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Development of a Self-Evaluation Instrument for Clothing Construction for Tertiary Institutions in Enugu State

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APPROVAL PAGE

UNIVERSITY OF NIGERIA, NSUKKA
FACULTY OF EDUCATION

DEVELOPMENT OF A SELF-EVALUATION INSTRUMENT FOR CLOTHING CONSTRUCTION FOR TERTIARY INSTITUTIONS IN ENUGU STATE

BY

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A PROJECT SUBMITTED TO THE
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APPROVED:

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EXTERNAL EXAMINER

CERTIFICATION

NJOKU STELLA NGOZI, a postgraduate student in the Department of Vocational Education with Reg. No. PG/M.ED/91/12633 has satisfactorily completed the requirements for course work and research work for the degree of Masters in Education (Home Economics). The work embodied in this project is original and has not been submitted in part or full in any other degree of this or any other University.

HEAD OF DEPARTMENT
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DR (MRS) E.U. ANYAKOHA
SUPERVISOR

DEDICATION

TO MY HUSBAND, JONES WHOSE IMMENSE LOVE AND CARE HAS BEEN A SOURCE OF ENCOURAGEMENT.

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Abstract

The purpose of this study was to develop a self-evaluation instrument which students in tertiary institutions can use to evaluate basic clothing construction skills and also to ascertain any problem(s) which students encounter with the use of the manual. A null hypothesis that there would be no significant difference in the mean ratings of the clothing skills by the subjects and the teacher/researcher at 0.05 level of significance was postulated. The population comprised students in the Home Economics area in tertiary institutions in Enugu State. Purposive sampling technique was utilized in selecting the 300-level students offering clothing construction courses. A sixty-eight item basic clothing construction techniques (BCLOTS) self-evaluation rating scale was the instrument used for the study. The instrument was validated by clothing lecturers and pilot tested on ten students. The instrument was further administered to the 300-level clothing students for self-evaluation of their clothing skills. Means, standard deviation, t-test and percentages were employed in the analysis of data. The findings include the following: self-evaluation instrument which students offering clothing construction courses in tertiary institutions can use to evaluate their clothing skills; students' self-evaluation of their clothing skills compared well with

those of the researcher/teacher, showing the objectivity of the subjects in their evaluation. Also there was no significant difference in the mean ratings of the subjects/students and those of the teacher/researcher at 0.05 level of significance. Most students also indicated interest in the developed self-evaluation device and recommended that it be made available for normal class/laboratory work. Based on the findings, it was concluded that students can effectively and objectively use the self-evaluation instrument to improve their clothing skills.

CHAPTER ONE

INTRODUCTION

Background of the Study

Clothing and Textiles is an aspect of Home Economics and a skill oriented subject. It can equip individuals with saleable skills thereby preparing them for enormous employment opportunities in many clothing related occupations including pattern designing, clothing construction, costume designing, fashion editor, consumer educator among others. It thus possesses the capacity of helping in the reduction of the unemployment problem of graduates in the country. As a skill-oriented programme, clothing and textiles requires effective teaching procedures that will promote self-instruction and self-evaluation.

Various attempts have been made at developing effective teaching strategies for clothing construction (Reich, 1971; Taylor, 1980; Onugwue, 1986; Igbo, 1989). These efforts were mostly directed at developing self-instructional materials which would help learners acquire the necessary skills in clothing construction. These materials possess such advantages as provision of immediate feedback for the learners, permitting learners to work individually, allowing the student to work at his own speed and accommodating individual differences.

However, if these materials are to achieve their potential to the maximum, they should incorporate means by which students can evaluate themselves.

Evaluation is an important component of the teaching and learning process. Teaching and learning are greatly influenced by the type of evaluation that takes place in the classroom, so evaluation should be an integral part of the teaching-learning process (Fleck, 1974).

Again, the nature of clothing skills require that students continuously assess their working methods to ensure efficiency. Evaluation in any skill development programme such as clothing construction requires more than giving a paper and pencil type of test (Centre for Vocational Education /Module D-4/, 1977). Such evaluation should involve the learner and enable him correct methods of working at each stage of the learning and reinforce correct learning procedures. Anyakoha and Njoku (1992) noted that development of clothing skills in learners requires effective teaching of the subject and teaching for skill development requires effective evaluation. Blackenship and Moerchen (1979) rightly pointed out that the ability to work with less supervision is an important criterion in the attainment of advanced level clothing skills. This minimal supervision necessitates that the learner should be able to evaluate himself,

detect her faults, correct them and continue with her work. This requires self-evaluation.

The primary objective of evaluation is to facilitate growth and development among learners and the single most important outcome of evaluation is what happens within the learner himself (Fleck, 1974). Spitze and Griggs (1976) noted that evaluation becomes highly significant when a student is given the opportunity to evaluate him/herself. Schwartz (1967) also noted that self-evaluation can give students a sense of strength and encourage them to use all available resources and opportunities to achieve a greater insight. Igbo (1989), recommended that in future, clothing students should be involved in their evaluation for better results. Broadfoot (1979) emphasized that an opportunity to discuss one's own performance helps a student to see himself realistically, to locate areas of misunderstanding, to correct methods of working and reinforce correct learning procedures.

Statement of the Problem

In spite of the capacity of clothing and textiles education to prepare students for employment in numerous clothing related occupations for self-reliance, studies have revealed that it is the most neglected aspect of Home Economics at various levels of education in Nigeria

(Anyakoha, 1986; Igbo, 1989). Teachers and students alike do not want to offer it. This poor enrolment is shown vividly in the table below.

Table 1

Showing Enrolment in the Different Areas of Home Economics in WASC/GCE

Year	HOME MANAGEMENT				FOOD AND NUTRITION				CLOTHING & TEXTILES			
	Anambra		Imo		Anambra		Imo		Anambra		Imo	
	Schls	Stds	Schs	Stds	Schls	Stds	Schs	Stds	Schs	Stds	Schs	Stds
1981	5	198	11	750	9	201	13	361	-	-	2	10
1982	8	361	14	845	12	256	15	476	-	-	2	16
1983	12	602	20	1161	18	383	18	521	-	-	-	-
1984	11	471	22	1485	19	395	18	474	-	-	1	1
1985	23	1019	22	1466	25	913	21	672	-	-	1	1
1986	24	1136	23	1496	30	1015	23	1019	-	-	2	6
1987	6	26	44	1418	9	59	25	1514	-	-	2	21
1988	30	1897	-	-	43	2062	-	-	10	26	-	-

Source: Anyakoha (1986) and WAEC Offices in Enugu and Owerri.

Purpose of the Study

The purpose of the study included the following:

1. To determine the clothing construction techniques and details that should be used as criteria for evaluating clothing skills.
2. To develop an instrument (self-evaluation manual) which

students in tertiary institutions can use to evaluate basic clothing construction skills.

3. To field-test the self-evaluation instrument.

4. To compare student's self-evaluation mean ratings with teacher's own evaluation mean ratings of the same basic clothing construction skills and thus determine how objective students could rate themselves.

5. To determine the problem(s) which students encounter with the use of the self-evaluation manual.

Significance of the Study

The self-evaluation instrument will assist students in clothing construction to assess their performance as they progress thus enhancing correct working methods.

Involving students in their own evaluation enhances their active involvement in the learning process. This is very important for skill development and will help the students tc develop a sense of self-worth, independence and most importantly trains students to recognise acceptable standards of workmanship.

With practice, students will acquire the attitude and skills to assess and score themselves objectively and appreciate their teachers' assessment.

The study will help learners with limited background in clothing and textiles to achieve progress at their own pace

using the self-evaluation manual.

The instrument (self-evaluation manual) will assist individuals in acquiring observational skills for use not only in evaluating individually constructed garments but also ready-to-wear garments.

The study will also enhance skill acquisition thus reducing unemployment problem of graduates and enhance the manpower development of the country.

Assumptions of the Study

1. The study assumed that the use of the self-evaluation manual would improve learners acquisition of skills and performance in clothing construction.
2. The study also assumed that the teacher's/researcher's evaluation of the clothing skills would be unbiased and very objective.

Delimitation (Scope) of the Study

1. The study covered only those tertiary institutions in Enugu State that offer clothing construction course and in particular, the University of Nigeria, Nsukka and Federal College of Education, Eha-Amufu.
2. The study was limited to the assessment of only eight selected basic clothing construction processes/techniques

and over-all fitting qualities embodied in two projects - a skirt and a blouse. The selected processes include:

(a) Seams and seam finishes

(b) Controlling fullness (darts, pleats, gathers, tucks)

(c) Attachment of underlying materials (linings and interfacings)

(d) Collars and Neckline finishes

(e) Attachment of sleeves

(f) Waistline finishes

(g) Attachment of fastenings (buttons and button holes, zippers)

(h) Hems.

