COMPARATIVE STUDY ON THE EFFECT OF ELECTRONIC-TUTOR-GUIDE AND DEMONSTRATION METHOD OF TEACHING ON SKILLS ACQUISITION IN CLOTHING IN COLLEGES OF EDUCATION IN PLATEAU STATE

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AHMADU BELLO UNIVERSITY,
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TITLE PAGE

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MAY, 2015

DECLARATION

I declare that the work in this thesis report entitle "COMPARATIVE STUDY ON THE EFFECT OF ELECTRONIC TUTOR – GUIDE AND DEMONSTRATION METHOD OF TEACHING ON SKILL ACQUISITION IN CLOTHING IN COLLEGE OF EDUCATION IN PLATEAU STATE", has been performed by me in the Department of Vocational and Technical Education under the supervision of Prof. T. O. Ojo and Dr. M. F. Ahuwan.

The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at any university.

Lucy Philip Shok

_____ _____

Signed Date

CERTIFICATION

This thesis titled report entitled "COMPARATIVE STUDY ON THE EFFECT OF ELECTRONIC – TUTOR GUIDE AND DEMONSTRATION METHOD OF TEACHING ON SKILL ACQUISITION IN CLOTHING IN COLLEGES OF EDUCATION IN PLATEAU STATE" written by LUCY, PHILIP SHOK meets the regulations governing the award of degree of M.Ed Home Economics (Clothing and textile) of Ahmadu Bello University Zaria and is approved for its contribution to knowledge and literally presentation.

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DEDICATION

This research work is dedicated to God Almighty, my parents Da Bature Tungwong and my mother Naomi Bature finally, to my beloved husband Hon. Philip Shok Horo.

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ABSTRACT

The study was carried out to compare thelevel of skills acquired in clothing using Electronic-Tutor-Guide and Demonstration method of teaching in Colleges of Education, Plateau state.In order to achieve this, three specific objectives were raised among which include comparing the level of skills acquired by students taught temporary stitches (even, uneven and tailors' tacking) using Electronic-Tutor-Guide and Demonstration/Lecture method of teaching in Colleges of Education. Three research questions and three Null hypotheses were formulated to guide the study. Experimental and descriptivedesignwas used for the study. The population of the study consisted of 299 students from the two colleges of Education in Plateau state out of which 120 students were sampled using purposive sampling. Students were first pre-tested and exposed to clothing skills using Electronic-Tutor-Guide and Demonstration/Lecture methods after which the post test was administered. The scores of the students from the two groups were analyzed using means and standard deviation. Independent sample t-test was used to test all the null hypotheses. The findings include among others that Electronic-Tutor-Guide group performed better than demonstration/Lecture group in the level of skills acquired in temporary stitches and thatElectronic-Tutor-Guide group performed significantly better than demonstration/lecture group in the level of skills acquired in permanent stitches. It was also found that Electronic-Tutor-Guide group performed better than demonstration/lecture group in the level of skills acquired in decorative stitches. Based on the findings, it was concluded that the Electronic-Tutor-Guide method of teaching clothing skills is more effective method of teaching clothing skills in order for students to develop proper clothing skills. This will lead to better skill acquisition in clothing and more students will be motivated to enroll in clothing section. In view of these findings and conclusions, it was recommended, among others that; clothing teachers should use more of Electronic-Tutor-Guide method in teaching skills in Basic stitches of clothing; there is the need for the college authorities to encourage clothing teachers to go for in-service training to acquire additional qualifications in computer skills so as to enable them teach Basic stitches using Electronic-Tutor-Guide method.

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LIST OF ABBREVIATION

ETG	-	Electronic-Tutor-Guide
EPSS	-	Electronic Performance Support System
NRC	-	National Research Council
OFSTED	-	Office for Standards in Education
CAI	-	Computer Assisted Instruction
NECTEC	-	National Electronics and Computer Technology Center.

DEFINITION OF OPERATIONAL TERMS

There is need to bridge whatever gap that may exist between the researcher and anyone who may read this work for meaningful understanding. Hence the following terms that form the thrust of the operational vocabulary are defined.

Appliqué- Decoration- It could also be application of lace or small piece of cloth in which motif (flowers and the like) are worked individually and then joined to a net or cloth background (whether made by machine or hand) in contrast to the method in which the net is worked around the solid parts of the design with join.

Embroidery - Is the art of decorating materials, primarily textile fabric,bymean of a needle and thread (and sometimes fine wire). The basic techniques include crewel work, needle point, cross- stitch embroidery, and quilting as well as quilt work and feather work.

