

COMPARISON OF CLOTHING CONSTRUCTION SKILL ACQUISITION LEVEL OF TRAINEES IN THE FORMAL AND NON-FORMAL SYSTEMS IN DELTA STATE, NIGERIA

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Abstract

This study sought to verify the notion that apprentices to non-formal or "roadside" seamstresses have higher clothing construction skills than Home Economics trainees in Nigerian tertiary institutions by comparing both groups. 32 subjects, with 16 as experimental, were randomly selected from Delta State University, Abraka and College of Education, Agbor and 16 as control group, randomly selected from non-formal seamstress trainees in Agbor and Abraka, and both groups were required to sew a self garment to a specified clothing style. A 5-point-Likert type scoring format was used to evaluate constructed garments and scores obtained on clothing skills in each group were compared using student t-test. Result obtained confirmed significant differences between both groups of trainees in 12 of the 20 clothing skills evaluated. Though differences between both groups were not significant in overall clothing skills, the results revealed that both groups scored poor/very poor in majority of the clothing skills. The study concluded with recommendations to enhance clothing construction skill acquisition for both formal and non-formal trainees in Nigeria.

Introduction

The Federal Government of Nigeria has consistently highlighted the importance of functional, practical or vocational education in its revised policy objective for tertiary education in Nigeria (National Policy on Education, Federal Government of Nigeria, 1981). This objective suggests the need for higher education in Nigeria to produce skilled professional or vocational manpower for national development. Home

Economics is one subject where considerable emphasis has been placed in its curriculum on the production of practical or skilled persons that are relevant to national manpower needs.

For any nation to grow economically, it is imperative that the education system be geared towards production of required skilled/professional manpower in its education planning and implementation policy objectives.

Home Economics is a field of study noted for its capability of equipping learners with professional skills that make for self reliance, self employment and paid employment. Home Economics can also be described as a vocational subject that is largely practical oriented backed by theoretical background. An important aspect of the subject is textile and clothing construction which is practical skill oriented, with theoretical background, capable of producing self employed and employable persons (Iloeje, 1999; and Lemchi, 2000). Sadly, several works (Olaitan, 1999; Anozie, 2002; and Molokwu, 2001) revealed that the training of Home Economics students in acquisition of vocational/professional skills in higher institutions in Nigeria is presently not well articulated and implemented, hence the present high unemployment rate of Home Economics graduates in Nigeria. These works suggest colossal mis-match between the aspiration of National Education policy objective (1981) in production of skilled/professional competent persons and its actual implementation in the training of Home Economics students in higher institutions in Nigeria. Thus, it is commonly believed that Home Economics students in tertiary institutions are less competent, in clothing construction skills when

compared with non-formal or roadside trained dressmakers. However, despite the wide acceptance of such a belief, research is yet to establish whether non-formal trained persons are better skilled or more professionally competent in clothing construction than graduates of formal tertiary Home Economics education in Nigeria. It is in this context that this study is undertaken, to evaluate and undertake comparative assessment of garments constructed by formally trained Home Economics students with clothing constructed by non-formal trainees on the basis of proper clothing construction principles; and thus establish which of the two groups of trainees in clothing construction (i.e. the formal or non-formal) is more competent or skilled when assessed on the basis of proper clothing construction principles.

Statement of Research Problem

There is presently the increasing need specifically for more clothing professionals to construct both indigenous and Western clothes, and help reduce reliance on the outside world for imported clothes. Clothing construction requires professional skill acquisition and so is practical oriented (Olaitan, 2000). In many countries such as the United States of America, Japan, Britain, East Africa, and some Asian countries, adequate effort has been made to equip the Home Economics teacher for this professional task of training graduates at the tertiary levels in competent skills of clothing construction and textile design. Consequently, in these countries, Home Economics has emerged as a field of study offering numerous occupational opportunities for its graduates. Unfortunately, the situation in Nigeria differs as several studies have shown that the skill acquisition practical classes of Home Economics especially that of clothing construction, is the most neglected by both students and teachers at various levels of the educational system in Nigeria (Anyakoha, 2000; Igbo, 1989; Njoku, 1994; Molokwu, 2001). The

situation is so pathetic that it is commonly believed in present day Nigerian society that Home Economics graduates from Nigeria's tertiary institutions are not confident and competent enough to set up sewing institutes even when capital funds are made available to them. Lemchi (2001) and Osifeso (2001) attribute this problem to gross incompetency in their acquired skills. Ileoje (2000) observed that Home Economics students in tertiary institutions are so incompetent in clothing construction skills that many of them go to the extent of employing non-formal or "roadside" dressmakers to construct their clothes for exhibition during practical classes.