Hypothesis

The following hypothesis was tested in the study:

Ho: There will be no significant difference between the subjects' mean self-evaluation ratings and the teacher's mean evaluation ratings of the clothing skills at 0.05 level of significance.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter deals with the review of related literature. The literature was reviewed and organised according to the following headings:

1. Meaning, Importance and Characteristics of Evaluation
2. Teaching, learning and evaluation in skill subjects.
3. Self-Evaluation and skill development
4. Studies related to the improvement of the teaching of clothing
5. Evaluation of clothing construction skills/techniques

Meaning, Importance and Characteristics of Evaluation

Evaluation has been variously defined by many authors. Bloom (1971) defined evaluation as the systematic collection of evidence to determine whether certain changes are taking place in the learners as well as to determine the amount or degree of change in individual students. Wheeler (1967) noted that evaluation is not only the process of determining what the actual educational outcomes are and comparing them with the expected outcomes, but also involves judgements about the nature and desirability of any demonstrated changes. Furthermore, the American Vocational Association (1971) observed that evaluation is a systematic procedure whereby the quality of the teaching-learning process and the achievement of stated

objectives are ascertained. They noted that evaluation should be an ongoing process that provides input and feedback to guide change and offer directions for the program and it's modification. This is similar to the aim of self-evaluation. Gronlund (1971) viewed evaluation from an instructional standpoint as a systematic process of determining the extent to which instructional objectives are achieved by pupils.

The above definitions point to the fact that evaluation implies a systematic process which omits casual uncontrolled observation of students and stresses the effectiveness of the programme in effecting desired behaviour changes in the learner. Evaluation should be an integral and continuous process and should point out strengths and weaknesses or shortcomings in any educational process.

Blackenship and Moerchen (1979) however, pointed out that though the terms Measurement and Evaluation are frequently used synonymously, they nevertheless have different meanings. They noted that Evaluation is a broader term than Measurement and while Measurement includes only quantitative data, evaluation includes both quantitative and qualitative data.

Evaluation is inevitable and indispensable in any teaching-learning situation at all levels. The fundamental objective of evaluation is to effect improvement. Evaluation helps to

determine whether specified objectives have been accomplished. It also helps to determine a program's adaptability to students of various backgrounds and various environmental conditions (Fleck, 1974).

On a broader level, evaluation of any programme is important for the following reasons as discussed by Wentling and Lawson (1976) and Olaitan and Agusiobo (1981):

1. To aid planning - Evaluative information provides measures of resources, limitations and possibilities and is essential in establishing and assessing objectives. It can be of use in developing plans.
2. To aid in decision-making - Decisions are based on a certain amount of information, Evaluation information not only aids making decisions but will also justify those decisions to others.
3. To upgrade programme personnel - Evaluation can be of benefit to instructional personnel. The evaluation system of a programme is capable of identifying deficiencies and strengths in personnel performance, thus helping personnel to improve their teaching. Not only will evaluation upgrade evaluated staff, but staff members who are involved in the evaluation and its procedures will gain a measure of evaluative expertise which should help them plan and evaluate their own

activities.

4. To improve programme for students - Evaluation of programmes will nearly always contribute to better teaching. Obviously, if evaluation offers both value judgements regarding what is happening within the programme and suggestions for improvement, then ultimately this will have an effect on the students. It is said that the improvement of programmes is the most important goal that evaluation can achieve.
5. To ensure accountability of expenditure - The society's desire for evidence to indicate whether the outcomes of a programme are worth the investment in it should be fully realized by evaluation. A programmes' result should be measured by placement of students on jobs; achievement scores; more effective management in relation to incurred costs and established objectives.

At the classroom level however, Storey (1970) identified the following functions and purposes of evaluation; increase motivation, enhance retention, highlight important aspects, help teachers refine goals, fulfill a review function, provide feedback to students, provide feedback to the teacher and provide the most valid measure of classroom learning.

There are certain characteristics which evaluation must possess to enhance its effectiveness. Some of these characteristics

as discussed by authors (Hall & Paolucci, 1970; Fleck, 1974; Olaitan and Agusiobo, 1981; Blackenship & Moerchen, 1979) include:

1. Evaluation is a continuous process: Appraisal is not a periodic phenomenon with spasmodic exposure to tests and other evaluative measures. Evaluation is concerned with the whole range of students learning, it is not limited to student's personalities, attitudes and interests. The teacher must continually collect evidence of her students growth in democratic living as a basis for effectively directing their efforts.
2. Evaluation is concerned with means and ends: It is not sufficient to appraise end results done, the teacher must be equally concerned with the processes by which those results evolve.
3. Evaluation emphasize the importance of the individual - The teacher must have equal concern for every student in the classroom regardless of their backgrounds or abilities. He/she must make every effort to keep well informed about students in order to help them become increasingly self-directive.
4. Evaluation is an integral part of the teaching-learning process - Teaching and learning are greatly influenced by

the kind of evaluation that takes place in the classroom. Evaluation should be carried on concurrently with teaching and is both individual centred and group-centred.

5. Evaluation is a co-operative procedure - Evaluation is not a function reserved for experts, it is the concern of all individuals who are associated with an educational activity or who are affected by its results.

6. Evaluation involves reconstruction - There is little necessity for having evaluation as an important part of education unless something positive results. Improvements should be made following an appraisal effort.

Teaching, Learning and Evaluation is Skill Subjects

Skill subjects including vocational subjects demand effective implementation emphasizing skill development. This must be reflected in planning and evaluation of programmes. Fleck (1974) noted that skill oriented subjects require instructional methods that will generate more efficient and effective learning by breaking down information into a logical step-by-step progression and providing immediate knowledge of results.

Skills belong to the psychomotor domain of learning and relates to products and processes, they must not only result in products of acceptable quality but must also be done in a carefully prescribed way (Centre for Vocational Education /Module D-47, 1977).

However, Nworgu (1992) pointed out that most teachers are more familiar with the evaluation of cognitive behaviours than with the affective and psychomotor behaviours. Thus, frequently, teachers evaluate only the products neglecting the processes. This strategy may permit learners to learn work methods that inhibit continued skill development. Hence, the necessity to device an evaluation method that will evaluate psychomotor skills and enhance their acquisition.

Evaluation in the skills development programmes requires more than giving a paper and pencil type of test (Centre for Vocational Education /Module D-4/, 1977). It needs a more effective type of evaluation that can correct methods of working at each stage and reinforce correct learning procedure as well as involve the learners in the evaluation process (Anyakoha & Njoku, 1992). This calls for the learners self-evaluation of learning processes for skill acquisition.

Self-Evaluation and Skill Development

The nature of skill subjects (involving processes and products) calls for step-by-step assessment at each stage to ensure correct working methods and reinforce correct procedures for skill development (Blackenship & Moerchen, 1979). Evaluation in any skill subject should be able to provide the learner with immediate feedback which can enable him determine his progress

and need for improvement (Anyakoha & Njoku, 1992). Self-evaluation provides this type of immediate feedback. Evaluation of skills at the process level cannot be over-emphasized for proper skill acquisition. Anyakoha and Njoku (1992) noted that the teacher may not always be readily available to evaluate students at various stages thus making it very important for students in clothing education (like any other skill subject) to be able to judge what they are doing, correct mistakes and continue with their work, but that is only if they know what to look out for. This can be achieved through a self-evaluation manual.

Spitze and Griggs (1976) observed that evaluation becomes highly significant when a student is given an opportunity to evaluate himself. They further stressed that involving students in their own evaluation through the use of appropriate evaluation instruments involves them actively in the learning process which is very important for skill development, helps them develop a sense of self-worth and independence and most importantly trains students to recognise acceptable standards of workmanship.

Fleck (1974) pointed out that the single most important outcome of evaluation is what happens within the learner himself. Hall and Paolucci (1970) in the same vein stressed the need to permit students to share in evaluating their progress. They

argued that students who are given the opportunity to use self-checking devices may gain interest in improving and begin to grow in the ability to direct their own learning. The feedback an individual receives from evaluation determines what his next steps will be. If he experiences success, he is likely to move forward with the next task while failure may affect not only that individual's adjustment but also the functioning of the rest of the class and the teacher. Hall and Paollucci (1970) furthermore pointed out that the difficulty that may be encountered in using self-evaluation techniques is that students may have little insight into their own behaviour and thus tend to rate themselves too high on desirable qualities and too low on undesirable qualities. Personal traits are closely related to a student's self-rating. While some students consistently overrate themselves, others lack confidence to rate themselves as high as they deserve. The teacher is responsible for guiding students to a realistic appraisal of their achievement. The above fact was supported by Hatcher and Andrews (1962).

