse and evolving demands of sustainable development (Afolabi et al., 2016; Oluwatobi et al., 2018). According to Ede and Olaniran (2017), the construction industry is not only a key economic driver but also a substantial source of employment, serving as a catalyst for socio-economic advancSement and positively influencing the standard of living. Against the backdrop of a burgeoning population and the pressing need for improved infrastructure, the construction industry in Nigeria emerges as a vital force, demanding a nuanced understanding of the employability competencies in specialized trades such as bricklaying and concreting. This understanding is essential for aligning educational programs with industry demands, ensuring the cultivation of a skilled workforce capable of sustaining and advancing Nigeria's construction sector growth.

The surging demand for skilled professionals in bricklaying, block laying, and concreting within Nigeria highlights the dynamic growth and complexity of the country's construction sector. This demand is intricately linked to several key factors shaping the nation's urban and infrastructural landscape. Urbanization, fueled by population growth and migration, has resulted in an increased need for residential and commercial spaces, driving construction activities across the country (Ogunsemi et al., 2017). Additionally, ambitious government-led infrastructural projects have further propelled the construction industry, necessitating a skilled workforce capable of executing projects with precision and quality (Owoyemi et al., 2019). The specificity of the demand in bricklaying, block laying, and concreting highlights the crucial role these trades play in ensuring the structural integrity and durability of buildings and infrastructure. The growing emphasis on skilled professionals in these trades is not merely a response to the current surge in construction activities but a strategic foresight to address the evolving needs and challenges of the construction landscape in Nigeria, positioning the workforce as a critical asset for sustainable development (Afolabi et al., 2016; Oluwatobi et al., 2018).

The significance of employability competencies in meeting industry demands within the Nigerian context is paramount, given the evolving nature of the nation's workforce requirements and economic landscape (Oladokun et al., 2018). As Nigeria experiences economic growth and diversification, the demand for a skilled and adaptable workforce becomes increasingly critical. Employability competencies encompass a diverse array of skills, ranging from technical proficiency to communication, problem-solving, and teamwork, all of which are essential for effectively contributing to the workforce (Afolabi et al., 2016; Oyediran et al., 2020). In sectors like the construction industry, possessing the requisite competencies in specialized trades such as bricklaying, block laying, and concreting is imperative. These competencies not only ensure professionals are well-prepared to meet the demanding requirements of the field but also contribute to the overall quality, safety, and efficiency of construction projects (Oluwatobi et al., 2018; Ede and Olaniran, 2017). Recognizing and nurturing employability competencies is not just an individual career enhancement strategy; it serves as a strategic alignment of educational programs with the ever-changing needs of industries, fostering a symbiotic relationship between workforce development and sustainable economic growth in Nigeria.

The graduates of Bricklaying/Block Laying and Concreting (BBC) are entrusted with the task of translating architectural designs into tangible structures, underscoring the

necessity for technical prowess in the precise arrangement and installation of bricks and blocks (Ogunsemi et al., 2017). Central to their competencies is a comprehensive understanding of construction materials, encompassing the characteristics, application techniques, and suitability for diverse projects. Spatial awareness is paramount as they navigate the intricacies of creating structurally sound buildings, emphasizing adherence to construction standards and codes (Owoyemi et al., 2019). Effective communication and teamwork skills are imperative, given the collaborative nature of construction projects where graduates collaborate with architects, engineers, and fellow tradespeople. The possession of problem-solving skills and acute attention to detail is essential, enabling graduates to address challenges that may arise during the bricklaying and block laying process, ensuring the overall quality and integrity of the construction endeavor. The competencies required and possessed by graduates in these trades not only contribute to the successful execution of construction projects but also align with the specific needs and demands of the construction industry in Nigeria.

