Analysis of Adult Female Clothing Made with Adapted Patterns and Free Hand Cutting: Constraints and Prospects

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Abstract *The main purpose of this study was to analyse adult female gown made with adapted patterns and free hand cutting. The specific objectives are to determine whether bodice part of a female gown, skirt part of a female gown and a female gown made with adapted patterns fit better than the ones made with free hand cutting. There were three research questions from which three null hypotheses were formulated. The study utilized an experimental design. A sample of 30 students was drawn from the target population of 550 Home Economics students of Federal College of Education (Technical) Omoku and University of Education, Port Harcourt. A systematic sampling technique was used to select the sample. Instrument used for the study was a 4-point likert scale questionnaire of strongly agreed, agreed, disagreed and strongly disagreed. Values were assigned as follows: SA-4, A-3, D-2, and SD-1. The data collected was systematically analysed using mean and t-test. The three hypotheses were tested at 0.05 level of significance. Findings revealed that a female gown made with adapted patterns fits better on the shoulder, sleeve, bust, waist, and hip than a gown made with free hand cutting. Findings also revealed that the gown made with adapted pattern look more outstanding and dressy than the one made with free hand cutting. Based on these findings, some recommendations were made. It was recommended that : Graduates of Home Economics that specialize in Clothing and Textiles should be encouraged to establish industries where they can make patterns according to contemporary fashion in sizes for sale. There should be an awareness programme organized by Home Economists to dressmakers who uses free hand cutting to make use of adapted patterns in sewing. Seminars/workshops should be organized by Home Economists on pattern making regularly for dressmakers.*

Introduction

Clothing includes all types of garments worn by human beings such as shirts, blouses, skirts, trousers and gowns. World Book Encyclopedia (2001), has described clothing as the different garments worn by people throughout the world. According to Ezema (1996), Clothing is a basic human need and it is any article placed on the body in order to protect, beautify, or to adorn it.

Clothing are worn for the simple fact that they protect the body against weather conditions, beautify the body and communicate to others about the wearer. Esiowu and Igbo (2008), are of the opinion that individual clothing also tell others whether the wearer is conservative or daring, out-going or reserved, casual or organized, a leader or a follower, confident or unsure. Ahia (2001), has stated that beyond the use of cloths to protect the bare body, it serves as a means of group identification, gender stereotyping, ritual distinction and status symbolization and these other functions of clothes create serious religious, social and economic pressure which people of the world have to bear.

Shailong and Igbo (2009), have opined that besides protection, clothes act as means of personal communication by expressing the individual unique personalities for modesty and for attraction, easy identification and for social statues. And that proper Clothing is what differentiate man from other animals.

Clothing for men and women are made from fabrics. These can be achieved through the use of adapted patterns, commercial patterns or the use of free hand cutting. Adapted patterns are made from blocks. Blocks are achieved through the drafting of patterns using the actual measurement of the person concerned without ease. These blocks which are in five pieces are later used to adapted to any style of garment as desired for onward transfer to the fabric, then sewing can commence.

According to Ekumankama and Igbo (2009), a pattern is a piece of paper drafted and cut to size and shape which is used for sewing dresses. They went further to say that a designer uses a foundation pattern (block

pattern) as a basis for making the pattern for a design (style pattern).

Adaptation of pattern is the process of developing a new pattern to any style of your choice using the drafted blocks. These patterns adapted should bear the seam allowance and pattern signs to guide the dress maker on the laying, cutting and sewing. Adapted patterns are usually placed directly on the fabrics for cutting and sewing.

Commercial patterns are patterns that are internationally produced and packaged for use by dressmakers. These are not locally made. Instructions for use are usually indicated on the envelops and the main pattern. Commercial patterns are produce in varieties of styles excluding styles for Nigerian traditional clothes. Adaptation of commercial pattern can also be done if the dress maker wish to change the style from what he/she has bought to suit him. Commercial patterns are placed directly on the fabric according to the instructions written on them and the envelops. Then sewing can be done. The use of commercial pattern is less stressful as it does not require any drafting.

"Before Nigerian government banned importation of ready-to-wear clothes, second hand clothing (Okirika) and commercial patterns in 1986, parents were not finding it difficult purchasing garments for their pre-school children. The main objectives of this ban is economic self-reliance. This has now led Nigerians to make use of local garment manufacturing companies in the provision of garments. these local manufacturing companies make use of free hand cutting techniques" (Shailong and Igbo 2009).

