Impact of Workshop Experiences on Building Finishing Skills of Building Technology Education Students in Public University in Anambra State

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ABSTRACT

The study assessed the impact of workshop experiences on building finishing skills of building technology education students in public university, Awka, Anambra State. Two research questions guided the study while two hypotheses were tested at 0.05 alpha level. The population consisted of 54 building technology education students. Census sampling technique was used. Instrument for data collection was a structured questionnaire. Out of the 54 questionnaires distributed, 45 copies were retrieved which represented 83.3 percent retrieval. The data were analyzed using simple linear regression. The results showed no significant impact of workshop experiences on tiling and painting skills, with p-values exceeding the 0.05 significance level. This indicated that workshop experiences, as currently offered to the students, do not contribute meaningfully to the skills development of students of building technology education. Based on these findings, it was recommended that workshops should be restructured to emphasize practical, hands-on training, with modern tools and equipment provided.

Keywords: Building finishing skills, building technology education, impact, workshop experience

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INTRODUCTION

Students of technology education are exposed to the workshop from time to time as they go through their training. This is due to the practical orientation required to equip the students with skills in their respective career choice. The exposure to the workshop settings and operations is referred to as workshop experience. Akomolafe and Adesua (2016) defined workshop experiences as practical engagements within a controlled educational environment where students interact with tools, materials, and equipment to develop hands-on skills. To Ezeokoli and Olatoye (2017), workshop experiences is the hands-on aspect of vocational education that involves the direct manipulation of tools and materials to achieve practical outcomes in learning. Adeoye (2018) described workshop experiences as structured activities designed to simulate real-world scenarios, providing students with the opportunity to apply

theoretical knowledge in practical settings. Alade (2019) defined workshop experiences as educational practices that emphasize practical application and experiential learning, providing students with the opportunity to build skills through active participation. Workshop Experiences refer to hands-on activities, learning environments, and laboratory/workshop exercises where students actively engage in applying theoretical knowledge to solving real-world problems.

A workshop is an essential facility equipped with tools, machines and raw materials (metals, woods, plastics, cables, paints, tiles, etc.) similar to those in the industrial settings for the study and practice of technical and vocational education (Ogunmola, 2023). Ezeokoli and Olatoye, 2017 revealed that many Nigerian universities often struggle with outdated equipment and insufficient technical support, limiting the effectiveness of workshop training. As a result, students may graduate without sufficient exposure to practical skills, hence, they lack requisite practical skills to compete in the market. Emoh (2016) defined Building Technology as a multidisciplinary field that combines engineering, architecture, and environmental science to create efficient, sustainable, and aesthetically pleasing buildings. Building Technology Education is a specialized programme in Technology Education that equips students with the technical knowledge as well as skills required to design, construct, and manage building projects and infrastructures. It integrates principles of construction, architecture, engineering, and management to prepare individuals for roles in the construction industry. Ajayi (2018) defines Building Technology Education students as individuals enrolled in a programme that teaches the scientific and technical aspects of building design and construction

Building finishes encompass the final stages of building construction where surfaces are treated and adorned to provide protection and enhance aesthetics. This includes tasks like tiling and painting, they give a protective coating to the surfaces which protects them from weather effects such as rain water, frost, heat etc., and provide decorative effects which add to the appearance of the surfaces of building as a whole. According to Ogunlade and Salawu (2018) Tiling and Finishing Skill is defined as the ability to install tiles and apply final touches to building surfaces to achieve aesthetic appeal and functionality. Tiling is a widely used surface finishing technique that can be applied to improve the appearance and usefulness of all types of buildings and facilities. It can range from beautiful tiled surfaces to highly functional tiled wall and floor finishes. Adesola (2022) defines it as a skill set involving the selection and application of materials like ceramic, marble, or porcelain tiles for durable and elegant building surfaces.

Painting and Decoration Skill according to Olawale and Akinyemi (2019) is the application of colors, textures, and patterns to surfaces to enhance their aesthetic and protective qualities. Also, Adeola and Bello (2018) emphasize painting and decoration as a skill requiring knowledge of color theory, surface preparation, and application techniques. Painting is the process of coating with paint as a final finish to all surfaces such as walls, ceilings, wood work, metal work, etc. in order to protect them from weathering effects, to prevent decay of wood and corrosion in metal, and over and above to obtain a clean, colorful and pleasing surface. Oyekan and Adejumo (2022) define painting and decoration as a skill set that integrates protective coatings with decorative finishes to enhance a building's functionality and aesthetics.