Loom -Machine for weaving cloth. It consists of bars or beam fixedIn place to form a frame to hold a number of parallel threads in two sets, alternating with each other.,

Modeling -Is essentially a building – up process of which numerous Materials or fabrics are used fashionably.

Spinning -Refers to the production of a cotton yarn suitable for Warp (length wise threads).

Wheel -This refers to spinning wheel which is an early machine of turning Fibers into thread oryarn, which was then woven into cloth on a loom

Fashion -Refers to much like fads and other collective obsessions acceptthat,it is institutionalized and regularized becoming continuous rather than sporadic and partially predictable.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

There is an urgent need for Nigeria to shift from the classroom lecture way of learning to a learning method that uses computer if Nigeria must fit favorably into the current trend of global technological development. This leaning method refers to learning models that combine classroom lectures with e-learning (electronic-learning).Paolucci (1970) stated that whatever method used, teaching should focus attention on the central purpose which is to inculcate knowledge to the students. Technique may differ from one teacher to another but the important thing is the efficiency of the technique in reaching variety of goals such as development of knowledge, understanding of attitudes, and appreciation of habits or acquisition of skills. The use of teaching materials will help to maintain students' interest in their work, permit flexibility in planning and provide for individual differences among students, classes and teachers. Electronic –Tutor - Guide is a method of teaching that requires the use of audio visual aid in the teaching process.

Agwasim (1999) stated that motion picture method of teaching and learning is that which makes the event look real and students will recall that which has been taught as the activity come alive on screen. One important thing is that the motion involves the use of projector, computers, disks, videotape and television where it is possible.

Shodeinde (2001) pointed out that Electronic-Guide uses many small parts of microchips that controls and direct a small current, as can be seen in electric engine, motion picture films, television, radio, disks, projectors and many others. Ofsted (2004) explained that Electronic-Tutor-Guide method of teaching is an alternative and cost

effective option to the usual classroom face-to-face learning model. Electronic learning marks the beginning of a new wave of technological development of learning in the world. It involves the use of the internet, CD Rom, audio and videotape, satellite, TV and teleconferencing to promote and facilitate content recalling and retention in the learner.

However, Gery (2009) opined that Electronic-Tutor-Guide method of teaching and learning is multimedia in nature. That is, combination of picture, sound and words used in computers. The various teaching methods and techniques at the disposal of Home-Economics teachers in Colleges of Education according to Agwasim (1999) include: demonstration method, lecture method, reading methods, storytelling method, interviewing method, reports method, discussion method, brainstorming method, role play method, experimental method, excursion method, problem solving method. Therefore, it is the responsibility of the teacher in the light of the topic to be taught to choose appropriate method(s) that will enhance learning and to achieve the objectives set.

Demonstration is generally used by the teacher to illustrate a procedure to be followed (Leroy and Herbert, 2002). A well planned demonstration can often crystallize a student's comprehension of a new concept more effectively in one or two minutes than hours of talk or pages of reading. The main purposes of demonstration are to:

i. Establish a pattern or procedure to be used/followed in the preparation of a given product.
ii. Set a standard for work habit
iii. Motivate a desire in the minds of students to try the product.(Harrison,2000).

Ajoma (2009) stated that the demonstration method of teaching and learning is a method in which teachers dramatize topics to be taught by either the use of items or recorded materials while students are made to practice the skills demonstrated in readiness for the time they will be asked to display their level of efficiency in the performance of those skills. It is one of the effective method of learning clothing and textile courses as it explained the steps of an operation principle and shows how a process, or an experiment is to be carried out, what to do and why it should be done that way. Teacher-demonstration method therefore, is a method of teaching whereby the teacher illustrates a procedure to be followed and thereafter students follow those procedures to solve the given problem practically.

Skill acquisition is the ability to use one's knowledge effectively in doing something or to develop practical knowledge. According to Omonoguns (2002) skills acquisition is the ability to demonstrate an acceptable level of proficiency or mastery in a given art or business. This could be in weaving, dressmaking, hairdressing, cooking, interior and exterior decoration, or even farming of various kinds. Njoku (2002) stated that, to possess skill is to demonstrate the habit of acting, thinking and behaving in a specific activity in such a way that the process becomes natural to the individual through repetition or practice. Skill development is very important in harnessing a nations natural resources, this is because skill acquisition helps in developing intrinsic potentials in individuals.

Belawati (2002) pointed out that clothing and textile as an aspect of Home Economics should provide students with proper instructions, including history of fashion and its social implication for consumers as well as usual clothing construction.