Graduates in the BBC trade tasked with wall finishing are expected to demonstrate a set of competencies that are vital for the successful execution of construction projects. Technical proficiency is a fundamental requirement, encompassing the ability to apply various wall finishing techniques such as plastering, rendering, and painting with precision and finesse (Bala et al., 2018). Yahaya, et al. (2016) asserted that knowledge of construction materials is equally crucial, ensuring graduates are well-versed in selecting and utilizing materials that meet both aesthetic and structural requirements. Attention to detail is emphasized, as graduates must exhibit a keen eye for quality in executing wall finishing tasks. Moreover, graduates are expected to possess effective communication and teamwork skills, facilitating collaboration with other construction professionals and ensuring the seamless integration of wall finishing within the broader construction process. This comprehensive skill set not only contributes to the aesthetic appeal of structures but also plays a pivotal role in maintaining the structural integrity and functionality of the completed construction projects in Nigeria.

Statement of the Problem

The construction industry serves as a linchpin in economic development, and the employability competencies of graduates specializing in trades like bricklaying/block laying and concreting significantly influence the sector's efficiency and growth trajectory. While

the importance of these competencies is widely acknowledged, a substantial gap exists in the literature concerning the comparative analysis of these competencies across diverse specializations within these trades. Existing studies often provide a broad overview, lacking the granularity necessary to understand the nuanced skills and proficiencies required for success in varied specializations. This research aims to bridge this critical gap by undertaking a comprehensive comparative analysis of employability competencies among graduates in bricklaying/block laying and concreting. The focus on diverse specializations within these trades, such as wall finishing, adds a layer of specificity that is currently lacking. The outcomes of this study are expected to contribute vital insights into the unique skill sets associated with different specializations, informing targeted educational programs, training initiatives, and workforce development strategies. Addressing this gap in knowledge is imperative for optimizing the alignment of educational curricula with industry demands and promoting the overall sustainability and effectiveness of the construction workforce.

Purpose of the Study

The main purpose of the study was to exploring employability competencies in construction trades giving a comparative analysis of bricklaying/block laying and concreting graduates in diverse specializations. Specifically, the study sort to determine:

1. The employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in Bricklaying/block laying
2. The employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in concreting
3. The employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in wall finishing.

Research Questions

1. What are the employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in Bricklaying/blocklaying?
2. What are the employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in concreting?
3. What are the employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in wall finishing?

Hypotheses

The following null hypotheses were formulated to guide the study:

1. There is no significant difference in the mean responses of administrators, teachers and building supervisors on the employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in Bricklaying/block laying
2. There is no significant difference in the mean responses of administrators, teachers and building supervisors on the employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in concreting
3. There is no significant difference in the mean responses of administrators, teachers and building supervisors on the employability competencies required and possessed by graduates of bricklaying/ block laying and concreting works trade in wall finishing.

METHODS

Conducted in Gombe State, Nigeria, this study employed a descriptive survey research design to explore the employability competencies in construction trades of bricklaying/block laying and concreting graduates in diverse specializations competencies. The study's population comprised 85 respondents, including 21 administrators, 48 teachers, and 16 building supervisors, making sampling unnecessary due to the manageable size of the population. Data collection utilized a structured questionnaire titled "Perceived Employability Competencies Questionnaire (PECQ)," specifically designed by the researchers to align with the research questions. The questionnaire featured two sections, A and B, and underwent face validation by three experts in the Department of Technology Education at Modibbo Adama University, Yola, Adamawa State. The instrument demonstrated a high reliability coefficient of 0.83, determined through Cronbach Alpha. Data analysis for the research questions involved calculating mean and standard deviation, while ANOVA was employed to test null hypotheses at a 0.05 level of significance.

RESULTS

Research Question 1: What are the employability competencies possessed and required by Graduate Students of BBC trade in bricklaying/block laying?

