

Original Research

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ACHIEVERS JOURNAL OF SCIENTIFIC RESEARCH*Open Access Publications of Achievers University, Owo*Available Online at www.achieversjournalofscience.org**Acceptability of Quilt Bedspread Made from Textile Scrap for Wealth Creation****Abdulkadir, S.O.,¹ Adeniran, I.B.^{2*} and Titilope, F.I.¹**¹Department of Home-Economics and Food science, Faculty of Agriculture, University of Ilorin, Kwara State.²Department of Biological Sciences, College of Natural and Applied Sciences, Achievers University, Owo, Ondo State

Corresponding Author's E-mail: adeniran.ib@achievers.edu.ng

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Abstract

Fabric waste in the garment manufacturing industry is one of the major issues facing manufacturing companies. The study examined the acceptability of quilt bedspread made from fabric scrap for wealth creation. Five research objectives were raised and two hypotheses were formulated. Score card and Questionnaire were used for data collection. Data collected were analyzed using frequency, percentages, mean, standard deviation, as T-test and ANOVA. The result revealed that majority of respondent were female and between age 21 and 25 years. 81.3% are students. respondent agreed that textile scrap quilt bedspread is better compare to contemporary type at (mean=8.29). The result shows that the TSQ is highly acceptable compare to CTQ (contemporary), language of design has influence and there is no significant difference in the perception of consumers on benefit of wealth creation in producing TSQ. It was concluded more of textile scrap should be retrieved from the landfill and textile industries, provide jobs for people, be financially rewarding by turning them into products for human consumption. It was recommended that prospective jobseeker should be encourage to more use of fabric scrap and designing with a sense of waste-awareness in producing a marketable product.

KEYWORDS: Quilt, textile scrap, recycling, wealth creation, pollution.**1.0 Introduction****1.1 Background of the Study**

One of the main issues facing manufacturing companies in the apparel sector is fabric waste. There are numerous environmental problems caused by the fact that many of these scraps are discarded in landfills. In the process of making fabrics and apparel, the fashion industry wastes a significant portion of textiles. At the moment, post-consumer textile waste makes up 5% of solid trash, and the majority of this garbage, which is disposed of in landfills, has an environmental cost. According to Redress Design Award (n.d.), this waste can include cut-off pieces of fabric, leftover

fabric from rolls, yardage used for samples, damaged textiles, unsold apparel, and waste from secondhand clothing. Additionally, fabric waste might occur during the production phase, the trimming phase, or the printing and embroidery phase (Bamisaye and Adeitan, 2018). This study looked at ways to reduce textile waste and make the most of it by creating patterns and using leftover fabric to create beds. Schipani (2019) asserts that the apparel industry's negative environmental effects go beyond emissions. Their main difficulties are these.

This study aims to shed more light on the problem of textile waste in Ilorin South, Kwara State's

fashion sector. The majority of the fabric waste generated there is always disposed of in landfills, but some is saved in sacks for potential use in the future. But these wastes continue to build up and take up room. Again, environmental pollutions including soil and water contaminating may arise from the company's fabric wastes being dumped in landfills. As a result, there is optimism based on this research that this issue can be resolved through the recycling and reuse of textile waste from the fashion industry to make bedding and home textile décor. This research aims to determine the acceptability of quilt bedspread made from textile scrap for wealth creation. Also determine the challenges facing its production, influence of language of design and the perception of consumer on the acceptability for the benefit of wealth creation.

Many clothing manufacturing companies face the challenge of waste management because of various associated issues. One of the challenges is how to develop a new product for manufacturing using textile waste. This study looks to find effective ways of using the fabric waste generated from garment production, textile industries. The amount of fabric waste is not consistent; it is dependent on each product. With that in mind, scraps from multiple construction processes were gathered in order to have enough scraps for innovative designs. Discarding the waste does not affect their business's standard cost (Jahan, 2017) because everyone assumes it is part of the standard cost of production. However, this textile waste is then subjected to process to develop new textile products called **QUILT** that could generate income and its easy acceptability for skill work.

1.2 Research Problem

Scrap cannot be avoided during fabric production in fiber industries, this is major problem face by textile companies in meeting up with demand yet those scrap is dispose in landfill as it turn to textile waste. This left over suffocate over time and causes environmental pollution which is detrimental to people's health.

