

Impact of Students' Exposure to Resist Technique of Fabric Decoration on Students' Perception of Career in Clothing and Textiles in Borno State Secondary Schools

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Abstract

This research work was carried out to assess the impact of students' exposure to resist technique of fabric decoration on students' perception of career in clothing and textiles in Borno State Secondary Schools. The study had one objective, one research question and one null hypothesis which were formulated and tested at 0.05 level of significance. The research design adopted for the study was quasi experimental. The population for the study was all JSS3 students that offer home economics in one hundred and eighty (188) secondary schools in both public and private. A purposive sampling technique was used to select two secondary schools, one from public, government secondary school Uba Borno and one from private, Abdulkadir Benishiek staff school, Maiduguri. One intact class was used in each of the schools and a sample size of one hundred and eighty-eight (188) students was used for the study. The instrument used for data collection was a self-designed questionnaire. Mean and standard deviation were used to answer the stated research questions. Two sample t-test was used to test all the null hypotheses. From the result of the study, hypotheses two were rejected that there is no significant difference between perceptions of career in clothing and textiles by students exposed to resist technique of fabric decoration and students not exposed to resist of fabric decoration in Borno State Secondary Schools. Based on the findings of this study, it was recommended among others that there is a need for career awareness and counseling at the onset of the Senior Secondary school such that students get acquainted with the different career opportunities before making their choice of subjects in their final examinations.

Keyword: resist technique, fabric, decoration, perception, clothing and textiles

Introduction

Borno State is one of the thirty six (36) states of Nigeria, in the North Eastern part of the Country with its Capital in Maiduguri. The State like other States of Nigeria has public and private Secondary Schools. The Secondary Schools offer a variety of academic programmes, one of which is Home Economics, with Clothing and Textiles as an area of study. The Clothing and Textile Education Curriculum provides a study in resist techniques of fabric decoration to prepare students to be self-reliant and job creators rather than job

seekers. Since the inception of clothing and textiles into Senior Secondary Schools level, the subject has not been taught in many Borno State Secondary Schools. Lack of qualified Clothing teachers, inadequate instructional materials and infrastructure, gender stereotype seem to contribute to the decline in the subject and students enrolment. The effectiveness of Clothing and Textiles as a means for global survival will be compromised if the problems that plague the study of the subject in Borno State Secondary Schools are not unveiled and tackled.

Clothing and Textiles Education is an area of study that exposes students to diversify curriculum. Arubayi (2003) viewed Clothing and Textiles as that type of education that inculcates in the students attitudes, knowledge, skills and values that are required in the society. This is a means of producing healthy, literate and self-reliant citizens that will create wealth for human development when they become self-employed thereby resulting to sustainable nation's development at large. According to Mberengwe (2004), Clothing and Textiles Education is primarily education for vocation. It is a training system that encourages the students to acquire skills that fit them into the world of work. Clothing and Textiles Education encompasses attitudes, knowledge and skills needed for any level of employment and advancement in broad range of clothing career.

Resist technique is a traditional method of dyeing textiles with patterns. Methods are used to resist or prevent the dye from reaching all the cloth thereby creating a pattern and ground. Potter as cited in Alheri (2014) stated that the most common forms of resist decorated fabrics in Nigeria are tie-dye such as Adire-oniko and Alabare, Batik or wax resist and the cassava paste resist method (Adire-eleko). These resist decorated fabrics are produced mostly by the Yoruba of the Southern part of Nigeria, particularly in Ibadan and Abeokuta. They are also produced in some parts of Northern Nigeria, in States such as Kaduna, Kano and Sokoto.

In the context of school learning, the development, maintenance, and enhancement of positive student-academic content domain relationships is often referred to as interests. Interest improved the quality of learning and promotes intrinsic motivation. Thus, academic interests should not only be considered important facilitators of academic outcomes, but also as valued Educational outcomes in their own right. According to Arubayi (2003), the students' interest if known would help the teachers in the Clothing and Textiles to encourage, make them realize themselves or know themselves. It would help the students to discover the areas of which they could be steadfast so as to be themselves. Attention should be given to individual students in their various areas of interest so as to stimulate them. The researcher is of the view that it is not to say that Clothing and Textiles programme is being implemented. It will be more pleasing to see what the teachers and students are doing which will reveal how much of the students interest is involved.