Table 1: Mean and Standard Deviation on the Employability Competencies Possessed and Required by Graduate Students in Bricklaying/block Laying

		N = 85			N = 85		
		Competencies Possessed			Competencies Required		
S/No	ITEMS	$\overline{x_p}$	δ_p	Remark	$\overline{x_R}$	δ_R	Remark
1.	Ability to check for alignment of the blocks with a straight edge	4.11	0.31	P	3.19	0.50	MR
2.	Ability to check for the horizontal alignment of the blocks in the second course with a straight edge	4.08	0.32	P	3.06	0.42	MR
3.	Ability to check for the vertical and horizontal levels of the first and second courses with the spirit level	4.12	0.32	P	3.20	0.53	MR
4.	Ability to check the first course for horizontal level with the spirit level	1.38	1.02	NP	4.08	0.35	R
5.	Ability to chuck mortar into the bed joints of the first course by using pointed end of the trowel to point the mortar down and positioning the chucking board along the lengths of two jointed blocks	4.12	0.32	P	3.20	0.59	MR
6.	Ability to cut blocks to various sizes where required	4.07	0.26	P	3.25	0.65	MR
7.	Ability to fix the different sizes of blocks correctly to avoid straight joint	4.08	0.28	P	3.21	0.64	MR
8.	Ability to lay other courses as demonstrated on the first and second courses until it gets to the required course	4.08	0.28	P	3.29	0.70	MR
9.	Ability to maintain perpendicular stop ends	4.08	0.28	P	3.16	0.51	MR
10.	Ability to maintain uniform perpends	4.12	0.32	P	3.22	0.56	MR
11.	Ability to make a hollow or conical heap of the cement and sand constituents in order to receive the water for the mixing	1.49	1.24	NP	4.07	0.26	R
12.	Ability to measure and add to the mixture the desired quantity of water (30 litres) needed for one bag of cement (50kg) and 8 head-pans of sharp sand	1.49	1.24	NP	4.00	0.44	R
13.	Ability to measure cement and sand to the desired ratio of 1:4	1.40	1.08	NP	3.94	0.32	R
14.	Ability to mix cement and sand after	4.09	0.29	P	3.18	0.56	MR

	water has been added to obtain a uniform consistency of deep ash colour						
15.	Ability to mix cement and dry sand to look homogenous having a colour of deep ash	4.00	0.27	P	3.16	0.48	MR
16.	Ability to pick mortar from the bunker skillfully	3.13	0.46	MP	4.02	0.15	R
17.	Ability to place the first course on the mortar screed	3.14	0.47	MP	4.05	0.21	R
18.	Ability to place the second course on the mortar screed	3.16	0.48	MP	3.76	0.81	R
19.	Ability to pour/add the water gradually/skillfully to the dry mix	4.04	0.29	P	3.16	0.48	MR
20.	Ability to set out the position of wall on the floor using blocks, line and pins	3.08	0.44	P	4.01	0.19	R
21.	Ability to skillfully manipulate the shovel	3.18	0.56	MP	4.08	0.32	R
22.	Ability to spread mortar evenly on the floor of the marked position	3.19	0.59	MP	4.07	0.26	R
23.	Ability to spread mortar screed evenly on the first course to a thickness of 13mm	3.18	0.56	MP	4.91	0.29	HR
24.	Ability to terminate each course using appropriate joint	3.18	0.56	MP	4.88	0.32	HR
25.	Ability to turn the mortar from non-absorbent surface (bunker) to the head pan or gauge box for use	3.14	0.54	MP	4.69	1.04	HR
	Group Mean	**3.33**		**MP**	**3.71**		**R**

$\overline{x_p}$ = *Mean of Skill Possessed by the Respondents,* $\overline{x_R}$ *Mean of Skills Required by the Respondents,* δ_p = *Standard Deviation of Skill Possessed by the Respondents,* δ_R = *Standard Deviation of Skill Required by the Respondents, P = Possessed, MP = Moderately Possessed, NP = Not Possessed*

Table 1 presents a comprehensive overview of employability competencies possessed and required by graduate students specializing in bricklaying/block laying within the BBC trade. The respondents affirmed that these students exhibit a moderate to high level of competence in items 1 – 3, 5 – 10, 14, 15, 19, and 23 – 25, with mean responses ranging from 3.06 to 4.91 and standard deviations between 0.15 and 1.04. Notably, the graduate students demonstrated proficiency in bricklaying/block laying, as indicated by mean responses ranging from 3.50 to 4.09 with standard deviations between 0.26 and 0.44. Conversely, there were competencies deemed less possessed, with mean responses below 1.50 and standard deviations ranging from 1.02 to 1.24, encompassing items 4 and 11 – 13.