A lot of garments worn these days apart from ready-to-wear garments are made from free hand cutting. Free hand cutting is a method of cutting a style of a garment directly on the fabric without the use of a pattern. Shailong and Igbo (2009),described free hand cutting as a method of cutting the fabric marked with chalk based on the measurement and cut directly without the use of a paper pattern. However the measurement of the individual is utilized directly on the fabric in free hand cutting. While using the free hand cutting and there is a mistake, the fabric will be wasted.

According to Iloeje (1995), as cited by Shailong and Igbo (2009), free hand method of garment construction may spoil the garment entirely, thereby wasting the fabric. They went further to say that free hand cutting is time consuming and slow, therefore cannot be conveniently used for mass production. From the writer's experience, free hand cutting has resulted to unfitted garments and quarrels among dressmakers and their clients.

A lot of people prefer ready-to-wear clothes due to the unsatisfactory jobs from some tailors that uses free hand cutting for their dress making. This has made the budget for clothing to increase for most individuals thus affecting the output of the tailoring institutes. For the purpose of this research study an analysis will be carried out on clothes made with adapted patterns and free hand cutting.

Constraints of Sewing with Adapted Patterns/Free Hand Cutting

There are a lot of constraints associated with sewing using adapted patterns. The processes of drafting and adaptation of patterns before laying , cutting and sewing is time consuming and may be difficult for an inexperienced person. It can be boring to a dressmaker or frustrating if the individual lacks the needed competence. He/she may not be able to meet up with his/her clients.

"Some women attend a formal program to develop their design abilities. Furthermore many other women have given up sewing because they are disappointed by the result. This mythical women may have a very busy life with little time to go to classes. She has heard about making your own patterns but assumes it is difficult, technical and requires attending a special school. At the library she has seen books on pattern drafting. They only added to her misunderstanding as they did not tell her how to start learning such a new skill". (Gizeski 2009).

Making clothes with free hand cutting can lead to the destruction of fabric because during direct cutting on the fabric the dress maker can make a mistake and amendment may be difficult or not possible. Free hand cutting may result to garments not fitting well on the shoulder.

Prospects of Sewing with Adapted Patterns/Free Hand Cutting

Gizeski (2009), has explained that the unifying principle of pattern drafting for fit and fashion is that patterns are designed so women will look and feel wonderful in their clothes. It presents a stepwise system for a student to accomplish that goal. And that after the fundamentals are understood, a student can experiment creativity and novices then become professional designers.

Clothes made with adapted patterns are cheaper than ready – to – wear clothes and they can be made to ones choice and exact size. World Book Encyclopedia (2001), has stated that clothing and other items sewn at home may cost less, fit and wear better and have more individuality than ready –to – wear products. Finally free hand cutting consumes less time in the process of sewing.

Statement of Problem

Clothing as one of the primary needs of an individual are worn to protect and beautify the body. Therefore factors have to be considered for the choice of clothing whether they are ready-to-wear or locally tailored. Locally sewn clothes are achieved with the use adapted patterns or free hand cutting. The use of free hand cutting and the use of adapted patterns by most dressmakers have posed a lot of problems.

Firstly it is assumed that there is a high rate of fracas between dressmakers and their clients due to the fact that clients feel they get unsatisfactory services from their dressmakers. On the other some dressmakers are not knowledgeable about the use of block patterns to produce new styles for dress making.

Secondly most people resolved in patronizing ready-to-wear clothes which are sometimes more expensive because they don't get the satisfaction they want from their dressmakers. Thirdly, it is assumed that tailoring institutions are no longer booming as they should have been since most clients are unsatisfied with the poor styles processed by dressmakers. Could this assumption be true?

The use of free hand cutting has given rise to the above problems. The problem of this study therefore is to analyze adult female clothing made with adapted patterns and free hand cutting and also pointing out their constraints and prospects.

Research Questions

This study sought answers to the following research questions.
1. What are the differences between the fitting of female bodice part of a gown made with adapted patterns and free hand cutting?
2. What are the differences between the fitting of female skirt part of a gown made with adapted patterns and free hand cutting?
3. What are the differences between the fitting of female gown made with adapted patterns and free hand cutting?