Since learning leads to change in behaviour, and motivation plays an active part in activating behaviour, there is a relationship between learning and motivation. Motivation refers to "the reasons underlying behaviour" (Guay, Chanal, Ratelle, Marsh, Larose and Boivin 2010). Motivation is the attribute that moves us to do or not to do something. Intrinsic motivation is motivation that is animated by personal enjoyment, interest, or pleasure.

Statement of the Problem

Clothing along with food and shelter are some of the primary needs of mankind since the origin of man. Apart from the provision of economic self-reliance in the face of dwindling

employment opportunities in the country, the importance of Clothing and Textiles to the development of individuals and groups in our society is not in doubt.

There is a dearth of interest among students in secondary schools across Borno State on the study of clothing and textiles. This lack of interest has led to the subject not being taught in many Borno State Secondary Schools. Presently, the enrolment and learning of clothing and textiles is very low. Attitudes of teachers associated with teaching of Home Economics and gender stereotype appear to affect students' enrolment in Clothing and Textiles as a subject. Study of clothing and textiles in Borno State Secondary Schools has therefore been a matter of serious concern to parents and stakeholders generally. Since the clothing and textiles Education was introduced into senior Secondary Schools, students lacked interest in the subject. Some Secondary Schools in Borno State failed to attend Clothing and Textiles course on the timetable. Clothing and textiles is omitted on the timetable and other courses are taught instead. Also school authority, teachers and students do not appear to have positive attitude towards the subject. This is in line with the West Africa Examination Council (WAEC) 2015 chief examiners' report during May/June Home Economics coordination, who stated that only one school offers Clothing and Textiles in the whole Borno State Secondary Schools and that only twenty students registered for May/June Examination between 2010-2015. The reports further maintained that this has been the trend since the introduction of Clothing and Textiles into Senior Secondary Schools which is practically very low compared to Home Management and Foods and Nutrition over the years.

It was against this background that this study sought to assess the impact of resist technique of fabric decoration on students' perception in Clothing and Textiles in Borno State, Nigeria with the aim of enhancing better students enrolment into the course, especially when the students see items produced using resist techniques of fabric decoration that could be used for fashionable garments and home furnishings.

Objective of the Study

Examine the impact of students' exposure to resist technique of fabric decoration on students' perception of career in Clothing and Textiles in Borno State Secondary Schools.

Research Question 1: What is the impact of students' exposure to resist technique of fabric decoration on students' perception of career in clothing and textiles in Borno State Secondary Schools?

Research Hypothesis

Null hypothesis 1: There is no significant difference between perceptions of career in Clothing and Textiles by students exposed to resist technique of fabric decoration and students not exposed to resist technique of fabric decoration in Borno State Secondary Schools.

Methodology

A research design according to Musa (2012) is the plan or studies practice based strategy adopted to carry out research project. It is the blue print of the research which outlines the procedure of data collection and analysis relating to a given problem. This study adopted quasi experimental research design because Musa (2012) reported that experimental research attempts to answer the question 'if this thing is done under careful controlled

conditions, what will happen'? The researcher manipulated certain variables and observed the change in order to answer the question. The researcher is interested in assessing the impact of resist technique of fabric decoration on students' interest in studying clothing and textiles.

The researcher prepared a stencil and stamp for Batik work, and then twines for tie-dye work for the design techniques. The stencils and the stamp designs were applied on the surface of 100% cotton fabric (white) using wax resist and cold water dyeing process. Hot water dyeing was used for the tie and dye design techniques on the 100% cotton fabric (white). By doing this the variable was controlled in such a way that the change observed attributed to the variable manipulated therefore, it was useful to adopt quasi experimental research design so as to have practical information on the outcome of the study. Musa (2012) stated that quasi experimental design assists the investigation to be aware of the impact (product) of the treatment and the behavioural characteristics of subject as the change occurs (process). Also, quasi experimental research design is that type of design in which there is only one independent and one dependent variable that is to say teaching of the resist design techniques of fabric decoration in clothing and textiles depends on students' interest.