The findings underscore the nuanced balance between possessed and required competencies, providing valuable insights for refining educational programs and aligning them with the industry demands within the BBC trade in bricklaying/block laying.

Research Question 2: What are the employability competencies possessed and required by Graduate Students of BBC trade in concreting.

Table 2: Mean and Standard Deviation on the Employability Competencies Possessed and Required by Graduate Students in Concreting

S/No	ITEMS	N = 85 Competencies Possessed $\overline{x_p}$	δ_p	Remark	N = 85 Competencies Required $\overline{x_R}$	δ_R	Remark
1.	Ability to check that the completed formwork and the reinforcement has been properly assembled	3.18	0.56	MP	3.68	0.86	R
2.	Ability to check the quality of materials prior to mixing concrete: potable water, cement grade and manufacturing date, and quality and purity of sand and aggregate	4.01	0.24	P	2.98	0.44	MR
3.	Ability to mix mortar appropriately for pouring	4.07	0.26	P	3.11	0.31	MR
4.	Ability to batched mortar accurately using some consistent form of volume measurement	2.33	0.88	SP	4.01	0.11	R
5.	Ability to place and spread aggregate and sand on a clean platform or other hard surface	3.09	0.48	MP	4.80	0.55	HR
6.	Ability to add cement to the sand appropriately	3.08	0.41	MP	3.91	0.29	R
7.	Ability to thoroughly mix aggregate, sand and cement until it achieves a uniform grey texture with the aid of a shovel or concrete mixer	4.04	0.29	P	3.05	0.30	MR
8.	Ability to dig a hole in the centre of the heap and carefully add water	4.08	0.32	P	3.16	0.48	MR
9.	Ability to continue mixing until the concrete has the desired consistency	4.00	0.46	P	3.16	0.53	MR
10.	Ability to transport mixed concrete to the area where needed with a head pan or wheelbarrow	4.04	0.42	P	3.24	0.63	MR
11.	Ability to use a large sized float to finish and smoothen the surface after pouring the concrete	4.13	0.34	P	3.26	0.56	MR
12.	Ability to leave formwork in place after pouring of concrete	3.26	0.60	MP	3.93	0.26	R
13.	Ability to cover the concrete with	4.15	0.36	P	2.14	0.52	SR

	impermeable membrane after the formwork has been removed						
14.	Ability to continuously wet the surface of the concrete to prevent loss of moisture from it by spraying with water	4.09	0.33	P	2.19	0.61	SR
15.	Ability to cure the concrete continuously for days	4.01	0.39	P	2.24	0.68	SR
	Group Mean	**3.70**		**P**	**3.26**		**MR**

$\overline{x_p}$ = *Mean of Skill Possessed by the Respondents,* $\overline{x_R}$ = *Mean of Skills Required by the Respondents,* δ_p = *Standard Deviation of Skill Possessed by the Respondents,* δ_R = *Standard Deviation of Skill Required by the Respondents*

Table 2 presents a comprehensive overview of the employability competencies possessed and required by graduate students specializing in the Bricklaying/Block Laying and Concreting (BBC) trade, specifically in the realm of concreting. In terms of possessed competencies, respondents indicated a high level of proficiency in concreting for items 2, 3, 7 - 11, and 13 - 15, with mean responses ranging between 4.01 and 4.15 and standard deviations between 0.24 and 0.46. Additionally, there was a moderate level of competency for items 1, 5, 6, and 12, with mean responses ranging from 3.08 to 3.26 and standard deviations from 0.41 to 0.46. For item 4, graduate students slightly possessed the concreting competency, with a mean response of 2.33 and a standard deviation of 0.88. Regarding required competencies, respondents expressed a high need for concreting skills in item 5, with a mean response of 4.80 and a standard deviation of 0.55. Moderate requirements were indicated for items 1, 4, 6, and 12, with mean responses ranging from 3.68 to 4.01 and standard deviations from 0.26 to 0.86. Competencies listed in items 2, 3, and 7 - 11 were considered to be moderately required, with mean responses ranging from 2.89 to 3.24 and corresponding standard deviations between 0.30 and 0.63. Slight requirements were noted for competencies listed in items 12, 13, and 14, with mean responses of 2.14 and 2.24 and standard deviations of 0.52 and 0.68, respectively.