Research Hypotheses

The following null hypotheses formulated were tested.
1. There will be no significant difference between the fitting of female bodice part of a gown made with adapted patterns and free hand cutting.
2. There will be no significant difference between the fitting of female skirt part of a gown made with adapted patterns and free hand cutting.
3. There will be no significant difference between the fitting of female gown made with adapted patterns and free hand cutting.

Purpose of the Study

The main purpose of the study is to analyse adult female clothing made with adapted patterns and free hand cutting stating their constraints and prospects. Specifically, the study will find out:

1. If female bodice part of a gown will fit better when they are made with adapted patterns or free hand cutting.
2. If female skirt part of a gown will fit better when they are made with adapted patterns or free hand cutting.
3. If female gown will fit better when they are made with adapted patterns or free hand cutting.

Significance of the Study

Clothing and Textiles is an area of Home Economics that can provide opportunities for the acquisition of skills for self-reliance through the construction of garments. Lemchi (2002), observed that as a skill oriented course, Home Economics possess the capability of equipping individuals with salable skills that make foe self-employment, hence self-reliance. Generally, it has been observed that most dress makers prefer to use free hand cutting while sewing because it is faster way of sewing not minding if it is an accurate method or not.

The study will provide information on the importance of garments made with adapted patterns. With the information provided in this paper dress makers will see the benefits dresses made with adapted patterns instead of using free hand cutting while sewing.

Dress makers will recognize the importance of the use of adapted patterns which limit wastage of fabrics and reduction of mistakes. Also the information on how to place the pattern on the fabric making sure of using the right grain and placement of design of the fabrics is known. This paper will reveal to the dress makers that garments made with adapted patterns may fit better on the body and look more attractive. Finally, this study will serve as a source of information for future researchers who will research on related topics.

Scope and Delimitation of the Study

The scope of this study covers the two tertiary institutions where Home Economics is studied in Rivers State. They are:-

1. University of Education, Port Harcourt.(NCE Year three students).
2. Federal College of Education (Technical), Omoku, Rivers State. (Year three students)

Limitation of Study

During the course of carrying out this research work, the researcher encountered some limitations. Some of the problems are that it took some time to be able to get students to wear the clothes made for the research and model them to stay as long as 1 hour to enable the respondents give answers to the items in the questionnaire. Time factor was also a problem encountered by the researcher.

Methodology

This chapter dealt with the description of methods used in carrying out the study. Specifically it described the research design, population, sample/sampling technique of the study, development of research instruments and technique for data analysis. It also dealt with the development, validity and reliability of the instrument. The data collection and method of data analysis were described.

Design of the Study

The study utilized the experimental design. It examined and compared the fitting of female clothes made with adapted pattern and free hand cutting.

Population of the Study

The target population consisted of all the Home Economics students in the two tertiary institutions where Home Economics is studied in Rivers state.

Sampling/Sampling Technique

The sample for the study was selected from the final year students of Home Economics in the two colleges. The sample consists of 10 final year Home Economics students of University of Education, Port Harcourt (NCE) and 20 final year Home Economics students of Federal College of Education (Technical), Omoku, Rivers state. They are chosen because of their maturity and adequate exposure to the content of Clothing and Textiles at the institutions. Therefore the sample is made up of 30 students. The study involved only females as no male enrolled in Home Economics in the two institutions. For sample selection, systematic sampling technique was used in selecting 30 students for the study.

Research Instrument

The instrument that was used for the study was a structured questionnaire containing 18 items. The instrument is based on the research questions of the study and also based on the practical work (clothes made) for the study. The questionnaire consists of questions constructed on a 4-point likert scale. The values are: Strongly agreed = 4, Agreed = 3, Disagreed = 2 and Strongly disagreed = 1.

Validity

The validity of the instrument was seen to meet the purpose for which the instrument was designed by four Home Economics lecturers who are familiar with the course content of Clothing and Textiles of the tertiary institutions. Two lecturers of Education department also had opportunity of assessing the instrument. The experts read, made corrections and redirected the content of the instrument. The instrument was therefore considered to possess a content validity.