Several Studies (Onwunedo, 1998; Molokwu, 2001; Lemchi, 2001; Anozie, 2002) suggest that a large proportion of the self employed dressmakers in Nigeria were informally trained. However, some of these works also opined that most clothing constructed by the non-formal trained dressmakers falls short of the standard competencies required in good clothing construction. Thus, if evaluated, clothes constructed by non-formal trained dressmakers may not conform to the principles of proper clothing construction or design in the clothing profession. And so it may be incorrect to conclude that informal trained dressmakers are more competent in clothing construction than formal trained ones. Sadly, research in Nigeria is yet to examine the contention whether non-formal trained dressmakers are better skilled professionals in clothing construction than graduates of Home Economics from Nigerian tertiary institution, as it is commonly believed. There is a general dearth of studies on skill acquisition in clothing construction in Nigeria. Specifically, a brief review of relevant literature (Onwunedo, 1998; Lemchi, 2000; Anozie, 2002) shows that experimental studies designed to compare professionalism/competencies in skill acquisition amongst formal and non-formal trained persons in dress making is lacking in

Delta State specifically and Nigeria generally. This is despite the common belief and contention that non-formal trained dressmakers make better dresses than formal trained ones.

Purpose of the Study

The purpose of the study is to examine whether there are significant differences in clothing construction skills amongst trainees of the formal and non-formal systems in Delta State, Nigeria, and thus establish whether non-formal trained dressmakers are more competent in clothing skills than tertiary trained graduates of Home Economics.

The following specific objectives were formulated to guide the study.

1. To establish whether non-formal or "roadside" trained dressmakers are better skilled in garment construction than formally trained Home Economics students in tertiary institutions, when assessed on the basis of clothing construction principles.
2. To determine specific aspects of skills where there are significant differences between non-formal trained dressmakers and students of tertiary institutions in clothing construction.

Significance of the Study

The finding of this study is significant as it shall provide opportunity to verify whether the Home Economics curriculum in vocational education at the tertiary level is yielding positive result in terms of skill acquisition of its graduates. The research work will also aid to verify if "roadside" trained dressmakers are better trained professionals than graduates of Home Economics from Nigerian tertiary institutions, as it is commonly believed. The findings are significant to students and teachers of Home Economics as it will assist them identify areas of inadequacies in skill acquisition programmes.

Research Question and Hypotheses

The main research question is: Are non-formal or "roadside" trainees more competent in clothing construction skills than formal trained students in tertiary institutions?

The following two hypotheses shall be tested in this study:

Hoi: Non-formal trainees in dressmaking do not demonstrate significantly higher skills in clothing construction than formally trained Home Economics students in tertiary institutions. **Ho2:** There is no significant difference between non-formal trainees in dressmaking and students of tertiary institution in skill acquisition in clothing construction.

Research Method

The study adopted a post-test only'-, control group experimental design as formulated by Campbell and Stanley (1963) to compare the two groups of trainees in various clothing construction skills. The population of the first group of trainees, the experimental group, -comprised final year (400 level) undergraduate Home Economics Students of Delta State University, Abraka and final year (300 level) Home Economics students of College of Education, Agbor. A sample of 16 students was randomly taken from this group. The population for the second group of trainees, the control group, consisted of all senior trainees in non-formal female dressmaking workshops in Abraka and Agbor in Delta State; and a sample of 16 trainees was randomly selected from this population. Thus, a total of 32 subjects, with 16 from each (experimental and control groups) were selected, using simple random sampling method. Each of the subjects was presented clothing materials and garment design, and requested to construct a skirt and a blouse with the material to conform to the required design. 20 independent variables that measured some important clothing principles and concepts of well constructed garments were grouped into 6

categories of clothing competencies, and used to evaluate the garment constructed by each of the 32 subjects. The evaluation of each garment was on a five point likert type scale, scored as Very Good (5 points), Good (4 points), Average (3 points), Poor (2 points) and Very Poor (1 point) for each clothing competency. The categories of clothing competencies were designated as grain and cutting accuracy, stitching accuracy, shape control, surface control, edge finishing and finishing time and appearance. The questionnaire, which was the other research instrument, obtained information on respondents' personal data such as age, sex, qualification and marital status. The face validity of the research instruments were obtained through critical evaluation of the questionnaire, evaluation sheet and garment design by 3 clothing experts, mainly senior lecturers in Home Economics. The main research instruments, which include the fabric design and the questionnaire, were administered and collected by direct contact to respondents in their various locations by the researcher. Garments sewn were evaluated by the same Home Economics lecturers mentioned earlier.