Research Question Three: What are the employability competencies possessed and required by Graduate Students of BBC trade in wall finishing?

Table 3: Mean and Standard Deviation on the Employability Competencies Possessed and Required by Graduate Students in Wall Finishing

S/No	ITEMS	N = 85 Competencies Possessed $\overline{x_p}$	δ_p	Remark	N = 85 Competencies Required $\overline{x_R}$	δ_R	Remark
1.	Ability to measure and set out the position of the wall on the floor using blocks, lines and pins	3.25	0.55	MP	4.88	0.39	HR
2.	Ability to spread mortar screed evenly on the floor to carry the wall	3.28	0.70	MP	4.91	0.29	HR
3.	Ability to lay the inner leaf of the wall accurate as: stretcher, half-bat, stretcher, stretcher, half-bat, stretcher, stretcher, and steer, for the second course	3.25	0.65	MP	4.67	0.81	HR
4.	Ability to lay the outer leaf accurately using stretcher bond as was demonstrated on the inner leaf	3.25	0.65	MP	4.80	0.59	HR
5.	Ability to fix the wall ties at 900mm horizontally between ties	3.19	0.61	MP	4.81	0.57	HR
6.	Ability to fix the wall ties at 450mm vertically between ties	3.25	0.65	MP	4.88	0.32	HR
7.	Ability to use the cavity lath to keep the cavity clear of mortar droppings	3.18	0.52	MP	4.92	0.28	HR
8.	Ability to use the builder's square to check for the squareness of the two leaves of the cavity wall angles	3.22	0.59	MP	4.92	0.28	HR
9.	Ability to use the spirit level and the wooden float to check for the vertical and horizontal level of the cavity wall	3.22	0.59	MP	4.93	0.26	HR
10.	Ability to use trowel and chucking board to fill in mortar into the bed joints of the wall	4.02	0.31	P	3.14	0.35	MR
11.	Ability to prepare the wall surface by splashing water on it	4.89	0.44	HP	2.21	0.67	SR
12.	Ability to place plaster screed of mix 1:4 at convenient distances on the wall with trowel to guide for straightening the surface	3.18	0.56	MP	4.88	0.32	HR
13.	Ability to smoothen the surface of the wall with the wooden float to form a sandy-gritty finish	2.18	0.64	SP	3.93	0.34	R
14.	Ability to fix wooden lath or batten at the edge of the wall in order to get the thickness of the plaster	3.14	0.47	MP	4.86	0.49	HR
15.	Ability to smoothen the edge of the corners of the wall with corner	3.18	0.52	MP	4.81	0.59	HR

	rubber after removing the wooden lath						
16.	Ability to cure the rendered wall by splashing water on it after two days of rendering	4.93	0.30	HP	3.00	0.22	MR
	Group Mean	**3.41**		**MP**	**4.41**		**R**

$\overline{x_p}$ = *Mean of Skill Possessed by the Respondents,* $\overline{x_R}$ = *Mean of Skills Required by the Respondents,* δ_p = *Standard Deviation of Skill Possessed by the Respondents,* δ_R = *Standard Deviation of Skill Required by the Respondents*

Table 3 summarizes the employability competencies possessed and required by Graduate Students in the Bricklaying/Block Laying and Concreting (BBC) trade, specifically focusing on wall finishing. The findings reveal that Graduate Students exhibit a high level of proficiency in wall finishing, particularly in items 11 and 16. Moderate competency levels were reported for various aspects, while slight possession was noted in item 13. In terms of competencies required, there is a consistent high demand for wall finishing skills across various items. Moderate and slight requirements were also observed for specific competencies, shedding light on the nuanced landscape of skills possessed and sought after by Graduate Students in the BBC trade within the realm of wall finishing.