Reliability

The researcher carried out a pilot study using 8 respondents from College of Education, Warri, Delta state. The level of reliability was determined by applying the split-half reliability coefficient. The responses of the respondents was split into two that is odd and even while the Pearson Product moment correlation formula was used to analyse the data to get 0.70 as calculated coefficient value. To transform the split-half correlation into an appropriate reliability estimate for the entire test, the Spearman Brown prophesy formula was employed and the computed correlation coefficient value was 0.95. Thus, the instrument was considered suitable and reliable for the study.

Method of Data Analysis

The data collected was analysed by calculating the mean of the total responses to each of the questionnaire items. T-test statistics at 0.05 level of significance was used to test the null hypotheses of the study.

Presentation of Results and Discussion

In this chapter, the presentation of data collected for the study were made. The interpretation and discussion of findings were also presented. The presentation was according to the research questions and hypotheses posted.

Research Question 1

What are the differences between the fitting of female bodice part of a gown made with adapted patterns and free hand cutting?

Table 1. Mean and standard deviation values of responses on the fitting of bodice part of a gown made with adapted patterns and free hand cutting.

S/N	ITEMS	N	MEAN	SD	REMARK
1.	The bodice part of gown made with adapted pattern fits better on the shoulder.	30	3.33	0.02	Accepted
2.	The sleeve of a gown made with adapted pattern fits better on the body.	30	3.17	0.08	Accepted
3.	The gown made with adapted pattern fits better on the bust.	30	3.2	0.02	Accepted
4.	The gown made with free hand cutting fits better on the shoulder.	30	1.8	0.87	Rejected
5.	The sleeve of a gown made with free hand cutting fits better on the body.	30	2.1	0.69	Rejected
6.	The gown made with free hand cutting fits better on the bust.	30	2.13	.68	Rejected

Presented in table 1 are mean scores showing Colleges of Education students' responses on the fitting of bodice part of a female gown made with adapted patterns and free hand cutting. Finding showed that out of the 6 items examined items 1, 2, and 3 had the mean scores of (3.33, 3.17, 3.2) respectively which is above the cutoff of 2.5 and therefore accepted. These results shows that a female gown made with adapted patterns fit better on the shoulder, body and bust more than a gown made with free hand cutting. Also items 4, 5, and 6 had the mean scores of (1.8, 2.1 and 2.13) which were below the cutoff mean and therefore rejected.

HO 1. There will be no significant difference between the fitting of the bodice part of a female gown made with adapted patterns and free hand cutting.

Table 2. T-test value of Colleges of Education students' responses on the fitting of the bodice part of a female gown made with adapted patterns and free hand cutting.

Summary

ITEM	N	T-test	df	Overall t-test	Table t-value	Remark
1 / 4	30	9.56	28	22	2.05	Significant
2 / 5	30	8.23	28			Significant
3 / 6	30	8.63	28			Significant

Table 2 shows the summary of t-test of significant difference between two mean scores of Colleges of Education students' responses on the fitting of bodice part of a female gown made with adapted patterns and free hand cutting. The calculated t-value however showed that all the items were significant. (P < 0.5: items

1/4 : 9.56, 2/5 : 8.23 and 3/6 : 8.63.) The overall calculated t – value however showed that there was significant difference between the fitting of the bodice part of a female gown made with adapted patterns and free hand cutting. The overall calculated t – value of 22 at df 28 was more than the table t – value of 2.05. Thus, the result shows that the bodice part of a female gown made with adapted patterns fits better than the one made with free hand cutting.

Research Question 2

What are the differences between the fitting of female skirt part of a gown made with adapted patterns and free hand cutting?

Table 3. Mean and standard deviation values of responses on the fitting of skirt part of a gown made with adapted patterns and free hand cutting.

