

UPHOLSTERY HAND TOOLS HANDLING AND CORDING SKILLS NEED OF TECHNICAL COLLEGE STUDENTS FOR EMPLOYABILITY IN AKWA IBOM STATE

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ABSTRACT

Upholstery hand tools handling and cording skills need of technical college students for employability in Akwa Ibom State was investigated. Two specific objectives, two research questions, and two null hypotheses were formulated to guide the study. Survey design was used on a population of 86 respondents. The entire population was studied as it was of a manageable size. An 18-item questionnaire was used for data collection. The instrument was face validated and had a reliability index of 0.83 which ensured its internal consistency. Mean was used to answer the research questions while t-test was used to test all the null hypotheses at 0.05 significant level. The study revealed that upholstery hand tools handling and cording skills were significant and required for employability. Hence, students need re-training on these skills. It was recommended among others that technical teachers should guide upholstery-making students to show competence in upholstery hand tools handling and cording skills by exposing them to practical classes and real work experiences while in the college. The study concluded that upholstery hand tools handling and cording skills are required for employability, hence they must be acquired while in training.

KEYWORDS: Technical College, Upholstery making, Upholstery hand tools handling, Cording, Employability, and Vocational Education.

Introduction

The dynamic nature of our society and teaching profession has a profound impact on educational policies, contents structures and methods of delivery in the educational system. Curriculum changes demand for changes in approaches and methods of teaching as well as the techniques for enhancing students' skills and academic performance especially in technical colleges where cognitive, affective and psychomotor skills are emphasized (Utuk, 2017).

Technical colleges in Nigeria are the institutions of learning that provide technical and vocational education at secondary school level (Utuk and Usoro, 2019). According to the National Board for Technical Education (NBTE, 2014), students of technical colleges are taught to acquire knowledge, skills and attitude in occupational trade areas such as carpentry and joinery, furniture and upholstery making, block laying and concreting, plumbing and pipe-fitting, electrical/electronics, automobile engineering craft, welding and fabrication engineering craft and mechanical engineering craft. According to Ben (2010), vocational education is that aspect of education that aims at the development of human abilities in terms of knowledge, skills and understanding so that the individual may happily and efficiently carry on activities in the vocation.

The Federal Government of Nigeria (FGN) in the National Policy on Education (FRN, 2013) designed technical education such that students are trained in those aspects involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitude, understanding and knowledge relating to occupation in various sectors of economic and social life. According to the National Board for Technical Education (NBTE, 2003), furniture and upholstery-making trade course is designed to produce graduates with essential knowledge and skills that will enable them perform proficiently in all aspects of furniture making. Furniture is the intentional creation of movable and immovable objects to support human activities such as eating (e.g. dining tables and chairs), sitting (e.g. chairs, stools and sofas), sleeping (e.g. bed and sofas), storage (e.g. chest of drawers, wardrobes and cabinets) and comfort (Usoro and Utuk, 2018). Upholstery-making basically involves the skills in upholstery design, handling of hand tools to convert wood in the construction of carcass, forming of platforms for sitting and backing; webbing with strong felts; cording the edges of the carcass for aesthetics; padding with the foam material for comfort and covering with fabric for beauty and style (Utuk, 2017).

Walton (2007) stated that upholstery hand tools include: hammers, screwdrivers, saws, chisels, mallet, G-clamp, fabric scissors, pliers, box knife, butter knife, hot glue gun, pneumatic or staple gun, sewing machine, needles and pins, web stretcher etc. Upholstery hand tools handling is defined as the skills or techniques that involve using upholstery hand tools to manipulate wood in the production of furniture. Usoro and Utuk (2017) asserted that proper handling of hand tools is essential for effective manipulation of wood to obtain wooden articles. Measuring and marking out operations are vital prior to using hand tools. Students must be taught the technique of handling each of these hand tools to forestall accident occurrence in the workshop. According to Corbett (2010), the success of the upholstery construction process involves the observation of wood shop safety first, the proper handling of hand tools and the proper use of mechanical fasteners such as nails, screws, spikes and pins.