The population for this study comprised of all students offering Home Economics in one hundred and eighty (180) Secondary Schools, public (30) and private (150) in Borno State. The population for the study was derived from *Borno State Ministry of Education (2016)* A purposive sampling technique was used in selecting the sample from the population. Two Secondary Schools were selected and JSS 3 students were used for the study. These schools are Government Secondary School Uba Borno and A. K. Beneshiek Staff School Maiduguri. These two schools were chosen because one school was chosen from public schools, and the other from private schools. One intact class was selected from the two schools for the study. From the classes selected, the researcher wrote 47 E (experimental) and the rest C (control) on a piece of paper and students from the intact class were asked to pick. Those who picked E formed experimental group, those who picked C formed control group. A total number of 188 JSS3 students were used for the study from the two schools. 47 students that formed the experimental group from each school were used for the study as recommended by Musa (2012) that a sample size of thirty to fifty (30-50) is appropriate in an experimental research. A research instrument according to Musa (2012) is a tool that helps a researcher in collecting, recording or measuring data, which are required to provide answers to research questions and to test hypotheses. The research instrument used in collecting data for this study was questionnaire. Questions were prepared by the researcher for the collection of data. In order to ensure the validation of the instrument, the researcher employed the services two (2) staff of industrial design, two (2) experts from psychology department and a statistician validated the instruments. They examined and vetted the instrument in respect to its relevance to this study. Their corrections and criticisms improved the instrument form.

The designed instrument was subjected to a pilot test in order to establish its feasibility for the study. Among others, the pilot study was to enable the determination of ease with which the subject will respond to the items, determine the reliability of the instrument and the internal consistency of the items with the instrument. A total number of 40 JSS3 students of Home Economics of GSS Ubain Adamawa state were selected for the pilot study. This was because GSS Uba Adamawa has similar characteristics with the area of this study. Data collected with the instrument in the pilot study were then coded and submitted for reliability and internal consistency test. The Statistical Package for the Social Sciences

(SPSS) IBM Version 20 was used for the statistical analysis. For the determination of the reliability and item consistency index, the Cronbach Alpha option was selected because of the interval scaling used in the instrument. According to Natasha (2014), a reliability coefficient of between 0.5 and 1 is expected to be obtained for an instrument which would imply that it is reliable and internally consistent for a study. From the result of the test (see Appendix B), a reliability index of 0.870 was obtained with the Cronbach's Alpha procedure. The internal consistency coefficient obtained for the items within the instrument with the intra class average measure was established at 0.87. These observed coefficients are consistent with Chaturvedi (2015) who reported that an instrument could be said to be reliable and internally consistent for a study and studies of similar nature if the reliability index could be approximated to 1.

Procedure for the Tie-Dye and Batik Design Techniques

The researcher washed the fabric to be dyed and dried it. This was to remove all factory treatment and finishes that was given. The researcher showed the designed motifs prepared for the students and allow the students to think of any motif or work round to see any motif that interest them. The motif seen by the students or thought by them were drawn individually by the students. The researcher demonstrated how the motif will be cut out on a strawboard or cardboard paper. The students were allowed to transfer the motifs onto the fabric provided by the researcher. This was for resist technique (Batik).

The researcher used the fabric and string to demonstrate how to tie it to produce design either by pleating, marbling or stitching. For the stitching technique, the researcher drew a motif on the fabric to be dyed and show the students how to stitch and tie. The researcher asked the students to draw any motif of their choice on the fabric and stitch, then pull and tie.