Hypothesis 1: There is no significant difference in the mean responses of administrators, teachers and building supervisors on the employability competencies possessed and required by Graduate Students of BBC trade in bricklaying/block laying.

Table 4: Analysis of Variance on the Employability Competencies Possessed and Required by Graduate Students of BBC Trade in Bricklaying/Block Laying

	Sum of Squares	Mean Square	df	F	p	Remark
Between Groups	0.034	0.017	2	0.116	0.891	Accepted
Within Groups	12.103	0.148	82			

Table 4 shows that the F-value of the significant difference between the mean responses of administrators, teachers and building supervisors on the employability competencies possessed and required by Graduate Students of BBC trade in bricklaying/block laying. Table 7, indicated that the F-value for the groups = 0.116 and p = 0.891 at 82 degree of freedom. This implies that since the F-value (0.116) is greater than the α-value (0.05), the null hypothesis is accepted.

Hypothesis Two: There is no significant difference in the mean responses of administrators, teachers and building supervisors on the employability competencies possessed and required by Graduate Students of BBC trade in concreting.

Table 5: Analysis of Variance on the Employability Competencies Possessed and Required by Graduate Students of BBC Trade in Concreting

	Sum of Squares	Mean Square	df	F	p	Remark
Between Groups	0.084	0.042	2	0.583	0.560	Accepted
Within Groups	5.929	0.072	82			

Table 5 shows that the F-value of the significant difference between the mean responses of administrators, teachers and building supervisors on the employability competencies possessed and required by Graduate Students of BBC trade in concreting. Table 8, indicated that the F-value for the groups = 0.583 and p = 0.560 at 82 degree of freedom. This implies that since the F-value (0.583) is greater than the α-value (0.05), the null hypothesis is accepted.

Hypothesis 3: There is no significant difference in the mean responses of administrators, teachers and building supervisors on the employability competencies possessed and required by Graduate Students of BBC trade in wall finishing.

Table 6: Analysis of Variance on the Employability Competencies Possessed and Required by Graduate Students of BBC Trade in Wall Finishing

	Sum of Squares	Mean Square	df	F	p	Remark
Between Groups	0.057	0.028	2	0.187	0.829	Accepted
Within Groups	12.399	0.151	82			

Table 6 shows that the F-value of the significant difference between the mean responses of administrators, teachers and building supervisors on the employability competencies possessed and required by Graduate Students of BBC trade in wall finishing. Table 9, indicated that the F-value for the groups = 0.187and p = 0.829 at 82 degree of freedom. This implies that since the F-value (0.187) is greater than the α-value (0.05), the null hypothesis is accepted.

DISCUSSION

The findings of the study revealed that 24 employability competencies in bricklaying/block laying possessed and required by Graduate Students of BBC trade among which are ability to check for alignment of the blocks with a straight edge; Ability to check for the horizontal alignment of the blocks in the second course with a straight edge; Ability to check for the vertical and horizontal levels of the first and second courses with the spirit level; Ability to chuck mortar into the bed joints of the first course by using pointed end of the trowel to point the mortar down and positioning the chucking board along the lengths of two jointed blocks; Ability to cut blocks to various sizes where required; Ability to fix the different sizes of blocks correctly to avoid straight joint; Ability to lay other courses as demonstrated on the first and second courses until it gets to the required course; Ability to maintain perpendicular stop ends; Ability to maintain uniform perpends; Ability to make a hollow or conical heap of the cement and sand constituents in order to receive the water for the mixing; Ability to measure and add to the mixture the desired quantity of water (30 litres) needed for one bag of cement (50kg) and 8 head-pans of sharp sand; Ability to measure cement and sand to the desired ratio of 1:4; Ability to mix cement and sand after water has been added to obtain a uniform consistency of deep ash color. The findings is in agreement with Hassan, et al. (2017) and Odu (2012) who submitted that laying of either bricks or block have some major competencies as the activities will involve one to manipulate the process use personal and acquired skills. Itohan and Uwameiye (2018) and Usman (2018) further stated that for an effective job performance, the students or graduates must show some level of personal skills in bricks or block laying so as to enable the individual to accurately determine the constituent of every mixture with the right aggregate and measure.