1.3 Research Objectives

The major findings of the research were its extraordinary properties and diverse range of uses in decorating space which added to the value of research and grabbed the attention of prospective change maker/recycler to engage more in that aspect. Some of the findings are specifically to:

1. Production, exhibition and acceptability of quilt bedspread made from textile scrap for wealth creation.
2. Determine the challenges facing production of quilt bedspread made with textile scrap for wealth creation.
3. Assess the influence of language of design on quilt bedspread made from textile scrap for wealth creation.
4. Examine the perception of consumer on acceptability of quilt bedspread made from textile scrap for benefit of wealth creation.

1.4 Research Question

During the study, the following questions were developed to guide the research

1. What is the acceptability of produced textile scrap quilt bedspread?
2. What are the challenges faced in using textile scrap for production of quilt bedspread for wealth creation?
3. Does language of design have influence on quilt bedspread made from textile scrap for wealth creation?
4. What is the perception of consumer on acceptability of quilt bedspread made from textile scrap for benefit of wealth creation?

2.0 Materials and Methods

2.1 Design of the Study

The study adopted descriptive survey design. This study is practice-based research organize in two phases; phase one is a practical aspect of finding a solution to how fabric waste from clothing/textile companies can be recycled into quilt bedspread using patchwork techniques and phase two entailed qualitative research methods to determine its acceptability and also gives answer to some of the research questions stated above.

2.2 Study Area

The study was carried out in the department of Home economics and food science, faculty of agriculture, university of Ilorin, kwara state.

Variables	Frequency	Percentage (%)
Gender	Frequency	Percentage (%)
Male	20	25.0
Female	60	75.0
Total	80	100.0
Age (years)		
Below 20	19	23.8
21-25	43	53.8
26-30	8	10.0
31-35	2	2.5
Above 36	8	10.0
Occupation		
Student	65	81.3
Lecturer	9	11.3
Workers	6	7.5
Total	80	100

2.3 Population of the Study

The population of the study comprises of the total 200 participant which is of among final year student, master student, and lecturers in home economics department and some workers around Ilorin South and in University of Ilorin, Kwara state.

2.4 Sample of the Study

A purposive sampling technique was used for this study. Researcher purposely choose 0.4% of population in total of 80 respondent which entail 64 respondent in home economics department and 16 respondent outside and at bank area in university of Ilorin. This formed the sampling frame for the selection of respondents, which resulted to sample size.

2.5 Instrument of Data Collection

Data was collected from respondent using sensory evaluation score card and questionnaire. The score card focus on the general issues pertaining to the subject of the study based on the research questions. It was distributed to the participants to fill in their opinions and knowledge on the research findings; most importantly accessing the quality of product design if it's acceptable for it usage and see if it can

be adopted subsequently for wealth creation. The questionnaire consisted of sections A inform of score card to access level of acceptability of produced textile scrap bedspread, B and C that sought information on influence of language of design, benefit of wealth creation respectively. Five-point rating scale of: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD), undecided (UD) was used for sections B and C with values of 1,2,3,4,5 respectively. The instrument was face validated by three experts in the department of home economics in university of Ilorin. The questionnaire was later administered to 20 respondents at the area of the study. Data obtained were used to establish the internal consistency of the instrument using Cronbach Alpha procedure. Coefficient of internal consistency obtained was 0.82.

2.6 Data Collection

The first phase was the production of textile scrap quilt bedspread. Then a total of 80 copies of questionnaires were administered by hand to the respondents and all were retrieved. This represents 100% return.

2.7 Data Analysis

The data collected were analyzed with descriptive statistics namely frequency count, mean and standard deviation. The null hypothesis was tested with ANOVA and T-test at 0.05 level of significance at which hypotheses were rejected.

3.0 Results and Discussions

3.1 Results

The findings showed that 20(25%) male panelist and 60(75%) female participated in the study. 23.8% of respondent were below age 20, 53.8% of respondent were of age range 21-25, 10% were of age range 26-30, 2.5% were of age range 31-35 and 10% were above 36 years of age. For this study, 81.3% of respondent were student while 11.3% and 7.5% were lecturer and workers respectively.