Preparation of the dye for two yards of fabric

2 Table spoon-vat dye

¼ cup-caustic soda

250ml boiled water

½ cup-hydrosulphate

1 litre cold water

Mix the dye appropriately in a plastic bowl and put the fabric into the dye solution and turn continually until oxidation of the dye. The measurement can be increased to give greater quality as required. Remove the fabric from the dye and rinse. Untie and dry.

Procedures for Data Collection

The researcher obtained a letter of introduction from the Head of Department of Home Economics, Ahmadu Bello University Zaria for permission from the principals of GSS Uba Borno and A. K. Benishiek both in Borno State Nigeria. This was for effective access and smooth conduct of the practical work with the students. The experiment lasted for five weeks using two hours, forty minutes for selection and eighty minutes for experiment. The first week was for introduction of the researcher to the principal and the students to establish rapport (Plate1) with the students for the study. The second week was for selecting the experimental and control groups from the intact class and also administering the instrument to the groups to establish their level of interest in clothing and textile which lasted eighty minutes. The third and fourth weeks were used to expose the experimental group to the

treatment which lasted for two hours each (Plates 2-16). The fifth week was used to administer the instrument to the control and experimental groups. This exercise was done with the assistance of two instructed research assistants.

Experiment Procedures for Tie-dye

Pleating Technique

1. Pre-wash the fabric to remove factory treatment and dry.
2. Plan the design to be produced.
3. Stitch and tie the fabric using twine.
4. Prepare the dye.
5. Dip the fabric in the dye bath solution.
6. Remove the fabric from the dye and rinse in cold water and un-tie the fabric.
7. Allow to drip dry and press cloth with hot iron to help fix colours.

Procedure for Batiks

1. Wash the fabric to remove any sizing.
2. Spread the fabric on a table and design the fabric.
3. Heat the wax and dip the stamp into the wax and stamp on the fabric or paint the fabric.
4. Mix the chemical with hot water and allow it to cool or add cold water.
5. Carefully dip the waxed fabric into the dye bath and allow it to absorb the dye.
6. Remove the fabric and rinse it in cold water.
7. Boil water in a big pot and dip the waxed fabric to remove the wax.
8. Rinse the fabric, starch, dry and iron.

Procedures for Data Analysis

The data collected with the instrument was analyzed with the Statistical Package for the Social Sciences (SPSS) IBM Version 20. Statistical option included frequencies and percentages for the demographic variables. Summary statistics of frequencies and percentages along with mean scores for the analysis of the research questions. The hypotheses were tested with inferential statistics. All hypotheses were tested with two sample t-test because of the two independent groups involved and were tested at the probability level of 0.05. Decision rule: when the calculated value was greater than or equal to the alpha value ($p \geq 0.05$), the null hypothesis was retained and when the calculated value was less than the alpha value ($p \leq 0.05$), the null hypothesis was rejected.

Results

Research Question: What is the impact of students' exposure to resist technique of fabric decoration on students' perception of career in clothing and textiles in Borno State Secondary Schools?

To examine the impact of students' exposure to resist techniques of fabric decoration on perception of clothing and textiles, a number of questions were posed to the two groups after the experiment. Their scores were scaled on a four point and the mean scores for each group on the item were then computed and compared. The mean scores on the items used for assessing their perception of the tie-dye and batik design materials are shown in Table 2. The midpoint average score used for decision is 2.5 based on the four point scale used for the assessment.

Table 1: Mean Scores on Perception of Career in Clothing and Textiles by the two Groups.