Result of the evaluation of the garments sewn by the two samples of trainees was presented in table 2 employing the mean score of each of the 32 students in twenty (20) clothing construction skills, and t-test values were used to compare the scores obtained from the garments constructed by the two trainee groups in Table 3.

In order to verify whether the samples of the two sub-groups of trainees being compared were drawn from a common population having similar characteristics, they were compared in 3 important aspects, age, educational qualification and marital status. The results obtained are presented in table I. The result of the preliminary comparison of the two samples of trainee groups presented in table 1 indicated that both sampled groups - apprentice to seamstresses and tertiary institution students - possessed similar characteristic and therefore

belonged to a common population of study. The entire apprentices to seamstresses/students are females, between the ages of 20 and 29 years, are single, and have basic education of JSS (Junior Secondary School Certificate) or WAEC (West African Examination Certificate).

Table 1: Demographic Profile of Apprentice to Seamstresses and Home Economics Students

| Demographic Variables | Delta State University, Abraka | College of Education, Agbor | Apprentice to Seamstresses, Abraka | Apprentice to Seamstresses, Agbor | TOTAL |
|----------------------------|--------------------------------|-----------------------------|------------------------------------|-----------------------------------|-------|
| GENDER: | | | | | |
| MALE | 8 | 8 | 8 | 8 | 32 |
| FEMALE | | | | | |
| AGE: | | | | | |
| Below 20 years | - | - | - | - | - |
| 20 - 24 years | 2 | 5 | 6 | 4 | 17 |
| 25 - 29 years | 6 | 3 | 2 | 4 | 15 |
| 30 years and above | - | - | - | - | - |
| EDUCATIONAL QUALIFICATION: | | | | | |
| Primary | - | - | - | - | - |
| School Cert. | 2 | 8 | 3 | 6 | 9 |
| J.S.S. Cert. | 4 | - | 5 | 2 | 17 |
| WAEC Diploma | - | - | - | - | - |
| NCE | - | - | - | - | - |
| MARITAL STATUS: | | | | | |
| Single | 8 | 8 | 8 | 8 | 8 |

Result Presentation and Discussion

The presentation and discussion of the results obtained in the study hinges on testing of the hypotheses formulated for the study, and this is undertaken below.

Hypotheses testing involving t-test comparison of mean scores obtained in clothing construction skills by the two groups.

The comparison in this section was intended to, first, establish whether the two trainee groups differed significantly in general

skill acquisition in clothing construction; and secondly to identify specific skills where the sample groups differed significantly in clothing construction. These two important study objectives articulated as the study hypotheses are detailed examined next.

Table 2: T-test Mean Score Comparison in General Clothing Skill Performance by the two Trainee Groups.

| Home Economics Students | Apprentice Seamstresses | t-score | Critical value | Level of significance (0.05) |
|-------------------------|-------------------------|---------|----------------|------------------------------|
| 120.46 | 116.69 | 0.85 | 1.645 | N.S |

N.S: Not Significant.

First, the result of the mean scores and t-test comparison of the two trainee groups in twenty clothing construction skills which is summarized in table 2. The result showed that there is no significant difference (at the 0.05 significant level) between Home Economics students in tertiary institutions and apprentice to seamstresses in several of the clothing construction skills where they were evaluated and compared. The result presented in Table 2 showed that the calculated t-test score of 0.85 is below the critical value of 1.645. Thus, the null-hypotheses which states that there is no significant difference in general skill performance in clothing construction between apprentice to seamstresses and Home Economics students in tertiary institutions is therefore accepted.

Next, to verify whether apprentice to seamstresses demonstrated significantly higher skills in some specific clothing construction competencies than formally trained Home Economics students in tertiary institutions, the two groups of trainees were compared in twenty specific skill acquisition levels in clothing construction. The result obtained is presented as

mean scores, and comparison in skill acquisition was undertaken by various t-tests presented in table3.