Schwartz (1967) stated that self evaluation can give students a sense of strength and encourage them to use all available resources and opportunities to achieve a greater self-insight. Self-evaluation tends to give a student personal satisfaction with her progress and motivate further achievement. When students

discover their own deficiencies, they tend to work harder to improve on them than when somebody else points them out. However, Broadfoot (1979) emphasized that an opportunity to discuss ones own performance helps a student to see himself realistically, to locate areas of misunderstanding, to correct methods of working and to reinforce correct learning procedure.

Studies Related to the Improvement of the Teaching of Clothing

It has earlier been established in the background of this study and the statement of the problem that an important reason why textiles and clothing suffers neglect and poor enrolment in schools is due to the ineffective instructional strategies (Anyakoha, 1986; Onugwue, 1986). Research efforts have so far been made at seeking ways of improving the teaching of clothing (Pankowski, 1967; Reed, 1969; Meerdink, 1970; Reich, 1971; Lefebvre, 1975; Taylor, 1980; Fletcher, 1981; Anyakoha, 1986; Mbah, 1989; Igbo, 1989; Utuk, 1991).

Pankowski (1967) developed a self-instructional manual for an introductory clothing course to facilitate the learning of art principles of introductory clothing design and construction classes. Books and Literature in the fields of clothing and art were examined and used as a basis for the content of the manual. However, no attempt was made to prove that the self instructional materials were an improved teaching tool as the prime concern was focused on the development of a self instructional

manual on fabric construction for an introductory college level clothing construction course. The program was not however, tested in a classroom situation to determine it's effectiveness as a teaching tool.

Many of the studies reviewed were concerned with developing an instructional tool that would facilitate teaching a single sewing (clothing construction) skill. Such include programmed approaches to teaching construction of collars, zipper applications, hems, pattern alterations among others. One of such studies of which the purpose was to develop and evaluate a linear programmed lesson on collar construction and attachment was that of Meerdink (1970). It was designed for students in elementary clothing construction course. The program provided background information on collars, gave instructions for constructing and attaching a collar, directed the student to proceed step-by-step through the construction process, gave evaluation criteria for judging workmanship and included a self-test over the project. After revision by Iowa state University textiles and clothing instructors and six undergraduate students, the program was tested utilizing twenty undergraduate students. The evaluation data was obtained from student information sheets, reaction questionnaires, records of the amount of time required by students to complete the project, program responses and workmanship

ratings of the collars. However, no attempt was made to apply statistical analysis in interpreting the data. After examining the data, Meerdink made recommendations for improvement of the program. The recommendations which would be applicable to other self-instructional programs include; arrangement for students to rate construction workmanship at regular intervals through the lessons; allow adequate time for completion of all parts of the program and to evaluate constructed garments in order to measure retention and transfer of learning.

Similar studies include those of Courtney (1979) who studied the effectiveness of two methods of teaching the application of a zipper crossing a seam and that of Green (1970), who developed a programmed lesson covering the construction of a bound button hole and the results were in favour of the self-instructional programs. Other studies that have compared the self-instructional methods and other conventional methods of teaching clothing include that of Athearn (1970).

One may be led to ask, why 'self-instructional' strategies? It is important to note, however, that studies have also revealed that students are able to learn and achieve particular course objectives through independent study particularly with the use of these self-instructional manuals (Churchill, 1960; Lefebvre, 1975). In a study examining independent study in a

college clothing course, Lefebvre concluded that independent study does not affect cognitive regain, retention, student satisfaction and student affective behaviour.

Other studies still aimed at the improvement of the teaching of clothing and which dwelt on the development and evaluation of self-instructional manuals mainly but to an extent included self-evaluation strategies to help the students in achieving their goals include those of Reich (1971), and Taylor (1980). Reich (1971) in a study involving development and evaluation of a self-instructional program for teaching basic principles of clothing construction to college students with varying degrees of clothing construction experience took the following steps; first, the content was analysed and the teaching objectives formed. Information was gathered from clothing construction sources most commonly used to prepare handouts and the illustrative material was constructed to show the progressive steps of each of the construction techniques. Directions for evaluating garments was given and students did a self-evaluation of their work. Reich recommended that students be rewarded for recognising mistakes and good and poor workmanship rather than credit for level of skill alone. The students self evaluation were then graded by two independent judges and the results averaged. The results showed that the students liked

the individual approach to learning and made the most of the opportunity. Also, Reich revealed that setting up a self-instructional program takes a great deal of initial planning and time but is well worth the effort. Reich also supported that clothing and textiles particularly clothing construction seems especially suited to a self-instructional programme.

Taylor (1980), also conducted a study involving the development and evaluation of a comprehensive self-instructional manual for a college introductory clothing construction course. The selection of topics included in the manual was as a result of the process which involved clothing construction textbooks, discussions with college clothing teachers, examination of clothing curricula and administration of a questionnaire designed to solicit information from persons knowledgeable in clothing and textiles. The overall format and organisation of the manual was developed after examination of other self-instructional programmes and related materials. The effectiveness of the manual as a teaching device and other variables were tested and results were in favour of the manual. Taylor revealed that the aspect of the manual which received the most praise was the technique developed for evaluation of construction processes as it will help students to develop observational skills needed to evaluate apparel/clothing construction processes.

Anyakoha (1982) with an aim of improving the teaching of clothing and textiles carried out a study using a competence-based approach on the in-service needs of post-primary school teachers in Home Economics (Clothing and Textiles) in Anambra State of Nigeria. She identified 98 (ninety-eight) technical competencies which were used to construct a questionnaire for data collection. The results showed that all the 98 competencies were upheld as needed by clothing and textile teachers. She also recommended that the identified competencies be incorporated into the pre-service and in-service post-primary training programme of Home-Economics. Anyakoha (1986) also utilizing the competency-based approach carried out a study on the identification of the essential traits and tasks of selected clothing occupations for senior secondary school students in Anambra and Imo States of Nigeria. The findings of the study among other purposes were to help teachers to improve and update their competencies in the area of clothing and textiles and also equip students with skills which they need in order to be gainfully employed in clothing occupations on graduation. A total of 45 clothing occupations, 33 traits and 109 tasks were identified from her study.

Onugwue (1986) in her study aimed at comparing the effect of another form of individualized instruction procedure with the

traditional lecture/demonstration method, used the experimental design with one control group and two experimental groups. The control group was observed before and after instruction and the two experimental groups were observed before instruction then taught using the individualized instruction method. It was observed that students taught with individualized method did better than those taught with lecture method.

Mbah (1989) in a study designed to develop and validate a self-evaluation instrument for clothing education students in tertiary institutions in Anambra State of Nigeria, utilized year two students and postulated a null hypothesis to find out if there was any relationship between the teachers and students ratings of finished students garments. The findings showed that there were relationships between the ratings by both students and teachers of the finished clothing articles as measured by the self-evaluation instrument. Mbah did not however, carry out a test statistically to determine the level of relationship or significant differences between the students' evaluation scores and that of the teacher. This is one of the aims of the present study among other purposes.

Igbo (1989) developed and evaluated task instruction sheets for teaching selected clothing construction skills to senior secondary school students in Anambra State of Nigeria. 40

psychomotor tasks were identified and 10 task instructions were developed and validated. 65 students were taught using the task instruction sheets and another 65 students were taught using lecture/demonstration method and all were evaluated using criterion referenced measures. Means and t-test were used in data analysis and findings showed that students taught with task instruction sheets performed significantly better than those taught by lecture/demonstration method. Igbo, although did not involve students in the evaluation recommended that such study be conducted in higher institutions and students/learners be involved in the evaluation due to the foreseen advantages.

The present study was carried out in tertiary institutions and learners were actively involved in their own self-evaluation of the clothing construction processes.

Evaluation of Clothing Construction Skills and Techniques

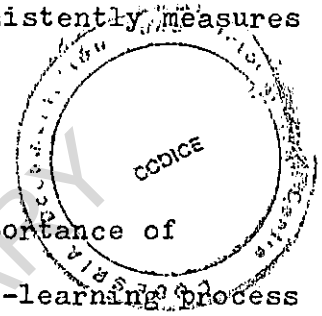
Blackenship and Moerchen (1979) pointed out that the ability to work with less supervision is an important criterion in the attainment of advanced level of clothing skills involving many steps. This minimal supervision necessitates that the learner should be able to evaluate himself, detect his faults, correct them and continue with his work. This in turn calls for effective analysis of the various tasks involved in clothing construction.