Students will be able to demonstrate an understanding of how the changing economic and social climates as well as advancement of certain technologies have influenced the industries. It also provide students with the ability to create their own clothes or other projects, teaching students to correctly use the various tools and materials necessary to construct their own clothing, learning how to follow sewing instructions with limited assistance and are also encourages them to use their creative skills.

According to Anyakoha and Eluwa (2008) clothing is one of the aspects of Home Economics Education which prepares individual for employment opportunities in occupations among which are clothing selection, clothing construction, costume designing, clothing care, craft work, as well as clothing economy. It equips students with basic skills and develops creativity, patience and artistic ability in them. It is also a course that is rich in varieties of viable skills for self-reliance and National development. Weber [1990] stated that basic stitches are the most necessary stitching crafts, the art of using stitches to join pieces of fabric together, example of the basic stitches are temporary, permanent and decorative

Federal Government of Nigeria (2005) pointed out that College of Education is the education given after secondary education. The goals of Colleges of Education shall be to:

a) Contribute to national development through high level relevant manpower training

b) Develop and inculcate proper values for the survival of the individual and society

c) Develop the intellectual capability of individuals to understand and appreciate their local and external environments.

d) Acquire both physical and intellectual skills which will enable individuals to be self - reliant useful members of the society.

e) Promote and encourage scholarship and community services.

f) Forge and cement national unity

g) Promote national and international understanding and interaction.

It is in the light of the goals of colleges of Education that the researcher considers it necessary to compare the effectiveness of two instructional methods (Electronic-Tutor-Guide and Demonstration/Lecture method of Teaching) on teaching skill acquisition in clothing and textiles in Colleges of Education in Plateau state.

1.2 Statement of the Problem

One of the goals of Colleges of Education is to acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society. In order to acquire these skills, proper methods of teaching are required to be used by the teacher. Home Economics, clothing and textile in particular require practical skills which should be taught with appropriate methods of teaching. When appropriate methods of teaching are used in teaching practical courses, it will go a long way in meeting the students' skills acquisition for self-employment and also to achieve the goals of clothing in Colleges of Education.

In the researcher's interaction with teachers teaching clothing in Colleges of Education in Plateau State it revealed that clothing teachers use only the demonstration method. The large nature of the classes makes demonstration/lecture method unsuccessful; this is because not all the students can see the demonstrated work. This leads to lack of understanding, interest and continuation after the class. Clothing teachers do not use new and modern ways of making their students to develop proper skill and

positive attitude towards clothing. Could this be the reason why students lack skills in clothing or could this be the responsible factor for students' hatred for clothing

Njoku (2002) state that, the method of teaching clothing practical especially the fundamental skills has been the same usual method of explaining and demonstration by the teacher which students only sit and observe. The students hereafter are expected to do it themselves, at this level difficulty of recalling the procedures is experienced and some sections of the practical are forgotten hence inability to carry on.

The researcher also had the opportunity to have an interactive session with some students and apprentices about their practical work during Students Industrial Work Experience Scheme (SIWES) supervision in Plateau State Colleges of Education and some Non-Governmental Organizations (NGOs), which researcher discovered that students were complaining about the method of teaching and that if there were other means or ways of drill practice of practical work in and outside the class, it would have been easier for them to acquire a lot of skills in clothing. Ofsted (2004) pointed out that the problem of length of time taken to make and produce projects by students after teaching can be reduced by the use of Electronic-Tutor-Guides. This can also reduce inappropriate pattern and monotonous methods of teaching and lead to acquisition of skills for self-employment.

Also, at a joint meeting of College of Agriculture, Plateau Sate and Nasarawa state on the 11th August, 2008 it was pointed out that all practical topics are not properly handled. This has created lack of interest in students, lack of continuity and practice after the lesson because no skill is acquired.

It was thus agreed upon in the meeting that all practical topics should be taught by giving picture films to students to use on their own. This will help to develop the students' interest as it is done in mathematics for independent learning.

It is against these reasons that the researcher decided to carry out a comparative study on the effectiveness of Electronic-Tutor-Guide and Demonstration/Lecture method of teaching on skill acquisition in clothing in Colleges of Education in Plateau state.