Table 3: T-test Comparison of Home Economics Students in Tertiary Institutions with Apprentice to "Roadside" Seamstresses in Various Clothing Construction Skills

| Skills | Home Students (n = 16) scoring scale | | | | | | Apprentice to seamstresses (n = 16) Scoring scale | | | | | | t-value | P-value |
|---------------------------------|--------------------------------------|---|---|---|---|------|---|----|---|---|---|---|---------|---------|
| | 1 | 2 | 3 | 4 | 5 | :X | 1 | 2 | 3 | 4 | 5 | | | |
| LEVELS OF SPECIFIC COMPETENCIES | 1 | 2 | 3 | 4 | 5 | :X | 1 | 2 | 3 | 4 | 5 | | t-value | P-value |
| GRAIN AND CUTTING ACCURACY | 5 | 4 | 5 | 2 | 0 | 6.44 | 7 | 7 | 2 | - | - | 4 | 2.11* | 0.05 |
| STITCHING ACCURACY | 4 | 7 | 7 | 2 | 1 | 6.44 | 2 | 7 | 1 | 2 | - | 1 | 2.40* | 0.05 |
| SHAPE CONTROL | | | | | | | | | | | | | | |
| i. appropriateness of seams | 4 | 6 | 5 | 1 | - | 6.19 | 7 | 6 | 3 | - | - | 5 | 1.95* | 0.05 |
| ii. shoulder Seams | 6 | 5 | 4 | 1 | - | 6.44 | 7 | 5 | 1 | - | - | 4 | 3.61* | 0.05 |
| iii. Underarm Seams | 4 | 8 | 3 | - | 1 | 5.56 | 7 | 8 | 1 | - | - | 4 | 2.02* | 0.05 |
| iv. waistline Seam | 5 | 5 | 6 | - | - | 5.88 | 2 | 1 | 1 | 2 | 1 | 7 | 2.20* | 0.05 |
| v. kirt darts | 4 | 3 | 6 | 2 | 1 | 7.13 | 4 | 6 | 6 | - | - | 6 | 0.83 | N.S |
| vi. collar dart | 4 | 5 | 6 | | 1 | 6.56 | 5 | 9 | 2 | | - | 5 | 1.71* | 0.05 |
| vii. bodice | 6 | 3 | 5 | 2 | | 6.51 | 5 | (1 | 5 | - | - | 6 | 0.95 | N.S |
| SURFACE CONTROL | | | | | | | | | | | | | | |
| i. interfacing | 5 | 5 | 6 | - | - | 5.5 | 6 | 5 | 2 | | | 4 | 1.33 | N.S |
| ii. collar holes | 5 | 7 | 1 | - | - | 4.06 | 1 | 9 | - | | - | 3 | 1.89* | 0.05 |
| iii. cuffs | 5 | 6 | 3 | 1 | 1 | 4.44 | 5 | 4 | 7 | | | 5 | 1.65* | 0.05 |

| | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|------|---|---|---|---|---|------|-------|------|
| iv. upper | 4 | 4 | 5 | 1 | 2 | 7.19 | 3 | 3 | 6 | 2 | 2 | 7.25 | 0.1 | N.S |
| v. collar | 4 | 6 | 6 | | | 5.31 | 1 | 1 | 1 | 2 | 1 | 7.06 | 3.43* | 0.05 |
| vi. sleeves | 5 | 4 | 6 | 1 | | 6.25 | S | S | 5 | | | 5.8 | 0.92 | N.S |
| EDGE FINISHING | | | | | | | | | | | | | | |
| i. hem | 6 | 6 | 4 | | | 5.13 | 5 | 5 | 6 | - | - | 5.56 | 0.88 | N.S |
| 11. seam edges | 3 | 4 | 7 | | 2 | 6.5 | 6 | 7 | 3 | - | - | 4.56 | 2.59* | 0.05 |
| FINISHING TIME APPEARANCE RANGE | | | | | | | | | | | | | | |
| Time scheduled | 3 | 2 | 9 | 2 | | 7.44 | 7 | | 8 | 2 | 4 | 0.38 | 2.18* | 0.05 |
| Fit | 6 | 4 | 4 | 1 | 1 | 6.69 | 3 | 3 | 7 | 1 | 2 | 5 | 1.35 | N.S |
| Acshelic appearance | 5 | 4 | 5 | 1 | 1 | 4.5 | 7 | 2 | 7 | | 1 | 4.3 | 0.12 | N.S |