Self-evaluation of skills like clothing construction require procedures or devices that will help in reducing the amount of subjectivity in the judgement of skill oriented objectives. Checklists and rating scales have been found to be suitable in evaluating the processes used and products produced by students (Blackenship & Moerchen, 1979; Centre for Vocational Education /Module D-47, 1977). Well constructed checklists and rating scale contain explicit criteria for judging student performance in skill oriented courses. These criteria help the evaluator to focus his or her observations on the critical aspects of the objectives and to assure that these observations are as objective as possible (Centre for Vocational Education /Module D-47, 1977).

Checklists are mainly used for processes and are suitable only when a simple 'yes' or 'no' judgement is required. Rating scales differ from checklists in that characteristics or qualities are judged according to which they are present. They are used when the process is more complex or critical and in evaluating the quality of the product. Rating scales are more informative than checklists. At least, five levels of quality should be specified in a good rating scale thus:

5 = Excellent, 4 = Very good, 3 = Average (Good),
2 = Fair, 1 = Poor.

However, whether a checklist or rating scale is used, it is important that the device be both valid and reliable; valid - in terms of whether it evaluates what it is supposed to, and reliable - in terms of whether it consistently measures what it is intended to measure.



Summary of Literature Review

The review of literature revealed the importance of evaluation as an integral part of any teaching-learning process and the importance of self-evaluation. Research efforts so far made at improving the teaching and performance of students of clothing were reviewed. Most of these studies however, did not incorporate adequate means whereby students can assess themselves as they progress in their acquisition of clothing skills. This is very necessary as clothing construction involves skill acquisition and learners need to follow correct working methods, reinforce correct procedures and be able to assess their work with a view to detecting mistakes and correcting them. This study was therefore, designed to develop a self-evaluation instrument for basic clothing construction techniques which would enable students assess their work and correct themselves as they sew.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter deals with the procedures adopted in the research under the following sub-headings:

i. Plan of the Study
ii. Area of the Study
iii. Population for the Study
iv. Sample for the Study.
v. Instrument for Data Collection
vi. Data Collection Techniques
vii. Data Analysis Techniques.

Plan of the Study

The procedure for the study was as follows:

i. Identification and Validation of the basic essential clothing construction skills involved in the eight selected construction techniques.
ii. Development of the self-evaluation instrument using the identified clothing construction skills.
iii. Pilot-testing of the self-evaluation instrument.
iv. Actual field-testing of the self-evaluation instrument (Data collection).
v. Data analysis.

Area of the Study

The study was carried out in Enugu State of Nigeria.

Population for the Study

The population for the study comprised all Home Economics students in the departments of Home Science and Nutrition, and Vocational Teacher Education of the University of Nigeria, Nsukka and Home Economics Education Department of the Federal College of Education, Eha-Amufu - all in Enugu State.

Sample for the Study

Purposive sampling technique was utilized in selecting students who offer 300 level clothing construction courses in the institutions selected for the study. This was because the 300 level clothing courses are expected to expose the students to the construction details identified in the study. Ten students from the Federal College of Education, Eha-Amufu taking 300 level clothing courses were selected for the pilot-test. Also all the students taking the 300 level clothing courses in the two departments in the University of Nigeria, Nsukka were selected, giving a total of twenty seven students.

Instrument for Data Collection

The instrument used in this study was the Basic Clothing Construction Techniques (BCLOTS) self-evaluation rating scale. The development of the instrument was carried out in the following

phases:

i. Identification of the basic clothing construction techniques and skills: The basic clothing construction skills to look out for under each technique/process were identified through intensive literature review. A total of eight (8) processes/techniques and 63 (sixty three) skills were identified.

ii. Validation of the basic clothing construction skills: The identified clothing construction skills were converted into a 4-point questionnaire and the validators (clothing lecturers) were requested to rate each skill on a four-point scale of highly important, important, unimportant and highly unimportant with assigned values of 4, 3, 2, and 1 respectively. The validators were also requested to add other construction skills that were not included under each technique in the instrument.

iii. Development of the self-evaluation instrument: Based on the analysis of the responses of validators, a total of sixty-one construction skills were chosen and converted into the self-evaluation instrument with instruction to the user and few questions at the end to find out the reactions of the subjects to the instrument and problems they encountered in its use.

iv. Pilot-testing of the self-evaluation instrument:

Pilot-testing of the self-evaluation instrument was carried out on ten students from the Federal College of Education, Eha-Amufu to ascertain if there need be further improvements and corrections on the instrument and establish the reliability of the instrument. The Split-half reliability procedure was utilized to determine the reliability. To obtain the coefficient of reliability, the Pearson's r was used. The formula for r used was:

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{[N\Sigma X^2 - (\Sigma X)^2][N\Sigma Y^2 - (\Sigma Y)^2]}}$$

where N = total number of students (subjects)

X = odd number set of scores

Y = even number set of scores

Σ = sum of

The result yielded a coefficient of 0.92 which is high. Also, as a result of the pilot-test, further improvement was made on the instrument which brought the number of the construction skills to a total of sixty-eight skills.

Data Collection Techniques

This involved the following phases:

i. Training of respondents: The researcher taught the subjects/students the eight clothing construction processes/techniques specified in the scope of the study in a class session.

ii. Administration of the test. After training, the researcher administered the clothing construction test to the subjects. The subjects were required to construct two garments - a blouse/shirt with convertible collar and a gathered skirt with lining - (see Appendix II). Standardized ½ (half) patterns and other necessary materials were supplied to the subjects. The subjects worked in a standard clothing construction laboratory for a duration of time as enabled by their other school work. The researcher also supervised the subjects for the duration of time they worked.

iii. Self-evaluation by subjects: At the end of the construction test, the self-evaluation rating scale was given to the subjects for self-evaluation of the construction skills and to respond to the questions at the end of the instrument.

iv. Teacher evaluation: The researcher/teacher also evaluated the subjects' clothing construction skills also looking at the subjects' finished garments using

the self-evaluation instrument. Two sets of scores (the subjects and the teacher/researcher) were obtained and later tested for significant differences. The teacher's/researcher's ratings which were unbiased and independent of the subjects' ratings were taken to be the basis/standard for comparison for the determination of how objective the subjects were in their own self-ratings.

Data Analysis Techniques

The following data analysis techniques were used:

i. Mean - The mean was used for the following:

(a) To determine the importance level of the clothing construction skills. Based on the four-point scale of 4, 3, 2, and 1, a mean of 2.50 was taken as the minimum value a task would score to be considered important.

(b) To determine the average score for a subject in both the subjects'/students' self-evaluation ratings and the teacher's/researcher's ratings of the clothing skills.

ii. Standard deviation - This was used to determine how far a subject's mean self-evaluation ratings deviated from the teacher's/researcher's mean ratings of the clothing

skills and thus establish if the subject was objective, over-rated or under-rated self.

iii. Percentages were used to analyse the subjects' responses to the questions at the end of the instrument relating to the subject's/students' reactions to and problems encountered.with the use of the BCLOTS self-evaluation instrument.

$$\text{Formula} = \% = \frac{\text{Number of respondents to an item}}{\text{Total number of respondents}} \times \frac{100}{1}$$

iv. t-test: This was used to test the hypothesis of the study at 0.05 level of significance. The formula for t is shown below:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

where: $\bar{X}_1$ = Mean of Group I

$\bar{X}_2$ = Mean of Group II

n_1 = number of subjects in Group I

n_2 = number of subjects in Group II

S_1^2 = Squared deviation of Group I

S_2^2 = Squared deviation of Group II

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation and analysis of data collected in the study. The main purpose of the study was to develop a self-evaluation instrument for basic clothing construction techniques and determine any problem(s) students may encounter with the use of the instrument.

The chapter is organised under the following sub-headings:

i) Development of the instrument

ii) Testing of the self-evaluation instrument

iii) Testing of the hypothesis

iv) Reactions of subjects to the use of the self-evaluation instrument.

i. Development of the Instrument

Clothing and textile lecturers were requested to rate the identified criteria for evaluating clothing construction skill in an importance level 4-point rating scale. Their responses are summarised below in Tables 2 to 9.