S/N	ITEM	N	MEAN	SD	REMARK
7.	The gown made with adapted patterns fits better on the waist.	30	3.3	0.04	Accepted
8.	The gown made with adapted patterns fits better on the hip.	30	2.8	0.31	Accepted
9.	The gown made with adapted patterns drapes well on the body.	30	3.2	0.02	Accepted
10.	The gown made with free hand cutting fits better on the waist.	30	1.83	0.024	Rejected
11.	The gown made with free hand cutting fits better on the hip.	30	1.63	0.013	Rejected
12.	The gown made with free hand cutting drapes well on the body.	30	1.73	0.005	Rejected

Presented in table 3 are mean scores showing Colleges of Education students' responses on the fitting of skirt part of a female gown made with adapted patterns and free hand cutting. Finding showed that out of the 6 items examined items 7, 8, and 9 had the mean scores of (3.3, 2.8, 3.2) respectively which is above the cutoff of 2.5 and therefore accepted. Also items 10, 11, and 12 had the mean scores of (1.83, 1.63 and 1.73) respectively below 2.5 the cutoff mean and therefore rejected. These results shows that a female gown made with adapted patterns fit better on the waist, hip and drapes well on the body better than a gown made with free hand cutting.

HO 2. There will be no significant difference between the fitting of the female skirt part of a gown made with adapted patterns and free hand cutting.

Table 4.T-test value of Colleges of Education students' responses on the fitting of skirt part of a female gown made with adapted patterns and free hand cutting.

Summary

ITEM	N	T-test	df	Overall t-test	Table t-value	Remark
7 / 10	30	17.3	28	23.3	2.05	Significant
8 / 11	30	19.5	28			Significant
9 / 12	30	36.7	28			Significant

Table 4 shows the summary of t-test of significant difference between two mean scores of Colleges of Education students' responses on the fitting of skirt part of a female gown made with adapted patterns and free hand cutting. The calculated t-value however showed that all the items were significant. (P < 0.5: items 7 / 10 : 17.3, 8 /11 : 19.5 and 9 /12 : 36.7.) The overall calculated t – value however showed that there was

significant difference between the fitting of the skirt part of a female gown made with adapted patterns and free hand cutting. The overall calculated t – value of 23.3 at df 28 was more than the table t – value of 2.05. Thus, the result shows that the skirt part of a female gown made with adapted patterns fits better than the one made with free hand cutting.

Research Question 3

What are the differences between the fitting of female a gown made with adapted patterns and free hand cutting?

Table 5. Mean and standard deviation values of responses on the fitting of a female gown made with adapted patterns and free hand cutting.

S/N	ITEM	N	MEAN	SD	REMARK
7.	The gown made with adapted patterns look outstanding on the body.	30	2.6	0.07	Accepted
8.	The gown made with adapted patterns look dressy on the body.	30	2.87	0.09	Accepted
9.	The gown made with adapted patterns fits well on the body.	30	2.7	0.011	Accepted
10.	The gown made with free hand cutting look outstanding on the body.	30	2.2	0.30	Rejected
11.	The gown made with free hand cutting look dressy on the body.	30	2.43	0.17	Rejected
12.	The gown made with free hand cutting fits well on the body.	30	2.2	0.30	Rejected

Presented in table 5 are mean scores showing Colleges of Education students' responses on the fitting of a female gown made with adapted patterns and free hand cutting. Finding showed that out of the 6 items examined items 13, 14, and 15 had the mean scores of (2.6, 2.87, 2.7) respectively which is above the cutoff of 2.5 and therefore accepted. Also items 16, 17, and 18 had the mean scores of (2.2, 2.43 and 2.2) respectively which is below 2.5 the cutoff mean and therefore rejected. These results show that a female gown made with adapted patterns look outstanding on the body, look dressy on the body and fits well on the body better than a gown made with free hand cutting.

HO 3. There will be no significant difference between the fitting of a female gown made with adapted patterns and free hand cutting.

Table 6. T-test value of Colleges of Education students' responses on the fitting of a female gown made with adapted patterns and free hand cutting.

Summary

ITEM	N	T-test	df	Overall t-test	Table t-value	Remark
13 / 16	30	7.3	28	28	2.05	Significant
14 / 17	30	4.44	28			Significant
15 / 18	30	0.83	28			N.S.

Table 6 shows the summary of t-test of significant difference between two mean scores of Colleges of Education students' responses on the fitting of a female gown made with adapted patterns and free hand cutting. The calculated t-value however showed 2 out of the 3 items were significant. (P < 0.5: items 13 / 16 : 7.3 and 14 /17 : 4.44.) The overall calculated t – value however showed that there was significant difference between the fitting of a female gown made with adapted patterns and free hand cutting. The overall

calculated t – value of 28 at df 28 was more than the table t – value of 2.05. Thus, the result shows that the female gown made with adapted patterns fits better than the one made with free hand cutting.