1.3 Objectives of the Study

The general objective is the Comparative study on the effect of Electronic-Tutor-Guide and Demonstration/Lecture method of teaching on skill acquisition in Clothing in Colleges of Education, in Plateau state. The specific objectives are to:

1. Compare the level of skill acquired by students taught temporary stitches (even, uneven and tailors' tacking) using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method of teaching in Colleges of Education.
2. Compare the level of skill acquired by students' taught permanent stitches (running, back and hemming) using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method of teaching in Colleges of Education.
3. compare the level of skill acquired by students taught decorative stitches (stem, satin and cross-stitch) using Electronic-Tutor-Guide and those taught using Demonstration/ Lecture method of teaching in Colleges of Education.

1.4 Research Questions

The study provides answers to the following research questions:

1. What is the level of skill acquired by students taught temporary stitches (even, uneven and tailors' tacking) using Electronic-Tutor-Guide and those taught using Demonstration/ Lecture method of teaching in Colleges of Education?
2. What is the level of skill acquired by students taught permanent stitches (running, back and hemming) using Electronic-Tutor-Guide and those taught using Demonstration/ Lecture method of teaching in Colleges of Education?
3. What is the level of skill acquired by students taught decorative stitches (stem and satin) using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method of teaching in Colleges of Education?

1.5 Hypotheses

The following hypotheses were postulated and tested at 0.05 level of significant to enable the researcher arrive at a meaningful conclusion:

1. There is no significant difference among students taught using Electronic-Tutor-Guide and those taught using Demonstration/ Lecture method in their level of skill acquisition in temporary stitches(even, uneven and tailor's tacking)in Colleges of Education.
2. There is no significant difference among students taught using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method in their level of skill acquisition in permanent stitches(running, back hemming) in Colleges of Education.
3. There is no significant difference among students taught using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method in their level of skill

acquisition in decorative stitches (stem, satin and cross-stitch) in Colleges of Education.

1.6 Significance of the Study

The findings of this study is of great benefit to

1. Home Economics teachers especially clothing and textile teacher as it helps them in the selection and use of appropriate teaching methods, using of Electronic-Tutor-Guide will enable the students to acquire skills on their own where there is no Instructor or teacher.
2. It will equally be of use to the Curriculum planners as it will help them include the use of Electronic-Tutor-Guide in the curriculum as an instrument for teaching different topics in different subjects, especially practical topics.
3. Students of clothing and textile stand a better chance to reap from findings of this study as it helps them to receive knowledge and acquire skills created through an active process in which the students transform information from the guide which the teacher has documented for their independent learning experience. The student can get the tutor–guide use on their own, using DVD and Television or Lab- top or Desk-top.
4. Non-governmental organizations and some individuals will also benefit as they can get the tutor-guide on their own and practice for skill acquisition.

1.7 Basic Assumptions

The basic assumptions for this study are that:

1. There is high level of skill acquisition in temporary stitches by students taught using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method of teaching.
2. There is high level of skill acquisition in permanent stitches by students taught using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method of teaching.
3. There is high level of skill acquisition in decorative stitches by students taught using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method of teaching.

1.8 Delimitation of the Study

The study was delimited to the use of two instructional methods namely Electronic-Tutor-Guide and Demonstration/Lecture method for teaching skills in basic stitches (temporary, permanent and decorative stitches). The two methods were chosen because they are the methods the researcher used for the comparative study. This study was delimited to two Colleges of Education in Plateau state, Federal College of Education, Pankshin and State College of Education, Gindiri because they are the only two colleges of Education in Plateau state. NCE I was used for the experiment because they have the previous background of the subjects from Pre-NCE and making of basic stitches is their first practical topic.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviewed the related literature in relevant journal, textbooks, magazines and papers presented. For the purpose of this study, the review of related literature is presented under the following sub-headings:

2.1 Theoretical Framework

2.2 Conceptual Framework

2.3 History of clothing and textile

2.4 Skills acquisition in clothing construction

2.5 Procedures of making basic stitches

2.6 Teaching methods in clothing.

2.7 Demonstration/Lecture Method.

2.8 Electronic-tutor-guide in teaching and learning of basic stitches

2.9 Review of empirical studies.

2.10 Summary

2.1 Theoretical Framework

Several theories have been propounded which have direct and indirect application to the present context. Several explanations have been made by several writers on teaching methods meant to meet the learning goals or to acquire skills in clothing.