Cording is one of the finishing processes in upholstery making. Cording is the art of fixing a padded fabric cord at the edges of the carcass to conceal the head of nails for aesthetics (Utuk, 2017). It entails cutting the fabric and foam materials respectively into the desired length, wrapping the fabric over the foam neatly, sewing the wrapped fabric into a cord, fixing the padded cord to the edges of the carcass to conceal the nail heads, so as to beautify the upholstery. James (2015) asserted that there is need to fix a padded fabric cord at the edges of the carcass to conceal the head of nails for beauty. Utuk (2017) affirmed that cording is a vital finishing process which enhances the aesthetics of the upholstery. Students should be trained in the art of upholstery hand tool handling and cording to make them employable after graduation from the college.

Employability is the state at which one is qualified enough to take up gainful employment. Students of upholstery making in the technical colleges, need to acquire skills in order to be employable in the industry or be self-employed upon graduation from the college. According to NABTEB (2007), employability prospects of upholstery-making graduates depend largely on the acquired work skills, whether in self or paid employment.

Statement of the Problem

Upholstery making is taught as a trade subject in technical colleges in Akwa Ibom State. The aim is to inculcate adequate knowledge, skills, and attitudes in the students prior to their graduation from college. The technical colleges sometime may not impart the skills of upholstery hand tool handling and cording to students due to improper mentoring. It is not out of place to note that most of the technical colleges in the state lack functional workshops, machines, hand tools and training materials and as such, much of the training is carried out in theory instead of hands-on activities which are required for skills training and acquisition.

Many technical college graduates of upholstery-making are seen roaming the streets for “white collar jobs”. Others are engaged in menial jobs, tricycle riding and petty trading. Yet still, others are involved in crimes such as armed robbery, kidnapping, drug peddling, militancy and cultism, to mention but a few. To address these societal problems, the study seeks to determine the upholstery hand tools handling and cording skills need of technical college students for employability in Akwa Ibom State.

Purpose of the Study

The main purpose of the study was to determine the upholstery hand tools handling and cording skills need of technical college students for employability in Akwa Ibom State. Specifically, the study sought to determine:

1. The upholstery hand tools handling skills need of technical college students for employability.
2. The cording skills need of technical college students for employability.

Research Questions

The study sought to provide answers to the following research questions:

1. What are the upholstery hand tools handling skills need of technical college students for employability?
2. What are the cording skills needs of technical college students for employability?

Null Hypotheses

The following null hypotheses were formulated and tested at 0.05 significant level:

- H₀₁: There is no significant difference between the mean responses of teachers and students in upholstery hand tools handling skills need of technical college students for employability.
- H₀₂: There is no significant difference between the mean responses of teachers and students in cording skills need of technical college students for employability.

Methodology

Survey design was used for the study. The design enabled the researchers to obtain information from the technical teachers and students of upholstery making through the use of questionnaires. The population for the study was 68 Senior Technical II (ST II) students in technical colleges in Akwa Ibom State offering furniture/upholstery making and 18 technical teachers who teach the subject. The entire population was studied as it was of a manageable size.

One structured questionnaire with two segments – Performance and Need – was used for data collection. The Need segment had five response options – Very Highly Needed (5 points), Highly Needed (4 points), Moderately Needed (3 points), Lowly Needed (2 points), and Very Lowly Needed (1 point), for the technical teachers. The Performance segment had five response options – Very High Performance (5 points), High Performance (4 points), Moderate Performance (3 points), Low Performance (2 points) and very Low Performance (1 point).

The instrument was face validated by five validates. Split-half technique was used to trial-test the instrument using 20 technical teachers who were not part of the study. Cronbach alpha analysis of the data yielded a reliability coefficient of 0.83 which implied that the instrument had a high internal consistency. The questionnaire was administered with the help of two research assistants. The mean was used to answer the research questions. The weighted means needed for each employability skill in upholstery hand tool handling and cording was represented by X_N while the weighted means performance of respondents for each item was represented by X_p . The difference between the two means ($X_N - X_p$) was determined to indicate Performance Gap (PG) which yields a difference of zero, negative or positive values.

The null hypotheses were tested at 0.05 significant level. The observed t-cal was compared with the significant value of 0.05 alpha level and relevant degree of freedom. When the significant value is less than the alpha level of 0.05, null hypothesis would be rejected and otherwise accepted with relevant degree of freedom.