Discussion of Findings

The discussion of findings was based on the study which was to analyse adult female gown made with adapted patterns and free hand cutting. To this effect, analysis was made on data received through questionnaire distributed to the students to which responses on the analysis made with adapted pattern and free hand cutting. Findings from the study revealed that the bodice part of a gown made with adapted pattern fits better on the shoulder, bust and sleeve than the one made with free hand cutting.   This is in agreement with World Book Encyclopedia (2001) that stated that clothing and other items sewn at home (with adapted patterns) may cost less, fit and wear better and have more individuality than ready – to – wear products.

     Secondly, findings from the study revealed that skirt part of a gown made with adapted patterns fits better on the waist, hip and drapes well on the body than the one made with free hand cutting. In support of this Shailong and Igbo (2009), have cited Ileoje (1995) by stating that free hand method of garment construction may spoil the garment entirely, thereby wasting the fabric. Therefore if the garment is spoilt, it will automatically not fit well on the body.

     Thirdly, findings from the study also revealed that the entire female gown made with adapted patterns fits better on the body, look more outstanding and look dressy on the body than the one made with free hand cutting. According to Cizeski (2009), the unifying principle of pattern drafting for fit and fashion is that patterns are designed so women will look and feel wonderful in their clothes.

Summary

The study analysed adult female gown made with adapted patterns and free hand cutting. The problem of this study was to examined if clothes made with adapted patterns fit better than clothes made with free hand cutting. The study provided answers to the following research questions.
1.what are the differences between the fitting of female bodice part of a gown made with adapted patterns and free hand cutting?
2.what are the differences between the fitting of female skirt part of a gown made with adapted patterns and free hand cutting?
3.what are the differences between the fitting of a female gown made with adapted patterns and free hand cutting? To meet the objectives of this study three null hypothesis were formulated as follows:
1.There will be no significant difference between the fitting of female bodice part of a gown made with adapted patterns and free hand cutting.
2.There will be no significant difference the fitting of a female skirt part of a gown made with adapted patterns and free hand cutting.
3.There will be no significant difference between the fitting of female gown made with adapted patterns and free hand cutting.

      From the study reviewed, there was an indication that a female gown made with adapted patterns fits better on different parts of the body than a female gown made with free hand cutting.

     The researcher made two gowns for an adult using adapted patterns and free hand cutting. The questionnaire was based on the objectives of the study and the practical work which was used to collect data for the study. The questionnaire consisted how female gown made with adapted patterns and free cutting fit on different parts of the body. Mean scores and standard deviation was used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. Answers to the research questions are as follows;

1. Female gown made with adapted patterns fits better on the shoulders, bust and sleeve more than female gown made with free hand cutting.
2. Female gown made with adapted patterns fits better on the waist, hip and drapes well better than the one made with free hand cutting.
3. Female gown made with adapted patterns are outstanding, look dressy on the body and fits well generally on the body than the one made with free hand cutting.
The three null hypothesis were rejected. The findings were as follows;
1. There was a significant difference between the fitting of the bodice part of a female gown made with adapted patterns and free hand cutting.
2. There was a significant difference between the fitting of the skirt part of a female gown made with adapted patterns and free hand cutting.
3. T here was a significant difference between the fitting of a female gown made adapted patterns and free hand cutting.

Conclusion

This study focused on the analysis of female gown made with adapted patterns and free hand cutting. It was discovered that a female gown made with adapted patterns fits better on the shoulders, sleeve and bust than the one made with free hand cutting. Also the gown made with adapted pattern drapes well on the body, fits better on the waist and hip more than the one made with free hand cutting. Generally the gown made with adapted patterns look outstanding, look dressy and fit the whole body better than the one made with free hand cutting.

Recommendation

Based on the findings of this study the following recommendations aimed at improving our locally made clothes were made.
1. Graduates of Home Economics that specialize on Clothing and Textiles should be encouraged to establish industries where they can make patterns according to contemporary fashion in sizes for sale.
2. There should be an awareness programme organized by Home Economists to dress makers who uses free hand cutting to make use of adapted patterns while sewing.
3. Seminars / workshops should be organized by Home Economists on pattern making regularly for dress makers.

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