In an ideal educational setting, Building Technology Education students are expected to graduate with a well-rounded set of skills that fully prepare them for the complexities of the construction industry. Practical workshop experiences are designed to bridge the gap between theoretical learning and real-world application, providing students with opportunities to develop these competencies in a controlled environment.

However, these objectives are far from being achieved (Akomolafe & Adesua, 2016; Ezeokoli & Olatoye, 2017) as students often face challenges related to inadequate workshop facilities and outdated equipment. This study aims to identify the gaps between the intended outcomes of practical training and the real experiences of students, with the goal of proposing solutions to enhance workshop practices and ensure that students graduate with the skills required to excel in the construction industry.

From the foregoing, the following research hypotheses tested at .05 level of significance are posed

to guide the study;

1. Workshop experiences significantly impact tiling skills development of Building Technology Education students.
2. Workshop experiences significantly impact painting and decoration skills development of Building Technology Education students.

METHODS

This study adopted correlational survey research design. According to Nworgu (2015), correlation research survey design is used to ascertain if two or more variables within a population or sample relate with each other. Hence; correlational research design is appropriate for this study. The participants in the study were 45 students of building technology education from public universities in Anambra State. The students were made up of male students (n = 40) and female students (n =5). Questionnaire was the instrument used for data collection. It consists of two sections; sections A and B. Section A contains items designed to collect demographic data of the respondents such as gender. Section B contains three clusters; cluster A consists of 10 items that measure workshop experiences, cluster B consists of 10 items that measure tiling skills and cluster C consists of 10 items that measure painting and decoration skills. The instrument was structured in a five-point Likert rating scale of: Strongly Agree (SA) = 5, Agree (A) = 4, Undecided (UD) = 3, Disagree (DA) = 2 and Strongly Disagree (SD) = 1. It was validated by three experts, two experts from the department of Industrial Technology Education and one expert from the department of Education Foundation, Nnamdi Azikiwe University, Awka. The reliability of the instrument was established using Cronbach alpha's method with the reliability coefficients of 0.71 and 0.81 respectively.

Simple linear regression was used to test the hypotheses. Decision regarding the outcome of the hypotheses was guided thus; if the p-value is greater than the significant value of 0.05, the null hypotheses was accepted while the null hypotheses was rejected if the p-value is less than or equal to the 0.05 alpha level of significance

RESEARCH RESULTS

The outcomes of the data analysis are presented under the following themes based on the research questions.

Workshop experiences impact on tiling skills development

Table 1

Linear regression on the relationship between work experiences and tiling skills

N	R	r^2	df	p-value	Remark
45	0.092	0.0085	43	0.361	NI

NI = Negligible Impact

Table 1 shows that r = 0.092: This also indicated negligible impact, suggesting that there was a slight but negligible impact of workshop experiences on tiling skills. p = 0.361: Since the p-value is greater than the significance level of 0.05, the impact is not statistically significant.

Workshop experiences impact painting and decoration skills development

Table 2

Linear regression on the relationship between work experiences and painting and decoration skills

N	R	r^2	df	p-value	Remark
45	0.151	0.023	43	0.133	WI

WI = Weak Impact

Table 2 show that r = 0.151: This indicated a weak positive impact, suggesting a slight impact of workshop experiences on painting decoration skills development. p = 0.133: Since the p-value is greater than the significance level of 0.05, the impact is not statistically significant.

DISCUSSION

The result of the data analysis on Table 1 and Table 2 indicated a very weak positive impact, suggesting that there is a slight but negligible impact of workshop experiences on tiling skills among Building Technology Education students in public universities in Anambra State. This could mean that the building workshop is inadequately equipped with no workshop experience going on there. This is in consonant with Oyebade (2015) and Nwosu and Uzoechi, (2015) both emphasized that inadequate workshops result in insignificant relationships between experiences and skill acquisition and that learning environments, including workshops, contribute minimally to skill development when students lack access to modern tools, materials, and real-world exposure. This aligns with the current result, as it highlights that without adequate resources, workshop experiences may not enhance tiling skills. Moreover, Chijioke and Ogbuagu (2018) reported that poorly structured workshop practices contribute little to the development of practical skills. Limited resources and insufficient hands-on experience were cited as contributing factors. These studies aligned with the current result. Workshops that fail to provide real-world practice tend to produce insignificant relationships between exposure and skills. Poor workshop facilities, lack of modern tools, and insufficient hands-on training contribute to the minimal impact observed in skill development.