Table 3.1: Distribution of Respondents based on their demographic status

Variables	Frequency	Percentage (%)
Gender	Frequency	Percentage (%)
Male	20	25.0
Female	60	75.0
Total	80	100.0
Age (years)		
Below 20	19	23.8
21-25	43	53.8
26-30	8	10.0
31-35	2	2.5
Above 36	8	10.0
Occupation		
Student	65	81.3
Lecturer	9	11.3
Workers	6	7.5
Total	80	100

The descriptive statistics used to access the overall acceptability of quilts made from textile scraps for wealth creation showed that respondents have a high level of preference for TSQ (Textile Scrap Quilt) compared to CTQ (Contemporary Textile Quilt) based on their appearance, texture, shape, design, and overall acceptability. Hierarchically, TSQ received the highest ratings in appearance/color with a mean of 7.94, followed by texture at 7.88, design at 7.71, and shape at 7.53.

Table 3.2: mean and standard deviation rating on of acceptability of produced textile scrap quilt bed spread

Sampl e code	Appea rance/ colour	Textu re	Shape	Desig n	Overall Accept ability
TSQ	7.94 ± 1.118	7.88±1 .184	7.53 ± 1.031	7.71 ± 1.160	8.29 ± 0.983
CTQ	6.78 ± 1.253	7.19 ±1.332	7.25 ± 1.298	7.06 ± 1.426	7.43 ± 1.065

TSQ: Textile scrap quilt CTQ: Contemporary quilt

According to the 7-point scale used in the scoring, the decision criteria state that if the mean is equal to or greater than the mean rating of 5.0, the characteristics of TSQ (color, shape, texture, design) and CTQ are considered accepted, denoted by "A." Conversely, if the mean is less than the mean rating, they are considered not acceptable, denoted by "NA." From the mean rating table, all attributes of TSQ were accepted and mostly preferred since the mean values are greater than five (5). The overall acceptability of TSQ falls within the range above 8.0, which is denoted as "liked very much" on the likert scale.

The mean rating for the textile scrap quilt based on attributes like texture, shape, color, design, and overall acceptability is 8.29, while for the contemporary quilt, it is 7.43. This suggests that the textile scrap quilt bedspread is more widely accepted compared to the contemporary one.

Table 3.3: Mean and Standard deviation of Respondents on influence of language of design on quilt bedspread made from textile scrap

Items	Me an	SD	Rema rks
Texture helps to show quality of quilt	1.7	0.5	Agree
Colour help to convey aesthetic sense of the user	4	22	Agree
Emphasis allows to draw the attention of the quilt	1.6	0.5	Agree
Balance equalizes the visual weight or space of different part of design	3	13	Agree
Well combine element of design makes the quilt to be nice and neat	1.7	0.6	Agree
Different fabric colour combined create a new pattern	5	88	Agree
the sizes of textile scrap should relate with each other	1.9	0.4	Agree
lines, colour and texture of scrap should blend well with the mood of all the quilt	0	93	Agree
	1.7	0.6	Agree
	3	56	
	1.4	0.5	
	9	28	
	1.9	0.8	
	6	49	
	1.7	0.4	
	5	90	
Grand mean	1.74		

In summary, the level of acceptance for TSQ is greater than the level of acceptance for CTQ. There are several challenges faced in using textile scraps for quilt bedspreads for wealth creation. The

first challenge is the gathering of materials for production. Acquiring materials is problematic because some scraps are not easily accessible; they are often expensive, and certain ones are not colorfast. Stitching the pieces together was also one of the most significant challenges, as the seam lines must match accurately. Some seam lines had to be eased (either by cutting) to match, and some were altered to fit as needed. If the seams do not match, the quilt would look unprofessional and unappealing to potential buyers. Even though it's waste fabric, its designs must attract sustainable buyers to the designer. Throughout these steps, a considerable amount of time and energy was spent on development, requiring creative skills. Another challenge is the separation of materials that are resistant to colorfast staining; these materials could potentially ruin the researcher's work. Therefore, random testing was conducted on each different patterned scrap (through washing) to determine their usefulness. However, the quilting techniques applied to the bed sets after the entire sewing process do not seem to be as straightforward as anticipated.