Results

The result of the study obtained from the research questions are presented in Tables 1 and 2.

Research Question 1

What are the upholstery hand tools handling skills need of technical college students for employability?

Table 1: Performance Gap Analysis on Upholstery Tools Handling Skills Need

	Upholstery-making skills need in handling of hand tools	\bar{X}_N	\bar{X}_P	Gap ($\bar{X}_N - \bar{X}_P$)	Remarks
1.	Marking with metre rule, to allow for sawing and shooting edges	3.72	2.44	1.28	N
2.	In using try square, face edge is planed and tested for straightness and squareness	3.67	2.10	1.57	N
3.	Gripping the saw with fore-arm	4.11	4.44	-0.33	NN
4.	Sawing in line with pencil marking	3.94	4.37	-0.43	NN
5.	Planning edges and surfaces of wooden members	4.33	3.21	1.12	N
6.	Chiseling off wastes to create mortice	3.33	2.24	1.09	N
7.	In straight nailing, holding cross pen hammer firmly by the handle and the nail between the left fore-finger and the second and third fingers at right angle to the job, keeping eyes on the head of nail while driving.	4.28	2.63	1.65	N
8.	In skewed nailing, holding nail at less than 90° to the job while driving.	4.22	2.41	1.81	N
9.	In cramping, the glued tenon and mortice of the front brace and posts are held firmly together between the fixed and adjustable levers before nailing	3.83	4.09	-0.26	NN
10.	In cutting fabric, holding scissors with fore-finger against the third and fourth fingers, moving the fore-finger up and down in line	3.50	1.91	1.59	N

	with marking.				
11.	In cutting foam, hold knife firmly with hand, using the second finger to guide the blade while cutting in line with markings.	4.00	4.22	-0.22	NN
12.	In stitching with machine, the bobbin runs thread underneath fabric while the needle runs the thread from the top.	3.22	1.59	1.63	N
13.	In stitching with hand, the curved needle allows thread into the padded curved sections	4.11	1.59	2.52	N

Note: Needed (N). Not needed (NN)

The result in Table 1 shows that 9 out of 13 identified upholstery hand tools handling skills need had their positive skills gap ranging from 1.09 to 2.52. 4 items had negative skills gap ranging from -0.22 to -0.43. This reveals that technical college students in Akwa Ibom State require re-training on upholstery hand tools handling skills need for employability.

Research Question 2

What are the cording skills needs of technical college students for employability?

Table 2: Performance Gap Analysis on Cording Skills Need

S/N	Cording skills need	\bar{X}_N	\bar{X}_P	Gap ($\bar{X}_N - \bar{X}_P$)	Remarks
1.	Marking a strip of 25mm on the 25mm foam and 75mm wide on the fabric	3.78	1.56	2.22	N
2.	Cutting the pieces of foam and fabric separately	4.44	4.65	-0.21	NN
3.	Wrapping the fabric over the foam	4.11	1.38	2.73	N
4.	Sowing the wrapped fabric into a long cord	3.94	1.38	2.56	N
5.	Nailing the long cord all over the edges of the carcase	3.67	1.38	2.29	N

Note: Needed (N). Not needed (NN)

The result in Table 2 shows that out of 5 cording skills identified, only item No. 2 had negative value (adequate). The other items had positive values ranging from 2.22 to 2.73. This indicates that technical college students in Akwa Ibom State require re-training on upholstery cording. Technically, it would not be possible to isolate the negative item during training without

creating a gap because of the overlapping nature of the skills involved in upholstery cording. However, at training, less emphasis would be placed on the negative item.

Hypothesis 1

There is no significant difference between the mean responses of teachers and students in upholstery hand tools handling skills need of technical college students for employability.