However, Adeyemi and Olumide (2016), Ogunyemi and Adewale (2018) both reported a strong positive relationship between workshop experiences and skill acquisition, arguing that practical exercises improve technical competence. Ogunyemi and Adewale work opposes the current result. The opposing study might reflect a better learning environment where workshops are adequately funded and practical activities are effectively supervised. Opposing studies often involve well-resourced workshop settings with hands-on learning approaches, making a strong case for significant relationships between workshops and skills acquisition.

The result of data analysis on Table 2 and Table 4 indicated that there is no significant impact of workshop experiences on painting and decoration skills development of Building Technology Education students. It also revealed a weak positive impact. Olayemi and Adekunle (2017) found that poor workshop infrastructure and lack of materials significantly limit skills acquisition. Olayemi and Adekunle work supports the current findings by showing that limited or ineffective workshop experiences result in weak and insignificant relationships with skills development. When workshops are theoretical or poorly equipped, they produce insignificant relationships between exposure and skill development. While a well-funded, well-equipped workshops where students have access to practical tools and receive proper training, enable them to develop skills significantly.

Conclusion

The findings from this study revealed that workshop experiences have a very weak positive and statistically insignificant impact on tiling, painting, and decoration skills development among Building Technology Education students in a public university in Anambra State. This suggests that while workshops are expected to enhance practical skills, the existing facilities and practices in the studied institutions do not sufficiently support meaningful skill acquisition. The weak relationship observed in this study reflects the inadequacy of workshop environments in the selected institutions, calling for urgent interventions to upgrade facilities, strengthen supervision, and align workshop experiences with industrial standards to promote genuine skills development.

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APPENDIX

Cluster A: Workshop Experiences

S/N	Items	SA	A	UD	DA	SD
1	I actively participated in all hands-on activities during the workshop sessions					
2	I gained valuable knowledge about construction techniques through my workshop experiences					
3	I received constructive feedback from instructors during the workshop sessions					
4	I felt confident applying what I learned in the workshop to real-life situations					
5	I was encouraged to ask questions and engage in discussions during workshops experiences					

6	I am familiar with workshop safety protocols, hazardous materials handling, and waste management practices.					
7	Team player with a collaborative mindset with colleagues					
8	I have experience in ability to prioritize and manage multiple tasks					
9	I have knowledge of workshop equipment and materials					
10	I participated in workshop meetings and trainings including field trips					

Cluster B: Tiling Skills

S/N	Items	SA	A	UD	DA	SD
1	I can prepare surfaces for tiling including cleaning, leveling and underlayment.					
2	I can select the right tiles for different applications (e.g., floor, wall)					
3	I am skilled in measuring and cutting tiles for installation					
4	I understand how to create designs and patterns with different tile shapes, sizes and colours					
5	Cutting tiles with tile cutters and wet saws					
6	I can apply adhesive and grout correctly to achieve a polished finish					
7	I can lay tiles in a pattern that ensure even spacing and alignment					
8	Paying attention to tile details such as edge finishing					
9	Troubleshooting issues during tiling projects					
10	Following safety practices and protocols					

Cluster C: Painting and Decoration Skills

S/N	Items	SA	A	UD	DA	SD
1	I can prepare surfaces properly before painting or decorating including cleaning, sanding and filling holes					
2	I am skilled in selecting appropriate paint types for different surfaces					
3	I can apply paint evenly using various techniques (e.g., brushing, rolling, spraying)					
4	I understand the principles of color theory and design in decoration					
5	I can evaluate my painting and decorating work to ensure high quality					
6	I observe safety practices when working on elevated structures, adhesives and other hazardous materials					
7	I can manage time effectively to complete projects as at when due.					
8	I can communicate well with clients and provide update on projects progress					
9	I can troubleshoot and repair common painting issues (e.g., painting defects).					
10	Creating a unique design concept in line with clients' vision					

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