3.2 Discussion of Research Finding

The main objective of the research was intended to promote maximum use of textile scraps as raw material for new designs and examine the level of acceptability of quilt bedspread made from textile scrap for wealth creation in Ilorin South. To achieve this objective, the researcher decided to design a scrap quilted product that utilized the textile scraps from mama ifeoma textile hub into marketable products. In the design and development process of this home textile, the researcher found the importance of careful planning of seam lines to give a Professional aesthetic to the piece and eliminate the feel of patchwork.

The study was designed to address the following questions:

- a) what is the acceptability of produced textile scrap quilt bedspread?
- b) What are the challenges faced in using textile scrap for production of quilt bedspread for wealth creation?

c) Does language of design have influence on quilt bedspread made from textile scrap for wealth creation?

d) What is the perception of consumer on acceptability of quilt bedspread made from textile scrap for benefit of wealth creation?

To address these research questions one; the study was designed in two phases. The first phase involved production of textile scrap quilt bedspread which demonstrate that textile scraps generated in the textile production can be reuse and recycle. Also shows process of textile scrap quilt for bedspread could become resources for creating new products, thereby reducing fabric scraps' contributions to environmental pollution as it was stated that the side effect of clothing industry's on the environment goes beyond emissions. This is their major challenges (Schipani, 2019). Then the second phase of the study design was based on using a purposive sampling technique to collect data. Respondent were interviewed using score card and questionnaire to get insight on the level of acceptability of the product design. During the process, the TSQ was compared with the machine made CTQ and was observed that the TSQ has higher likes with all the attributes appearance/colour, shape, design, texture and overall acceptability. This means the level of acceptance for textile is greater than contemporary.

Research question two addresses challenges faced in using textile scrap for production of quilt bedspread. The major challenge while working with textile scraps (as the only source) was to ensure consistency in construction as well as finding efficient ways for mass production; because seeing textile scrap is a problem, time and energy consuming. In order for a marketable bedspread to be able to be developed this way, a clear and efficient way of drafting the fabric pieces needs to be developed so the designer won't get tired over the time. Consistency in new design will vary based on the use of fabric and it placements before sewing.

Table 3.4: Mean and Standard deviation of consumer perception on acceptability of quilt bedspread made from textile scrap

Items	Mean	SD	Remarks
Entrepreneurial skill create a room for wealth creation	1.60	.493	Agree
Fabric recycling can reduce unemployment	1.94	.832	Agree
Earning without stress is easy in fabric recycling	2.42	.956	Agree
Learning of the skills increase wealth vocabulary and find opportunities	1.55	.525	Agree
Recycling of fabric waste to sellable Product has an exchanging value in a marketplace	1.64	.484	Agree
Is this fabric techniques(textile scrap recycling) a good one for wealth creation	1.76	.641	Agree
Quilt from fabric waste serves as strategy for rapid economic development	1.91	.640	Agree
Creating wealth journey can still be achievable in fashion industry through use of fabric scrap	1.77	.675	Agree
Fabric recycling is another means of creating a clear financial objective	1.65	.530	Agree
Fabric recycling allow people to see opportunities in wealth creation	1.78	.595	Agree
Grand mean		1.80	

3.3 Hypotheses Testing

Table 3.5: the t-test analysis on language of design for textile scrap quilt bedspread based on availability in the market

Variable	Mean	SD	Df	P-value	Decision
Textile	39.34	4.185	79	.000	Rejected
Contemporary	35.70	5.149			

Table 3.6: Mean, SD and paired t-test showing influence of benefit of wealth creation on acceptability of quilt bedspread made from textile scrap.

Model	B	SD	T	P-value	Remark
constant		2.924		.000	
BWC	-.222	.160	-2.000	.049	Rejected

Research question three and four addresses Influence of language of design and determine it influence on benefit of wealth creation so as to solve the problem of unemployment or underemployment. It was evaluated that most

language of design enhances the output of the product design (TSQ). In the statement analyzed, it was agreed that Texture help to show quality of quilt, Colour help to convey aesthetic sense of the user, Emphasis allow to draw the attention of the

quilt, Balance equalize the visual weight or space of different part of design, Well combine element of design makes the quilt to be nice and neat, Different fabric colour combined create a new pattern, the sizes of textile scrap should relate with each other and lastly lines, colour and texture of scrap should blend well with the mood of all the quilt. Ever knowing the art and language of designing using textile scraps retrieve from landfill, creating further study to produce more product other than quilt will be easy for jobseekers to hold hand over time, control economic development, increases financial stability of individual applies and reduces risk of unemployment.