Significant at 0.05 level, N.S = Not Significant, P. value = 1.645

Result of t-tests in table 3 indicated significant differences between Home Economics Students and apprentice to "roadside" seamstresses in twelve (12) of the twenty (20) skills in clothing construction evaluated. Apprentice to seamstresses displayed significantly higher performance levels in five (5) clothing construction skills than Home Economics students in tertiary institutions. Majority of these are outward appearance skills, such as stitching accuracy, waistline seam, buttons, collar and time schedule. In contrast, Home Economics students displayed significantly higher performance levels in seven (7) clothing construction skills than apprentice to seamstresses. These are majorly inward aspects of clothing, and they include grain and cutting accuracy, appropriateness of seams, shoulder seams, underarm seams, bodice darts,

button holes, and seam edges. Thus, in general, Home Economics students in tertiary institutions demonstrated significant higher performance in more specific skills in clothing construction than apprentice to seamstresses. The null hypothesis which states that apprentice to non-formal seamstresses possess higher performance in many more specific aspects of clothing construction skills than formally trained Home Economics students in tertiary institutions is therefore rejected.

Discussion of Findings

It was observed that although the students in tertiary institutions demonstrated significantly higher skills in more specific competencies than apprentice to seamstresses, further comparison of both sample groups showed that there was no significant difference between both groups in their overall performance in clothing construction. Both sample groups performed similarly poor/very poor in almost all the clothing skills that they were evaluated. The study results thus confirm the suggestion by Onwunedo (1998) that if evaluated, most clothing constructed by non-formal trained dressmakers may not conform to the principles of clothing construction in the dressmaking profession. Additionally, this finding does not support the commonly held opinion in Nigeria today that the non-formal training system produces more professional competent dressmakers than Home Economics degree/NCE graduate programmes of the formal education system in Nigeria.

The findings also confirm the opinion of Olaitan (1999), Anyakoha (2000) and Lemchi (2000) that the training of Home Economics students in clothing professional skills is not currently well articulated by institutions of higher learning at both the degree and NCE levels, hence many of such graduates remain unemployed after graduation.

Conclusions

The result which showed that apprentice to seamstresses were deficient in inward competencies while Home Economics students were more deficient in external competencies also suggest the specific competencies that greater training strategies should be focused on in future in order to enhance clothing construction skill proficiency for the two trainee groups. The study result implies that greater attention should be focused in practical classes on outward clothing skills where the Home Economics students performed poorly such as appropriateness of seams, shoulder seams, underarm seams, waistline seam, bodice darts, • fixing of interfacing, button holes, buttons, collar, sleeves, hemming and the fitting/aesthetic appearance of garments. Also, the study result suggest need for greater attention on skill acquisition strategies such as "in house" training, seminars/workshops to enhance the skill acquisition of the non-formal sector or "roadside seamstresses" in competencies where they scored very poor. These are in grain manipulation, appropriateness of seam, shoulder seam, underarm seam, skirt darts, bodice darts, interfacing, button holes, buttons, fixing of sleeves, hemming and neatening of seam edges.

Recommendations

Arising from the results of this study are recommendations that have implications for the planning and implementation of Home Economics Clothing Curriculum at the tertiary levels (NCE and University) in our educational institutions and for the training of non-formal sector seamstresses. The huge personnel, materials and other financial resources invested on tertiary vocational education of the formal education system may not be considered wasted, as some level of training/professionalism was evident in the clothing construction output of Home Economics students when compared with non-formal apprentice to seamstresses. However,

the objective of the Home Economics education has been stated as largely practical/professional oriented to produce students with relevant skills and knowledge who are to become self employable. Results of this study showed a mismatch between these objectives and their actual implementation in the tertiary institution as very poor/poor performances were revealed in virtually all the clothing skills evaluated. This implies that the practical implementation of clothing construction aspects of Home Economics curriculum is not presently well articulated by institutions of higher learning at both the NCE and degree levels. Hence, perhaps the rate of self employed Home Economics graduates is low. Thus, an important" recommendation arising from this study is the" need to emphasize the importance of Home Economics as a practical skill oriented subject with the objective of producing self reliant *and* self employable graduates in the planning of the school curriculum and in its practical implementation through course and resource, allocations in schools.

Also arising from the findings of the study is the recommendation that the teaching of clothing in the Departments of Home Economics should devote more time and resources to the practical/professional aspects of clothing than it is done presently. Additionally, seminars and workshops/exhibitions on clothing should be organized in both the formal and non-formal sectors from time to time to encourage and help improve the practical skill acquisition of both groups of formal and non-formal trainees in dressmaking.

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