Table 2

Mean Rating of Criteria for Evaluating Seams and Seam Finishes Technique

S/No	Criteria	Mean	Standard deviation	Remarks
1.	Seam appropriate for type of fabric	3.8	0.45	Important
2.	Seam suitable for style and purpose of garment.	3.0	0.70	"
3.	Seam stitched straight, evenly without puckering.	3.6	0.89	"
4.	Stitching secured firmly at both ends.	3.8	0.45	"
5.	Even accurate seam allowances	3.6	0.55	"
6.	Seam smooth, flat and firmly stitched.	3.8	0.45	"
7.	Grainline maintained without distortion.	4	0	Highly Important
8.	Reinforcements at points of strain	3.4	0.55	"
9.	Inward and outward curved seams well handled.	3.4	0.55	"
10.	Seam edges neatly finished without fray or ravel.	3.8	0.45	"
11.	Seam pressed flat or open.	3.8	0.45	"

Table 3

Mean Rating of Criteria for Evaluating the Controlling of Fullness (Darts, Pleats, Gathers)

S/No	Criteria	Mean	S.D	Remarks
1.	Dart tapers to nothing at one or both ends.	3.4	0.55	Important
2.	Thread fastened off at the tapered end.	3.4	0.55	"
3.	Dart pressed towards the centre-front or centre back of the garment.	3	0.7	"
4.	Uniform width for pleats and tucks.	3.6	0.55	"
5.	Pleats and tucks pressed down flat and smooth.	3.6	0.55	"
6.	Two rows of gathering stitches made with one exactly on the seam line and the other about 1/8 inch above the first.	3.2	0.45	"
7.	Gathering made by pulling the bobbin threads so that they do not break.	3.2	0.45	"
8.	Gathers evenly spread.	4	0	Highly Important

Table 3 above showed that all the criteria identified under the techniques of controlling fullness (darts, pleats, gathers), were considered important for acquisition of clothing skills.

Table 4

Mean Rating of Criteria for Evaluating Underlying Materials

S/No.	Criteria	Mean	S.D	Remarks
1.	Interfacing and lining materials compatible to garment fabric in terms of weight, colour, care requirements etc.	3.2	0.45	Important
2.	Interfacing inconspicuous and correctly fitted to garment.	3.6	0.55	"
3.	Interfacing provide sufficient firmness and reinforcement.	3.2	0.45	"
4.	Linings cut on the same grain as garment and from the same pattern pieces.	3.4	0.89	"
5.	Garment pieces assembled before lining is attached matching darts and seams together.	3.4	0.55	"

Table 4 above also showed that all the identified criteria were important for acquisition of skills.

Table 5

Mean Rating of Criteria for Evaluating Collars and Neckline Finishes.

S/No	Criteria	Mean	S.D	Remarks
1.	Facings, flat and smooth without bulges or puckers.	3.8	0.45	Important
2.	Facing compatible to garment fabric in terms of weight, colour and care requirement.	3.4	0.55	"
3.	Facing invisible on right side of garments except decorative facings.	3.6	0.55	"
4.	Fitted and bias facings used appropriately.	3.4	0.55	"
5.	Collars sharp edged, smooth and well pressed.	3.8	0.45	"

Table 5 above showed that all the criteria identified for evaluating collars and neckline finishes are important for skill acquisition.

Table 6

Mean Rating of Criteria for Evaluating Attachment of Sleeves

S/No.	Criteria	Mean	S.D	Remarks
1.	Sleeve suitable for fabric type and figure type.	3.6	0.55	Important
2.	Smooth rounded cap with no pleats or gathers unless they are fashion features.	3.4	0.55	"
3.	Ease in the under-arm area as well as the sleeve cap area.	2.4	0.45	Unimportant
4.	Good armhole line resulting from straight, even stitching and well marked seam lines.	3.4	0.55	Important
5.	Cross wise grain parallel to the floor, length-wise grain perpendicular to the floor and no diagonal wrinkles.	3.2	0.45	Important
6.	Seam finish appropriate for the fabric.	3.4	0.55	"

Table 6 above revealed that one of the identified criteria for evaluating attachment of sleeves was considered unimportant as indicated by the mean value of 2.4 placed on it which is below the cut off point of 2.50, which was taken as the least

any item must score to be considered important.

Table 7

Mean Rating of Criteria for evaluating Waistline Finishes

S/No	Criteria	Mean	S.D.	Remarks
1.	Dart and seams on bodice and skirt are perfectly aligned.	3.6	0.55	Important
2.	Waistline smooth without wrinkles and seam flat.	2.3	0.55	Unimportant
3.	Waist band even in width except for fashion features.	3.4	0.55	Important
4.	Waist band interfaced to keep firm and retain shape.	3.4	0.55	"
5.	Cut on true grain.	3.2	0.45	"
6.	Flat and smooth with no bulges or ripples.	3.2	0.45	"

The above table also revealed that one of the criteria identified for evaluating waistline finishes was rated unimportant for acquisition of skills as indicated by the mean score of 2.3 as against the average minimum score of 2.50.

Table 8

Mean Rating of Criteria for Evaluating Attachment of Fastenings (Buttons and Button holes, Zippers)

S/No	Criteria	Mean	S.D	Remarks
1.	Button holes accurately and evenly spaced on the garment.	3.8	0.45	Important
2.	Button holes adequately reinforced to retain shape.	3.2	0.45	"
3.	Button holes positioned to prevent gapping and top and lower edges of garment evenly aligned.	3.2	0.45	"
4.	Button colour blends and suitable for fabric.	3.2	0.45	"
5.	Button holes sized correctly for buttons.	3.4	0.55	"
6.	Button securely sewn.	3.2	0.45	"
7.	Zipper flat, smooth and inconspicuous except where decorative.	3.2	0.45	"
8.	Zipper teeth and pule tab concealed beneath fabric flap.	3	0	"
9.	Stitching straight and even for the entire length of the placket.	3.4	0.55	"
10.	No noticeable gap between the end of the zipper and the edge of the garment.	3	0	"

Table 8 above revealed that all the identified criteria for evaluating the attachment of fastenings to a garment were considered important for proper skill acquisition.

Table 9

Mean Rating of Criteria for Evaluating Hems

S/No	Criteria	Mean	S.D	Remarks
1.	Inconspicuous on the right side of the garment unless for design and decorative purposes.	3.2	0.45	Important
2.	Uniform in width and parallel to the floor.	3.2	0.45	"
3.	Flat, smooth and no trace of bulkiness.	3.5	0.55	"
4.	Width appropriate to the cut, fabric and style of garment.	3.2	0.45	"
5.	Hem stitched inconspicuously, evenly and securely.	3.4	0.55	"

The above table also revealed that all the identified criteria for evaluating hems were important for skill acquisition.

Table 10

Mean Rating of Criteria for Evaluating Overall Fitting of Garments

S/No	Criteria	Mean	S.D.	Remarks
1.	General appearance of the garment.	3.6	0.55	Important
2.	Suitability of fabric for style.	3.2	0.45	"
3.	Grain well manipulated, i.e grain line line/direction followed.	3.2	0.45	"
4.	Adequate ease and balance.	3.2	0.45	"
5.	No unbecoming folds.	3.2	0.45	"
6.	Well pressed professional appearance.	3.2	0.45	"
7.	General workmanship.	3.2	0.45	"

Table 10 above showed that all the identified criteria for evaluating over-all fitting of garments were important.

In summary therefore, only two out of all the criteria (clothing construction details) had a mean of less than 2.50 and thus unimportant and deleted from the questionnaire.

ii. Testing of the BCLOTS self-Evaluation Instrument

In order to test the self-evaluation instrument, the subjects constructed a skirt and a blouse after which they rated their work using the self-evaluation instrument and the teacher/researcher rated the subjects' work also. These two sets of ratings were compared to determine how objective students could be in their self-ratings. The teacher's/researcher's ratings were assumed to be unbiased and independent and so used as basis/standard for comparing the subjects' ratings. The subjects' and teacher's mean ratings are summarized below in Table 11.