S/N	Perception of tie-dye and batik design material	Control		Experimental		Mean Diff.
		Mean	SD	Mean	SD	
1	The colour of the material is very attractive	3.72	.490	3.80	.546	-0.08
2	Texture of the material is coarse	3.52	.624	3.22	.885	0.3
3	The intensity of the colour of the material produced is dull	3.28	.691	3.03	1.041	0.25
4	tie-dye and batik design material can be used for sewing fashionable wears	3.25	.600	3.48	.596	-0.23
5	tie-dye and batik design fabrics can be used for home furnishing	3.15	.606	3.52	.596	-0.37
6	Creativity can be developed through tie-dye and batik design technique	3.17	.668	3.45	.534	-0.28
7	Job opportunity and self-reliance can be enhanced in tie-dye and batik design technique	3.07	.710	3.45	.534	-0.38
8	tie-dye and batik design techniques can be as source of entrepreneurship for contemporary Nigerian society	3.12	.691	3.52	.504	-0.4
9	Students interest in clothing and textiles can be developed through tie-dye and batik design technique	3.15	.685	3.38	.555	-0.23
10	Materials required for clothing and textiles production could be improvised easily by students	2.98	.833	3.45	.649	-0.47

Table 1 revealed that perception of the resist designed material by the two groups in terms of colour did not differ much as both agreed that the colour of the material was very attractive. The students in the control group scored 3.72 with a standard deviation of 0.490 while those in the experimental group scored 3.80 with a standard deviation of 0.546. The mean difference was only 0.08 in favour of students in the experimental group. For the texture quality of the material, both groups were of the perception that it was coarse but that the intensity of materials' colour produced was dull. These were indicated with high mean scores for items 2 and 3 by the two groups in the Table. There was no much difference between the two groups on the various ways the designed materials could be used. The mean score for the students in the experimental group was 3.48 while that of the control group was 3.25 which shows that both groups were of the view that resist designed material can be used for sewing fashionable wears.

There was a relatively high variability in the means by both groups' agreement on the suggestion that resist designed fabrics can be used for home furnishing. Students in the experimental group had a mean score of 3.52 compared with those in control group with a mean score of 3.15. In terms of creativity students exposed to the resist design technique had a slightly higher mean score (3.45) than those who were in the control group (3.17). But the variability was not high with a mean difference of 0.28. The indication from the mean scores is that both groups were of the view that creativity can be developed through resist design

technique. This could explain their agreement with the suggestion that job opportunity and self-reliance can be enhanced in resist design technique as a subject in the secondary school.

Null Hypothesis I: There is no significant difference between perceptions of career in clothing and textiles by students exposed to resist technique of fabric decoration and students not exposed to resist of fabric decoration in Borno State Secondary Schools.

In the test of this hypothesis, the scores of the two groups in Table 2 where their perception of clothing and textiles was assessed are compared to determine the level of difference between students who were exposed to the resist techniques of fabric decoration (experimental) and those not exposed (control group). The two sample t-test was used to compare the means because of the two groups. The result of the test is summarized in Table 3

Table 2: Two Sample t-test on Perception of Resist Techniques of Fabric Decoration on Career in clothing and textiles by the two groups

Group	N	Mean	S. D.	S E	t-value	DF	P-value	Remark
Control	94	3.24	0.396	0.048	2.924	186	0.004	Significant
Experimental	94	3.43	0.355	0.043				

(critical value for $t = 1.96$)

From Table 2 the observed t-value of 2.924 obtained at 186 degree of freedom compared with the critical value of 1.96, the variability between the mean could be considered statistically significant. The observed probability level obtained for the test is 0.004 ($P < 0.05$). With these observations, there is sufficient evidence to reject the null hypothesis. The null hypothesis that there is no significant difference between perceptions of career in clothing and textiles by students exposed to resist technique of fabric decoration and students not exposed to resist technique of fabric decoration in Borno State Secondary Schools is therefore rejected. The mean scores indicated in the Table shows that the two groups have positive perception of clothing and textiles materials. But the group exposed to the resist technique of fabric decoration had their rating significantly higher than those in control group who were not exposed to the techniques, a development that could be associated to the exposure in the experiment.

Conclusion

Based on the findings from the experiment, it was conclusion that decline in enrollment by secondary school students in clothing and textile could be partly traced to lack of awareness of the potential career prospect.

Recommendations

Based on the findings of this study,

1. It was recommended that there is need for councellors should give career awareness and counseling to students at the onset of their Senior Secondary School education
2. Students should get acquainted with the different career opportunities before making their choice of subjects in their final examinations.

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