From the result analyzed, data were obtained from the research instrument using a specific methodology and some variables were emerged. First among these variables was difference in the language of design of quilt bedspread made from textile scrap for wealth creation based on availability. With the data obtained from the respondents involved in the study, and the test of hypothesis (HO1) findings revealed that the respondents accept that language of design has influenced the pattern of the quilted bedspread. This enables the respondents to have great choice in textile scrap quilt fabric when compare with contemporary quilt. This is in accordance with (Anyakoha,2010) findings which stated that “languages of design are basic and art in designing a fabric, so all must be obeyed to achieve a good result”

The second variables that was observed to be significant was how benefit of wealth creation influenced the level of acceptability of the textile scrap quilt bedspread. The study revealed that textile scrap quilt is readily acceptable by the respondents if they were made available for consumer to purchase compare to contemporary quilt. This also enable sustainability of fabric production in textile industries making the industry aware that there waste can still be recycle to form a new design as well as reducing the fear of not meeting up with the demand of the distributors or buyers. According to Cua and Vidovic (2014), fabric recycling creates jobs for people. It uses less amount of energy to recycle than to produce

new textiles. Recycling can also be financially rewarding as the people turning in the waste products may earn money. Moreover, it helps in water conservation and energy serving. Watson *et al.* (2017) stated that textile recycling or reusing is seen as an imperative way to assist in the sustainable transition for the fashion industry. Agrawal *et al.* (2013) made some excellent points on how recycling and reusing benefit humans and society. The study further revealed that contemporary quilt with textile scrap is now produce using modern machine, compare to hand made textile scrap quilt which is still produced using primitive equipment which slow down its production. Another finding shows how the fashion industry produces more waste than any other manufacturing sector globally (Bamisaye and Adeitan, 2018). Wastes in the form of fabric scraps, pre-and-post-consumer wastes, and dyes, among others, currently contribute to various forms of environmental pollution (Gardetti and Torres, 2013). To overcome the threats that fabric wastes pose to the environment, recycling and upcycling programs are being promoted in recent times (Vitali *et al.*, 2021). While recycling and upcycling programs are increasingly becoming popular, they are inadequate to deal with all the different categories of waste generated by the fashion industry in general, particularly during the process of garment production. Indeed, there is a lack of literature on how fabric scraps could be reused to reduce the fabric industry’s environmental footprints. This study seeks to eliminate fabric waste from the garment manufacturing process and textile industries. By using fabric waste for usable material, such as quilt production, poses many advantages to the industry; for example, this can prevent textile scraps from ending in the landfill, provide jobs for people, the scraps can be financially rewarding by turning them into products for human consumption. Again, using fabric waste for designs is an important way to assisting the fashion industry to sustainability. Mers, (2020), stated that people shop for fast fashion so often, leading to the overflowing of the landfills, which is one of the main reasons why textile scraps needed to be reused or recycled.

4.0 Conclusion

This study investigated how fabric waste can be eradicated in textile industries through pattern making and using fabric waste in designing quilt bedspread. I propose that more of textile scrap should be retrieved from the landfill and textile industries, this can prevent textile scraps from ending in the landfill, provide jobs for people, the scraps can be financially rewarding by turning them into products for human consumption. Again, using fabric waste for designs is an important way to assisting the fashion industry to sustainability and enable designers to produces a design that can still work and have less waste than machine print patternmaking approach. The first recommendation is to encourage more use of fabric scrap and designing with a sense of waste-awareness in producing a marketable product; this control economic development, reduce problem of unemployment and enhances wealth creation.

5.0 Recommendations

Based on the finding of this study, there are some recommendations;

The first recommendation is to encourage more use of fabric scrap and designing with a sense of waste-awareness in producing a marketable product; this control economic development, reduce problem of unemployment and enhances wealth creation. follow up on this study by implementing the techniques and approaches learned from this study for other usable product, more in-depth research could focus on implementing limited waste studies in producing multiple styles as well as looking at the Designers acceptance of the changes to the designs once the patterns are manipulated for the lowered waste approach.

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