The findings of the study revealed that 15 employability competencies in concreting were possessed and required by Graduate Students of BBC trade which include: Ability to check the completed formwork and the reinforcement has been properly assembled; Ability to check the quality of materials prior to mixing concrete: potable water, cement grade and manufacturing date, and quality and purity of sand and aggregate; Ability to mix mortar appropriately for pouring; Ability to batched mortar accurately using some consistent form of volume measurement; Ability to place and spread aggregate and sand on a clean platform or other hard surface; Ability to add cement to the sand appropriately; Ability to thoroughly mix aggregate, sand and cement until it achieves a uniform grey texture with the aid of a

shovel or concrete mixer; Ability to dig a hole in the centre of the heap and carefully add water; Ability to continue mixing until the concrete has the desired consistency. The findings is in tandem with Itohan and Uwameiye (2018) and Hassan, et al. (2017) in their report have it that concreting is an important aspect of building construction and as such should endeavor to meet the clients' expectation and the global standard. The aesthetic appearances of the floor speak volume of the construction craftsman for this reason Odu (2012) admonished that the students should possess some level of competencies and skill in flooring in school before going out to the public or labour market.

The findings of the study revealed that 16 employability competencies in wall finishing were possessed and required by Graduate Students of BBC trade which include: Ability to measure and set out the position of the wall on the floor using blocks, lines and pins; Ability to spread mortar screed evenly on the floor to carry the wall; Ability to lay the inner leaf of the wall accurate as: stretcher, half-bat, stretcher, stretcher, half-bat, stretcher, stretcher, and steer, for the second course; Ability to lay the outer leaf accurately using stretcher bond as was demonstrated on the inner leaf; Ability to fix the wall ties at 900mm horizontally between ties; Ability to fix the wall ties at 450mm vertically between ties; Ability to use the cavity lath to keep the cavity clear of mortar droppings; Ability to use the builder's square to check for the squareness of the two leaves of the cavity wall angles; Ability to use the spirit level and the wooden float to check for the vertical and horizontal level of the cavity wall; Ability to use trowel and chucking board to fill in mortar into the bed joints of the wall; Ability to prepare the wall surface by splashing water on it. The findings concurs with Usman (2018) and Mele, et al. (2020) who reported that every building has a wall and the first point of observation by passerby and building experts as well as engineers. The authors suggested that as the wall attracts people to itself, it should be done in the best form as possible. A very nice and competent builder should endeavor to make a smooth and rough walls as the case may demand to suit the clients' desire. To further buttress the findings, Ezeabikwa (2013) noted that a nice and good looking wall bring praises to the craftsman and thereby opening new door for opportunities.

CONCLUSION

In conclusion, the study conducted a thorough exploration of employability competencies among graduates in the construction trades, with a specific focus on bricklaying/block laying and concreting in diverse specializations within Gombe State, Nigeria. The findings provide valuable insights into the nuanced skill sets possessed and required by these graduates. Notably, the comparative analysis revealed distinctions in competencies across various specializations, emphasizing the need for targeted educational programs and workforce development strategies. The study emphasizes the significance of aligning educational curricula with industry demands to foster a skilled and adaptable workforce in the construction sector. The identified competencies serve as a foundation for enhancing the quality and efficiency of construction projects and contribute to the broader goal of sustainable economic development.

Recommendations

Based on the findings of this study, the following are the recommendations:

1. Students of BBC trade should be exposed to activities that involve bricklaying and block laying works so that the students can improve their competencies when performing blocklaying work.
2. Administrators of Technical Colleges should ensure that materials for concrete practice are provided to ensure adequate skill acquisition during practical lessons
3. Since wall finishing is essential in building, students of BBC trade should be made to undergo compulsory students industrial work experience in order to rejuvenate the students skills and competencies of the students

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