Jonassen (1999) has proposed a model of developing constructivist learning and diversity in teaching in the classroom. He stated that for effective teaching to take place, a good method must be adopted by a teacher. A teacher must have many options when choosing a style to teach. The teacher may write lesson plans of their own, borrow plans from other teachers, or search online or within books for lesson plans. When deciding

what teaching method to use, a teacher needs to consider students' background knowledge, environment, and learning goals. Teachers should be aware that students learn in different ways, but almost all children will respond well to praise. Students have different ways of absorbing information and of demonstrating their knowledge. Teachers often use techniques which cater for multiple learning styles to help students retain information and strengthen understanding. A variety of strategies and methods are used to ensure that all students have equal opportunities to learn. A lesson plan may be carried out in several ways; modeling questioning, explaining, collaborating and demonstrating. Jonassen identified three major roles for facilitators to support students in construction of learning environment.

1. Modeling
2. Coaching
3. Scaffolding.

The integration of Information Communication Technology (ICT) in the teaching of Home Economics facilitates the constructionist approach to teaching and learning (Amanda, 2008). The integration of ICT in education should change both the role of teacher and the role of the student. The Home Economics curriculum should be based on a philosophy of child centered learning which facilitates the integration of ICT across the areas of food studies, clothing and family Resource Management. This aim is to integrate ICT in the teaching of Home Economics in order to facilitate the constructivist approach of teaching and learning. It will demonstrate the flexibility of the Home Economics curriculum in levels of motivation, punctuality and attainment. The role of the leaner will

become active where they are involved in the discovery of knowledge. The teacher becomes a facilitator who guides the students in their discovery.

Watson (2000) brought out a model to follow for "competencies in clothing and textile needed by beginning family and Consumer Science Teachers".

i. Perform basic skills necessary to use and alter patterns, construct and fit simple garments, and make simple repairs and alterations.
ii. Choose techniques and sequences of fabric preparation, cutting and marking of pattern process, construction, and pressing that are compatible with fabric and garment design.
iii. Assess ready-made and or constructed garments of quality of construction.
iv. Demonstration ability to select and use equipment for the construction and the maintenance of personal and family clothing.
v. Use management techniques in clothing construction
vi. Define criteria to use in the acquisition and care of sewing and teaching equipment.
vii. Evaluate the properties and characteristics of clothing in relation to anticipated use and care
viii. Apply art elements and principle of design in the acquisition and use of apparel and clothing products.
ix. Identify alternative means of acquiring using and caring for clothing and products in relation to values, defined goals, life styles, and available resources.

Brandes and Garner (1997) indicated that the potential of e-learning to promote the acquisition of these skills is tied to its use as a tool for raising educational quality

including promoting the shift to a leaner-centered environment. Improving the quality of education and training is a critical issue particularly at a time of educational expansion. ICTs can enhance the quality of education in several ways; by increasing leaner motivation and engagement, by facilitating the acquisition of basic skills and by enhancing teacher training. E-learning are also transformational tools which when used appropriately can promote the shift to a learner-centered environment. Computer software that combines text, sound and colorful moving images can be used to provide challenging and authentic content that will engage the student in the learning process.

The most related theory the researcher applied to is the Brandes and Garners' (1997) theory. The study emphases on using the modern and ICT for skills acquisition students' especially practical courses like clothing and textile even if the teacher is not there; they can acquire a lot of skills by using Electronic-guide which is the ICT.

Brandes and Garner (1997) also conducted a research on the potentials of e-learning to promote the acquisition of skills and to use it as a tool for raising Educational quality which includes promoting the shift to a learner-center environment.

2.2 Conceptual Framework

Alabi (1986) stated that the process of modernization in any country depends on availability and effective use of human skills. Alabi continued that consequently this conscious effort in the development of skills and craftsmanship has today made some Asian countries especially India the third largest reservoir of scientific and technical manpower in the world. The researcher said one can acquire skills through oral and written communication effectively. Alabi added that skill can be acquire through self

participation, skillful watching, reading books and write-ups, forceful relationship, cooperative work experience programs, media, film shows and so many others.

According to Anyakoha (2001) skills are acquired through learning experiences in clothing management, sorting the article to be washed, mending, laundering, ironing, renovating and storing. Anyakoha (2001) stated that any other technical Education aimed at National development should emphasize on the importance of performance of skills acquired during training. For proper skills to be acquired there must be competent teachers at all levels of Education where Home Economics is taught formally and informally. Anyakoha (2001) went further to state that learning experience is not synonymous with course content that, the experiences takes place within the student. Anyakoha also stated that learning experience deals with the activities performed between the learner and the external conditions in the environment which reacts when learning takes place through the active behavior of the student. Renold (2008) reflected that in the early days, the foremost priority was to prepare women for their duties in the home and the family. This cemented the dualistic idea of reserving gainful employment for men and tying down women to the home. But there were also first steps in a different direction as an offshoot of the Home Economics schools. For example training schools were setup for (female) gardeners, that is, for a trade that would enable them to earn a living. Agwasim and Yaroson (1995) said that the training of Home Economics teachers is one of the few areas of teaching that was undisputedly accessible to females which contributed to professionalizing women's education. The quality of Home Economics lessons also led to professionalizing, skill development and its ultimate goal do not stand in vacuum. Black (2008) at IFHE world congress presented a paper on changing attitudes