Table 3: t-test Analysis of the Mean Responses of Teachers and Students on Upholstery Hand Tools Handling Skills Need

Variables	N	\bar{X}	SD	df	t-cal	Sig.p \geq .05	Decision
Teachers	18	46.48	4.60	84	7.91	0.04	Significant
Students	68	35.76	5.22				

The summary of data analysis presented the observed t-cal at 7.91. This value was compared with the significant value of 0.04 at 0.05 alpha level and 2,84 degree of freedom. Since the significant value of 0.04 is less than the alpha level of 0.05, null hypothesis which states that there is no significant difference between the mean responses of teachers and students in upholstery hand tools handling skills need by technical college students for employability in Akwa Ibom State is rejected. Hence, there is significant difference in the responses of teachers and students in handling of upholstery hand tools.

Hypothesis 2

There is no significant difference between the mean responses of teachers and students in cording skills need of technical college students for employability.

Table 4: t-test Analysis of the Mean Responses of Technical Teachers and Students on Cording Skills Need

Variables	N	\bar{X}	SD	df	t-cal	Sig.p \geq .05	Remarks
Teachers	18	17.01	3.05	84	16.88	0.04	significant
Students	68	9.24	1.18				

The summary of data analysis presented the observed t-cal at 16.88. This value was compared with the significant value of 0.04 at 0.05 alpha level and 2,84 degree of freedom. Since the significant value of 0.04 is less than the alpha level of 0.05, null hypothesis of no difference is rejected. Hence, there is significant difference between the mean responses of teachers and students in cording skills need by technical college students for employability in Akwa Ibom State.

Findings of the Study

The following findings were made based on the research questions and hypotheses:

1. Technical college students of upholstery making need re-training in the thirteen identified upholstery hand tools handling skills for employability in Akwa Ibom State.
2. Technical college students of upholstery making need re-training in the five identified cording skills for employability in Akwa Ibom State.
3. The difference between the mean responses of teachers and students in upholstery hand tools handling skills need for employability was statistically significant.
4. The difference between the mean responses of teachers and students in upholstery cording skills need for employability was statistically significant.

Discussion of Findings

The findings of the study as presented in Tables 1 and 3 showed that technical college students in Akwa Ibom State require re-training on upholstery hand tools handling skills for employability. The finding, therefore, is in line with the work of Usoro and Utuk (2017) who found out that proper handling of hand tools was essential for effective manipulation of wood to obtain wooden articles. Corbett (2010) in his work, found out that the success of the upholstery construction process involves the observation of wood shop safety first, the proper handling of hand tools and the proper use of mechanical fasteners, such as nails, screws, spikes and pins. Students must be taught the technique of handling each of the hand tools to forestall the occurrence of accident in the workshop. There is need for re-training of technical college students in upholstery hand tools handling skills to facilitate upholstery making for employability.

The findings of the study as presented in Tables 2 and 4 revealed that technical college students of upholstery making in Akwa Ibom State require re-training on upholstery cording for employability. The finding, therefore, is in congruence with the work of James (2015) who found out that there was need to fix a padded fabric cord at the edges of the carcass to conceal the head of nails for beauty. Utuk (2017) in his research work found out that cording was a vital finishing process which enhances the aesthetics of the upholstery. There is need for re-training of students in upholstery cording for employability after graduation from the college.

Educational Implication of the Findings

The findings of this study imply that technical college students of upholstery making need upholstery hand tools handling and cording skills for employability after graduation from the college. The absence of these skills can, to a large extent, prevent upholstery making students from being able to create jobs for themselves and for others. Consequently, the current challenge of unemployment facing upholstery-making graduates of technical colleges in Akwa Ibom State is sequel to inadequate mentoring of the students while in training.

Conclusion

Based on the findings of the study and the discussions of same, the following conclusion was drawn. For jobs to be created for oneself and others, upholstery hand tools handling and cording skills must be acquired while in training. The lack of these requisite skills will hinder the students from being able to create jobs for themselves and for others, upon graduation from the college. This could result in unemployment and the attendant societal vices.

Recommendations

On the bases of the findings and the conclusion of the study, the following recommendations are made:

1. Technical college teachers should guide upholstery making students to show competence in upholstery hand tools handling skills, by exposing them to practical classes as well as work experiences while in training.
2. Technical college teachers should guide upholstery making students to show competence in cording skills, by exposing them to practical classes as well as work experiences while in training.
3. Technical college teachers should encourage students by making improvised training materials to teach the art of upholstery cording.

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