Table 11

Comparison of the Subjects' Individual Self-Evaluation Mean Ratings of the Clothing Skills with the Teacher's Mean Ratings

S/No.	$\bar{X}_1$	$\bar{X}_2$	S.D.	Remarks
1.	4.2	4.0	0.14	*
2.	3.5	4.2	-0.5	***
3.	3.8	3.1	0.5	**
4.	2.75	3.1	0.24	*
5.	3.8	3.6	0.14	*
6.	4.5	3.8	0.5	**
7.	2.3	2.4	0.07	*
8.	3.0	3.1	0.07	*
9.	4.3	4.1	0.14	*
10.	3.3	2.6	0.5	**
11.	4.2	3.8	0.28	*
12.	2.9	3.1	0.14	*
13.	3.7	3.97	0.19	*
14.	4.2	4.0	0.14	*
15.	4.4	3.8	0.42	*
16.	3.8	3.7	0.07	*
17.	4.0	4	0	*
18.	4.0	3.2	0.56	**
19.	3.0	2.75	0.17	*
20.	3.75	3.5	0.17	*
21.	3.54	3.44	0.07	*
22.	4.16	4.23	0.04	*
23.	3.76	4.05	0.2	*
24.	2.4	2.56	0.11	*
25.	3.44	3.71	0.19	*
26.	2.8	2.75	0.03	*
27.	3.6	3.5	0.07	*

$\bar{X}_1$ = mean of subject's ratings

$\bar{X}_2$ = mean of teacher/researcher's ratings

* = objective (81.4%)

** = over-rated self (14.8%)

*** = under-rated self (3.7%)

The above table showed that 81.4% of the subjects rated themselves objectively with their mean ratings deviating from the researcher/teachers mean ratings of the clothing skills by less than 0.5. On the other hand, 14.8% of the subjects over-rated themselves with their mean ratings deviating from the researcher/teacher mean ratings with a value of 0.5 and above, while 3.7% of the subjects under-rated self with a standard deviation of -0.5 less than the teacher/researchers mean rating.

iii. Testing of Hypothesis

Ho: There will be no significant difference between the subjects' self-evaluation mean ratings and the teacher's own mean evaluation ratings of the clothing skills at 0.05 level of significance.

The t-test was applied to test the hypothesis using the mean of the subjects' ratings and that of the teacher/researcher at 0.05 level of significance.

Table 12

T-test Analysis of the Difference between Mean Ratings by Subjects and the Teacher/Researcher

	Mean	S.D.	T-cal	T-crit.
Subjects' ratings	3.6	0.6	0.8	2.0
Teacher's ratings	3.48	0.54		

The above table showed that the calculated value of t (0,8) is less than the table or critical value of t (2.0). Thus, the null hypothesis was accepted suggesting that there is no significant difference between the subjects' mean evaluation ratings and the teacher/researcher's mean evaluation ratings of the clothing construction skills at 0.05 level of significance.

Table 13

Subjects' Reaction to and Problems Encountered in the use of the Self-evaluation Instrument

S/No	Questions	% Yes	% No
1.	Would you recommend this self-evaluation instrument to other students?	100	-
2.	Do you feel you could have sewn well using the self-evaluation instrument alone without a teacher present?	88	11
3.	If yes, explain! - not very simplified	7.4	-
4.	What changes or improvements would you like to see in the self-evaluation instrument if you were going to use it again?		
	- Speed limit should be included	11	
	- should be more simplified	14.8	
	- more sewing instructions should be included.	14.8	

Table 13 above revealed that all the subjects (100%) found the instrument useful and so recommended it for other students. Also majority (88%) of the subjects felt they could sew well with the aid of the self-evaluation instrument without a teacher being there while 11% felt they could not cope. 92% of the respondents found the self-evaluation instrument easy to follow/use while 7.4% experienced difficulty in using the instrument and gave their reason as the manual not being very simplified.

Table 14

Additional Comments of the Respondents Regarding the Self-evaluation Instrument

S/No	Comments	%
1.	The use of the self-evaluation instrument is very good, encouraging and will help students in improving their skills.	26
2.	The instrument is very useful and should be made available for normal class work.	18.5
3.	Quite comprehensive and interesting to use.	11
4.	My construction work could have been better if I were sewing with the self-evaluation instrument.	14.8
5.	No comments	29.6

Table 14 above showed that most of the respondents found the use of the self-evaluation instrument interesting and encouraging and recommended it for their normal class/ laboratory clothing construction work.

Findings

The following findings were made:

1. Sixty-eight (68) clothing construction skills were identified as necessary criteria for the evaluation of basic clothing skills.
2. A sixty-eight item basic clothing construction techniques

(BCLOTS) self-evaluation instrument for clothing students was developed for proper acquisition of skills.

3. There is no significant difference between the subjects' mean evaluation ratings and the teacher/researchers' mean evaluation ratings of the clothing construction skills. This was shown by the t-test analysis of the means in table 12 where t-cal (0.8) was less than t-crit (2.0) and so led to the acceptance of the null hypothesis.

4. Most of the subjects were objective in their rating (81.4%). Only a few over-rated themselves (14.8%) while a very minor percentage (3.7%) under-rated self.

5. All the subjects (100%) found the BCLOTS self-evaluation instrument useful and would recommend it to other students.

6. Majority (88%) of the subjects admitted they could sew well with the aid of the BCLOTS self-evaluation instrument without a teacher present, while 11% felt they could not.

7. Most of the stuaents did not encounter any difficulty in using the BCLOTS self-evaluation instrument (92%). A little percentage (7.4%) of the subjects, however, experienced difficulty in using the instrument and indicated that the instrument was not very simplified for them to understand.

8. Regarding changes or improvements to be made on the BCLOTS

self-evaluation rating scale, the subjects recommended that the construction details be more simplified, speed limit included in the test and more sewing instructions included.

9. In addition, the subjects made the following comments;

(i) the use of the self-evaluation instrument is very good and will help students in improving/perfecting their clothing skills;

(ii) the instrument is very useful and should be made available for normal class/laboratory work;

(iii) the instrument is quite comprehensive and interesting to use;

(iv) would have performed better in the construction test if the sewing was done looking at the instrument.

Discussion of the Findings

Among all the identified criteria for evaluating basic clothing construction skills, maintaining of grain line and even spread of gathers scored the highest points on their importance level. This could be due to the improper hang, unbalanced and poor workmanship appearance of a garment with distorted grain direction and uneven spread of fullness. Other construction details that ranked next to the above mentioned include smooth, flat and firmly secured stitches;

seam edges neatly finished without fray or ravel, seam pressed flat or open; button holes accurately and evenly spaced on the garment. This could be attributed to the professional finish the above construction details give to a garment.

Many of the subjects (81.4%) possessed the ability to rate themselves objectively. A few subjects, however, over-rated themselves on comparing their mean ratings to that of the teacher/researcher. Furthermore, a fewer still percentage (3.7%) under-rated self. This finding is consistent and in agreement with the assertion of Hall and Paolluci (1970) that the difficulty that may be encountered in using self-evaluation techniques is that students may have little insight into their own behaviour and thus tend to rate themselves too high on desirable qualities and too low on undesirable qualities. Personal traits are closely related to a student's self-evaluation. While some students consistently over-rate themselves, others lack confidence to rate themselves as high as they deserve.

However, one subject was most objective in her self-evaluation with a standard deviation of 0 on comparing subjects' ratings with teacher/researcher's ratings. This finding seems supported by Hatcher and Andrews (1962) who explained that when students first begin appraising themselves, their scores may be

too high or too low and at variance with the teachers scores, but with experience and practice, students can develop the ability to rate themselves quite accurately/objectively with their ratings similar to those of their teachers.

There was no significant difference between the subjects' mean evaluation scores and the teacher/researcher's mean evaluation scores of the clothing skills at 0.05 level of significance. This was because most of the subjects (81.4%) were objective in their ratings. This finding is also consistent with that of Mbah (1989) who also found out that there was a significant relationship between the students and teachers ratings of the constructed clothing articles.

All the subjects (100%) found the self-evaluation instrument useful and recommended it to other students. This finding is consistent with that of Taylor (1980) and seems supported by the assertion that evaluation becomes highly significant when a student is given the opportunity to evaluate him/herself (Spitze and Griggs, 1976).

Most of the subjects (88%) stated that they could sew well with the aid of the self-evaluation instrument without a teacher being there all the time. This again agrees with the

statement of Schwartz (1967) that self-evaluation can give students a sense of strength and encourages them to use all available resources and opportunities to achieve a greater insight.

A few percentage (7.4%) of the subjects experienced some difficulty in using the manual while majority (92%) did not encounter any difficulty. The reason they gave for the difficulty they experienced was that some construction details were not very simplified for them to understand. This may be attributed (because of the small percentage) to the fact that some Home Economics students tend to dislike clothing construction and so do not take time to study the subject and acquaint themselves with some common terminologies. Some students see the subject as difficult to understand and so frown at it, thus do not lend themselves to understanding it.

It was also interesting to note that among the additional comments made by the subjects, most of them stated that the use of the self-evaluation instrument was very good and encouraging and will help them in improving/perfecting their skills, while most others indicated that their construction work could have been better if they were working/sewing with the self-evaluation instrument and thus demanded that it (the instrument) be made available for normal classwork. These foreseen advantages must

be the reasons why Igbo (1989) recommended that in future students should be involved in their own evaluation. It thus becomes obvious that clothing construction which is a skill-subject, and involves processes and products needs a step-by-step assessment that will provide learners with immediate feed-back which can enable them determine their progress and need for improvement.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter summarises the study, highlights the implications of the findings, arrives at conclusion, recommends and suggests areas for further research.