to Home Economics teaching in the context of new curriculum. Black conducted a research data were collected from 48 experienced teachers and 45 trainee teachers using questionnaire which focused on the identity and content of the subject. Essays written as part of initial teacher training were analyzed as to the perceived challenges and threats to the subject compared with views expressed during interview with experience Home Economic teachers. Practical skills were core of the curriculum which was seen as an opportunity for developing greater awareness on the subject. Experienced teachers were wary of the re-focus on practical skills, some felt this was change for change sake but generally agreed that the positioning would give the subject greater status.

Skills are invisible, they are ability to do well, they are transferable, it could be action and they can be recognized. Nubler (2007) stated that skills in clothing means the ability to arrange material well and bring it together for man to wear, use and apply appropriately. Therefore, skills in clothing is more than the ability to arrange materials and bring them together to wear, but improving on the technology of materials for tourist and acceptability to the whole world through addition of other skills from other areas, like arts, textiles, traditional and cultural geographical background of the wearers, or consumers. When we talk of skills in clothing, we talk of the following:

- Skills in stitching or sewing
- Skills in care of clothing
- Skills in Pattern and clothing construction

2.3 History of Clothing Education

Everything that has existed and still exists must have a beginning and a past, which is referred to as history and clothing is not an exception. The history of clothing

therefore becomes relevant in this study. Craig (1973) described the history of clothing as old as history of civilization, clothing has been important since pre-historic time. The culture throughout the world both primitive and modern individual have used clothing or body ornament for protection, self-expression, group identity, status and ceremonies as well as in attempting confirm to the prevailing code of modesty. Halzey (1980) also identified the history of clothing and fashion as old as the history civilization. Archeologist and anthropologist have found that clothing and decoration of the body have played a vital role in human culture since the earliest time. The skin of animal served as clothing during old and recent time. Weaving came into use, the loom, the plow and wheel all representing, the accomplishment of pre-history man. Clothing and textiles which was formerly called needlework or dressmaking is a subject in the field of Home Economics introduced into Nigerian schools by the different early missionaries who felt there was a need for the girls and women to be taught in their churches and schools to learn certain craft through which they could be better homemakers and earn their living. Okani (1977) revealed that in 1873 the first catholic Nouns from France started the St. Mary's convent school in Lagos and the most important subject which they had in their curriculum was domestic science. Subject such as needlework, house wifely, laundry, embroidery, childcare and cooking were taught.

Alabi (1986) described the history of clothing thousands of years ago, man wear clothing as protection, adornment and as part of ritual. Early man wore skin of animals to celebrate his victories over the beast to seek favor with the spirit of the hunt. Gradually man learn to wear and cut fur into pattern piece and to fashion clothing that was fitted to

their bodies with splinted bones and needles and sews as thread. Later the development of embroidery, the spinning machine was invented in 1764 and sewing machine in 1900.

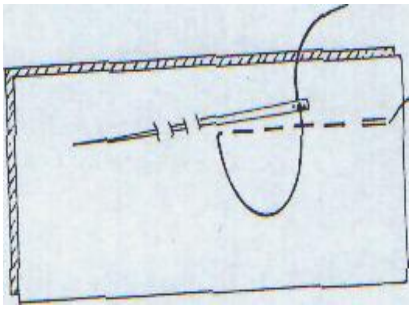
Weber (1990) pointed out that history of clothing is as far back as thousands of years ago when people learned to make cloth; clothing from natural resources around them. In many climatic region of the world, clothing is essential for protection from cold weather or the blazing sun. Animal skin and hair, plants, grasses and tree bark were some of the materials used for clothing. Weber further revealed that after thousands of years of wondering, people learned that they could live in one place with other human beings and grow what they needed and raised animals for meat and skin and grow plants for food. People learned how to spin bits of plants, reeds, horse hair and bark into one continues strands or yarn which they wore into fabric. They then began to look for other fibers to use. Such as flax, ramie, wool, cotton and silks that are still commonly used today.

Agwasim (1999) stated that the study of Home Economics has progressed to this day when home making education is now studied at the universities. Agwasim further said that government in girls education received a boost, when in 1927 Queens College Lagos was established. Miss Blackwell the principal of the school gave much attention to domestic science as the field it was the most important subject for girls who had passed their junior Cambridge examination. In 1899 and 1910 conference of lack placid, extended a marked influence on home making movement. In the drive to define and explain domestic science, the conference decided that the home making activities be described and hard work in elementary schools, domestic science in secondary schools. As a result of these conferences, domestic science grew importance in the United Kingdom and became accepted as a subject for examination in the West African

Secondary School and women Teacher training Colleges. The subject got introduced into both the Colleges of Education and the universities in the late 60s and 70s. Therefore, clothing and textiles was the first to be identified in the programmed of home economics and the interest should generate confidence in the establishment of industries and self-employment in the generations studying and teaching clothing and textiles.

According Watson (1981) basic stitches plays such an important part in the construction of clothes that no properly made dress can be completed without one basic stitch or the other. It is the attention paid to the hand sewn details which determines the quality of your finished garment. As hand sewing becomes less of a necessity, it becomes an increasingly desirable luxury.

1. **Tacking**: is a temporary stitch used in the preparatory phase of your sewing. Always work on a flat, smooth surface. You can pin your garment pieces together before basting, and use contrasting colored thread. Begin with a knot or a backstitch, and always remove basting before pressing permanent stitching.



2. **Running stitch**: is the most basic of stitches.



It has many uses-easing, gathering tucking, mending, and sewing seams that are not subjected too much strain. Take several small forward stitches, evenly wearing pulling the thread through:

Pick up as many stitches as your fabric and needle will allow.

For permanent seams, use stitches 1mm to 3mm long. For easing and gathering use 1mm to 6mm long.

3. **Backstitching:** is one of the strongest hand stitches. It is especially useful for repairing hard to reach seams that have ripped.



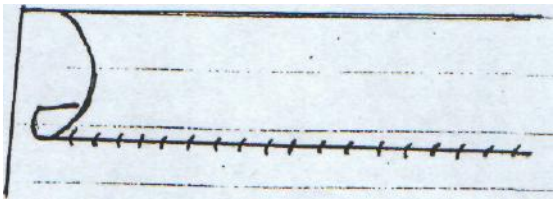
It has the appearance of machine stitch on the right side, but the stitches overlap on the wrong side. With right sides together, following the seam line, bring the needle through the fabric to the appear side.

Take a stitch back about 1mm to 3mm bringing the needle out again 1mm to 3mm forward on the seam line. Keep inserting the needle in the end of the last stitch and bringing it out one stitch ahead.

The stitches on the underside will be twice as long as those on the upper side.

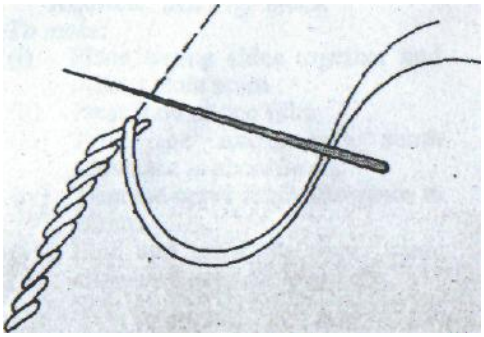
4. **Hemming Stitch:** is most often used for hems finished with seam bindings especially when the garment is not underlined





Take a tiny inconspicuous stitch in the ferment, then bring the needle diagonally up through the edge of the seam binding or hem edge. Continue in this manner, spacing stitches about 6mm apart.

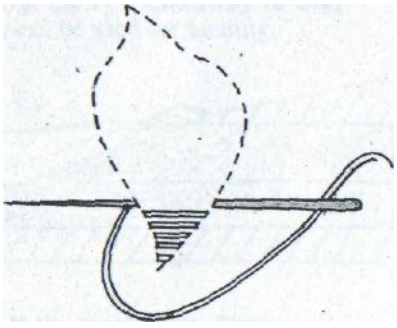
5. Stem Stitch: is a hand embroidery stitch for outlining designs.



It gives a finer line than open stitch like chain stitch. It worked away from the worker. The threat must be kept below the needle, and the needle brought out exactly where the previous stitch finished. Arrow of back stitches shows on the wrong side.

6. Satin Stitch: is a decorative stitch, which can be used in hand embroidery, appliqué etc. Make stitches close and parallel.





The satin stitch can fill in any design of flowers, objects figures and leaves on a garment or table and house-hold linen (Anyakoha and Eluwa, 2000).