Re-Statement of Problem

Clothing and textiles has been identified as the most neglected aspect of Home Economics as shown in Table 1. However, the capacity of the subject to prepare students for employment in numerous clothing related occupations for self-reliance cannot be neglected. One of the reasons advanced for the neglect of the subject was attributed to ineffective instructional strategies. Efforts have been made at developing instructional methods and materials that will promote students interest and achievement of their objectives. However, efforts have not been directed towards devising ways of enhancing meaningful evaluation of clothing skills. Yet effective teaching and learning must of necessity involve effective evaluation. This study thus aimed at developing a self-evaluation instrument for basic clothing construction techniques which students taking clothing courses in tertiary institutions can use in assessing their clothing construction skills.

Procedure Used

The population for the study comprised Home Economics students in the departments of Home Science and Nutrition and Vocational Teacher Education of the University of Nigeria, Nsukka and also department of Home Economics Education of the Federal College of Education, Eha-Amufu - all in Enugu State. The sample comprised students taking 300 level clothing construction courses in the above institutions. A comprehensive list of identified criteria for evaluating clothing skills was validated by clothing lecturers in the area of study. Based on the analysis of their responses, the BCLOTS self-evaluation instrument was developed. This was pilot-tested on ten subjects from the Home Economics Department of the Federal College of Education, Eha-Amufu. Also, based on the analysis of the pilot-test, the instrument was further improved on and used for the actual field testing (data collection) on the main sample.

Principal Findings

Sixty-eight (68) clothing construction skills were identified as necessary criteria for the evaluation of basic clothing skills. These criteria were also considered important for proper acquisition of skills and so formed the basis for the developed self-evaluation instrument.

There is no significant difference between the subjects' mean self-evaluation ratings and the teacher/researcher's mean evaluation ratings of the clothing skills. This was shown by the t-test analysis of the means of the two sets of scores/ratings. Thus the null hypothesis was accepted.

Majority of the subjects (88%) were objective in their rating. Only few of the subjects either over-rated or under-rated themselves.

All the subjects (100%) found the self-evaluation instrument useful and recommended it to other students. Also, most of the subjects (96%) found the self-evaluation instrument easy to use while a few experienced some difficulty in using the instrument and attributed it to lack of understanding of some terminologies in the instrument.

Finally, most of the subjects commented that the use of the self-evaluation instrument was good, encouraging and would help students in acquiring and improving their clothing skills. The subjects also recommended that the self-evaluation instrument be made available for their normal class/laboratory clothing construction work.

Implications of the Study

The findings of this study have implications for educators, Home Economics teachers and clothing and textile lecturers who

have the task of teaching students and helping them acquire relevant clothing skills.

The findings of this study have implications for students who have the task of practising how to rate or assess themselves objectively. By realistically assessing themselves, students will discover their good and poor workmanships and correct themselves and also better appreciate the assessment of their teachers.

The findings of the study imply that clothing and textile lecturers and Home Economics teachers need improve on their instructional strategies for teaching clothing construction to students as most of the basic skills the students were supposed to possess at their level were lacking in them, especially as most of them complained of difficulty in fixing the collar.

The findings of the study also have implications for students who need to improve their clothing construction skills. It now rests on the students to employ the use of the developed self-evaluation manual in their clothing construction and progress, even with less supervision and attain proper clothing skills.

The findings of the study have implications for those who are interested in clothing construction, home sewers and retirees who may not have the opportunity to go to school and

learn. With the developed self-evaluation manual, they can evaluate their construction processes and acquire the proper skills needed for a well made garment that does not bear the imprint 'home-made'.

The instrument developed in this study will also assist individuals, apart from students and home economics teachers in acquiring observational skills for use not only in evaluating individually constructed garments, but also ready-to-wear garments.

Conclusion

The teaching of clothing construction requires instructional strategies that should necessarily involve effective evaluation and student's self-evaluation. The evaluation device developed by this study appears suitable for teaching and learning of clothing construction.

Students can effectively and objectively use the self-evaluation manual for assessing their basic clothing construction skills and thus improve/perfect their construction skills. Thus, any properly planned instructional strategy in clothing construction should include this means, self-evaluation devices by which the learners can evaluate themselves as they progress, discover their mistakes, correct them and continue with their work. This will promote acquisition of skills and self-reliance

and hence promote the manpower development of the nation.

Recommendations for Action

Based on the findings of the study, the following recommendations were made:

1. Clothing and textiles students in tertiary institutions should be made aware of the self-evaluation device to help them in acquiring clothing construction skills.
2. Clothing and textile lecturers and Home Economics teachers should incorporate into their instructional strategies the self-evaluation guide for students, to supplement their efforts and for better skill acquisition.
3. Students should be encouraged to evaluate themselves objectively as it will enhance their discovery of good/poor workmanship and thus areas where they need improvement. The developed manual would be useful for this purpose.
4. The self-evaluation instrument should be reviewed by curriculum planners and produced in form of a laboratory manual and distributed to higher institutions to back up the self-instructional strategies being emphasized and developed recently.
5. Students in senior secondary schools should also be encouraged by their teachers to use the self-evaluation device as it will enhance their early acquisition of

clothing skills for self-reliance.

6. The self-evaluation manual is also recommended for those undergoing the NDE (National Directorate for Employment) programme to support the training they receive and improve their clothing construction skills.

7. Seminars and workshops could also be organised by programme/curriculum planners for all teachers of skill subjects to emphasize the need for effective evaluational strategies in skill subjects and need to involve students in their own evaluation for proper acquisition of skills.

Suggestions for Further Research

The following have been suggested for further research:

1. The developed instrument could be tried out in tertiary institutions in the country.
2. The developed instrument could also be tried out using a larger sample size.
3. The study could also be carried out in colleges of education and polytechnics that offer clothing construction courses.
4. The study could be carried out using two groups - a control and an experimental group to determine the extent to which the use of the instrument facilitates the acquisition of clothing skills.

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APPENDIX I

Department of Vocational Education,
University of Nigeria,
Nsukka.

Dear Sir/Madam,

Validation of Research Instrument

I am a postgraduate student of the above school carrying out a study towards developing a self-evaluation instrument for basic clothing construction techniques.

Please your assistance is required in validating this research instrument by indicating the extent to which the listed clothing construction details are important for the acquisition of skills in clothing construction. A four point scale from highly important to highly unimportant is provided.

You can also add other construction details that are not included under each technique.

Thanks for your co-operation.

Sgd./
Njoku, Stella N.

Indicate how you would rate the following clothing construction details as necessary for a well finished garment using the key below:

KEY: 4 = Highly Important, 3 = Important, 2 = Unimportant
1 = Highly Unimportant.

	Seams and Seam Finishes	4	3	2	1
1.	Seam appropriate for type of fabric.				
2.	Seam suitable for style and purpose of garment.				
3.	Seam stitched straight, evenly without puckering.				
4.	Stitching secured firmly at both ends.				
5.	Even accurate seam allowances.				
6.	Seam smooth, flat and firmly stitched.				
7.	Grainline maintained without distortion.				
8.	Reinforcement at points of strain.				
9.	Inward and outward curved seams well handled.				
10.	Seam edges neatly finished without fray or ravel.				
11.	Seam pressed flat or open.				
	Controlling Fullness (Darts, Pleats, Gathers, Tucks)				
12.	Dart, tapers to nothing at one or both ends.				
13.	Thread fastened off at the tapered end.				
14.	Darts pressed towards the centre - front or centre-back of the garment.				
15.	Uniform width for pleats and tucks.				

4	3	2	1

16. Pleats and tucks pressed down flat and smooth.

17. Two rows of gathering stitches made with one exactly on the seam line and the other about 1/8 inch above the first.

18. Gathering made by pulling the bobbin threats at the same time carefully so that threats do not break.

19. Gathers evenly spread.

Underlying Materials

20. Interfacing and lining materials compatible to garment fabric in terms of weight, colour, care requirements, etc.

21. Interfacing inconspicuous and correctly fitted to garment.

22. Interfacing providing sufficient firmness and reinforcement.

23. Linings cut on the same grain as garment and from the same pattern pieces.

24. Garment pieces assembled before lining is attached matching darts and seams together.

Collars and Neckline Finishes

25. Facing flat and smooth without bulges or puckers.

26. Facing compatible to garment fabric in terms of weight, colour and care requirements.

27. Facing invisible on right side of garments except decorative facings.

28. Fitted and bias facing used appropriately.

29. Collars sharp edged, smooth and well pressed.

	4	3	2	1
Attachment of Sleeves				
30. Sleeve suitable for fabric type and figure type.				
31. Smooth rounded cap with no pleats or gathers unless they are fashion features.				
32. Ease in the under-arm as well as the sleeve cap area.				
33. Good arm hole line resulting from straight, even stitching and well marked seam lines.				
34. Cross wise grain parallel to the floor, lengthwise grain perpendicular to the floor and no diagonal wrinkles.				
35. Seam finish appropriate for the fabric.				
Waistline Finishes				
36. Darts and seams on bodice and skirt are perfectly alligned.				
37. Waistline smooth without wrinkles and seam flat.				
38. Waist band even in width except for fashion features.				
39. Waist band interfaced to keep firm and retain shape.				
40. Cut on true grain.				
41. Flat and smooth with no bulges or ripples.				
Attachment of Fastenings (Buttons and Button holes, Zippers)				
42. Button holes accurately and evenly spaced on the garment.				

		4	3	2	1
43.	Button holes adequately reinforced to retain shape.				
44.	Button holes positioned to prevent gapping and top and lower edges of garment evenly aligned.				
45.	Button colour blends and suitable for fabric.				
46.	Button holes sized correctly for buttons.				
47.	Buttons securely sewn.				
48.	Zipper flat, smooth and inconspicuous except where decorative.				
49.	Zipper teeth and pull tab concealed beneath fabric flap.				
50.	Stitching straight and even for entire length of placket.				
51.	No noticeable gap between the end of the zipper and the edge of the garment.				
	Hems				
52.	Inconspicuous on the right side of the garment unless for design and decorative purposes.				
53.	Uniform in width and parallel to the floor.				
54.	Flat, smooth and no trace of bulkiness.				
55.	Width appropriate to the cut, fabric and style of garment.				
56.	Hem stitched inconspicuously, evenly and securely.				

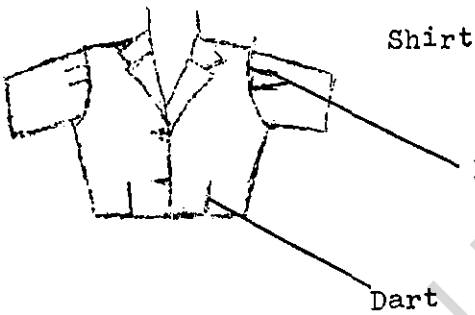
	4	3	2	1
Over-All Fitting				
57. General appearance of the garment.				
58. Suitability of fabric for style.				
59. Grain well manipulated, i.e grain line/ direction followed.				
60. Adequate ease and balance.				
61. No unbecoming folds.				
62. Well pressed professional appearance.				
63. General workmanship.				

APPENDIX II

CONSTRUCTION TEST SHEET

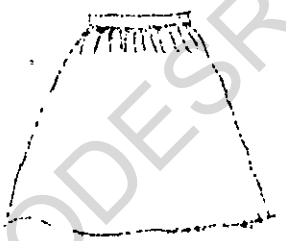
Using the patterns and materials provided, construct the garments illustrated below:

(1)



Shirt with convertible collar

(2)



Gathered skirt with lining and zipper behind.

Note: Accuracy in techniques/skills should be aimed at.

APPENDIX III

THE SELF-EVALUATION RATING SCALE

INSTRUCTIONS:

1. Tick the appropriate column as applies to your construction.
2. You are required to score yourself objectively.
3. You will be evaluated partly on the basis of your recognition of your good and poor construction technique. In other words, credit will be given for recognizing mistakes and standards of workmanship rather than credit for level of skill alone.
4. Additional comments can be written at the end/back in the space provided.
5. Turn in your garments for evaluation and your evaluation scores.

KEY: 5 = Excellent, 4 = Very good, 3 = Good (Average), 2 = Fair, 1 = Poor.

	5	4	3	2	1
Seams and Seam Finishes					
1. Seam appropriate for type of fabric					
2. Seam suitable for style and purpose of garment.					
3. Seam stitched straight, evenly without puckering.					
4. Stitch secured firmly at both ends.					
5. Even accurate seam allowances.					
6. Seam smooth, flat and firmly stitched.					
7. Grainline maintained without distortion.					
8. Reinforcements at points of strain.					

		5	4	3	2	1
9.	Inward and outward curved seams well handled.					
10.	Seam edges neatly finished without fray or ravel.					
11.	Seam pressed flat or open.					
12.	Colour of thread blends with and suitable for fabric.					
	Controlling Fullness (Darts, Pleats, Gathers, Tucks)					
13.	Dart tapers to nothing at one or both ends.					
14.	Thread fastened off at the tapered end.					
15.	Darts pressed towards the centre front of or centre back of the garment.					
16.	Uniform width for pleats and tucks.					
17.	Pleats and tucks pressed down flat and smooth.					
18.	Two rows of gathering stitches made with one exactly on the seam line and the other about 1/8 inch above the first.					
19.	Gathering made by pulling the bobbin threads at the same time carefully so that threads do not break.					
20.	Gathers evenly spread.					
	Underlying Materials					
21.	Interfacing and lining materials compatible to garment fabric in terms of weight, colour, care requirements, etc.					

	5	4	3	2	1
22. Interfacing inconspicuous and correctly fitted to garment.					
23. Interfacing provides sufficient firmness and reinforcement.					
24. Linings cut on the same grain as garment and from same pattern pieces.					
25. Garment pieces assembled before lining is attached matching darts and seams together.					
Collars and Neckline Finishes					
26. Facings flat and smooth without bulges or puckers.					
27. Facing compatible to garment fabric in terms of weight, colour and care requirements.					
28. Facing invisible on right side of garments except decorative facings.					
29. Fitted, extended and bias facings used appropriately.					
30. Facing firm enough to avoid stretching or wilting (i.e interfaced).					
31. Collars sharp edged, smooth and well pressed.					
32. Collars follow the natural neckline of the garment without gapping or pulling.					
33. Collars accurately and symmetrically curved or pointed.					
Attachment of Sleeves					
34. Sleeve suitable for fabric type and figure type.					

		5	4	3	2	1
35.	Sleeves set-in appropriately.					
36.	Smooth rounded cap with no pleats or gathers unless they are fashion features.					
37.	Good arm hole line resulting from straight even stitching and well marked seam lines.					
38.	Cross wise grain parallel to the floor, length-wise grain perpendicular to the floor and no diagonal wrinkles.					
39.	Seam finish appropriate for the fabric.					
	Waistline Finishes					
40.	Darts and seams on bodice and skirt are perfectly aligned.					
41.	Waist band even in width except for fashion features.					
42.	Waist band interfaced to keep firm and retain shape.					
43.	Cut on true grain (length-wise grain).					
44.	Flat and smooth with no bulges or ripples.					
	Attachment of Fastenings (Buttons and button holes, Zippers)					
45.	Button holes accurately and evenly spaced on the garment.					
46.	Button holes adequately reinforced to retain shape.					
47.	Button holes positioned to prevent gapping and top and lower edges of garment evenly aligned.					

		5	4	3	2	1
48.	Button colour blends and suitable for fabric.					
49.	Button hole sized correctly for buttons.					
50.	Buttons securely sewn without loose threads.					
51.	Zipper plackets flat, smooth and inconspicuous except where decorative.					
52.	Zipper teeth and pull tab concealed beneath fabric flap.					
53.	Stitching straight and even for the entire length of placket.					
54.	No noticeable gap between the end of the zipper and the edge of the garment.					
55.	Size of hook and eye suitable for garment.					
56.	Hook and eye securely sewn and well concealed.					
	Hems					
57.	Inconspicuous on the right side of the garment unless for design and decorative purposes.					
58.	Uniform in width and parallel to the floor.					
59.	Flat, smooth and no trace of bulkiness.					
60.	Width appropriate to the cut, fabric and style of garment.					
61.	Hem stitched inconspicuously, evenly and securely.					

	5	4	3	2	1
Over-all Fitting					
62. General appearance of the garment.					
63. Suitability of fabric for style.					
64. Grain well manipulated, i.e grain line/ direction followed.					
65. Adequate ease and balance.					
66. No unbecoming folds.					
67. Well pressed professional appearance.					
68. General workmanship.					

Answer the following questions:

1. Would you recommend this manual to other students?
   Yes ☐ No ☐

2. Do you feel you could have sewn well using the manual alone without a teacher present?
   Yes ☐ No ☐

3. Did you experience any difficulty in using the manual?
   Yes ☐ No ☐

4. If yes, explain: _____

5. What changes or improvements would you like to see in the self-evaluation manual if you were going to use it again?
   _____

6. Additional comments: _____
   _____