2.4 Skills in Clothing Construction

Bane (1972) analyzed the following as skills in creative clothing construction: the clothing construction is an exercise in creativity, equipment findings and the sewing machine, pattern selection, fabric selection, preparation of pattern and alterations, layout and cutting, reading direction of the construction sheet, bias facing and binding sleeve construction collars, cuffs, pockets, miscellaneous, decorative detail zippers and bond pocket. All these are techniques in clothing construction and without these skills in clothing construction, clothes cannot be made. Bane (1973) noted that flat pattern design is a favorite skill that instructors and students like because it refreshes new information that provides greater understanding of the technical aspect of clothing field and is always true that the greater the depth of understanding, the greater excitement for learning.

As the student progress from one clothing construction class to another, much of the information is new, but it has a familiar ring which although it is comfortable, is most entirely stimulating. By contrast the study of design methods, by providing the special excitement of artistic expression, multiples sharpens the students interest. And because of the highly technical and scientific nature of pattern design, the students discovers the thrills of increasing their powers of reasoning; they finds that they are far more capable of creative thought (both artistic and technical) than they had imagined, and this gives them a new found professional pride and confidence.

Waden (1996) noted that an individual must gain some technique or skill and be reasonably contented with her product if the project is to give satisfaction and promote

confident decision. Individuals will have little interest in constructing clothes until they master the mechanical sewing skills, just as no one cares to play polo when he/she has not learned to ride a horse. A comprehensive knowledge of techniques for the manipulations of fabrics into design allows the individual to apply general principle and guide in making his/her decision. Perfection of sewing techniques is a necessary goal, but without enjoyment and satisfaction in producing the first garment, a beginner may not be stimulated to develop further skills. Different researchers have expressed the importance of patterns not only in clothing construction, but from different fields of studies. Glencoe (1990) stated that a pattern is just like a blue print. It is a project that contains all the instructions you will need for constructing your sewing project. Every pattern consists of an envelope, guide sheet and tissue pattern pieces. The envelope has a wealth of information about the design of the garment, fabric and notions needed. The guide sheet gives you step–by-step instructions for cutting and sewing. The tissue pattern pieces contain many symbols to aid in construction. Always take the part to completely read all parts of the patterns before beginning your project. Each item contains very valuable information to help make your sewing easier and more successful.

Donald (1988) said that, convectional paper patterns can be perplexing, yet they are not really in order to types of very wearable clothes. Flat – pattern is one of the methods of making patterns. The other two are drafting on paper from a set of body measurement, and drafting fabric on a dress form. The flat pattern is based on the use of simple pattern which is changed or modified by specific directions to create a pattern for a chosen design. Although the development of the ability to make pattern is the primary purpose of flat pattern work, it contributes also to a better understanding of pattern

alteration, garment fitting, and the use of fabric gain. It increases the ability to plan use procedures; organize work efficiently; analyze intelligently the cause of mistakes and makes proper corrections and practice economy in the restyling of out – of – date clothing and old patterns of great importance also is the feeling of confidence which comes with an understanding of pattern making principles and the feeling of pleasures derived from creative activities.

2.5 Skills in Sewing

Stitches are the basic or details of foundation in clothing. For all the techniques found in clothing, there must be one form or the other of stitches e.g. running, hemming, over sewing, backs stitches, button hole, and so many others. It is assumed that it has been acquainted from junior school, to senior and now in post senior level. The researchers also gave it a name, the master of all clothing techniques.

Williams (1978) expressed that stitching is needle work and needle work is a joyous adventure, a needle flashes through a bit of fabrics and leaves a stitch. The stitches combine to form a design, color makes it come alive. These beautiful objects are transformation of our home. A clutch of pillows in vibrant colours and brilliant designs does more than light up a sofa; it brings new vitality to an entire room. A crewel embroidered seats transforms bench into an heirloom of tomorrow. Needle point seats on the dining room chairs give the room a new dimension of elegance; a group of embroidery flower pictures on a flower wall is a gracious welcoming note. While Glencoe (1990) noted that sewing is the most basic of the stitching crafts, is the art of using stitching to join pieces of fabric together. Sewing is a skill that can provide you with many hours of pleasure. It can also help you save money.

Glencoe (1990) further said that needle point is the technique of learning stitches on a special open-weave fabric called canvas. Embroidery thread or wool yarn is pulled in and out of the holes in the canvas to form variety of stitches. Needle point is used to make pillows; cushions chair covering, wigs and wall hanging.

Other authors explain the processes of sewing tips that; before you cut the fabric, always find the straight grain which runs parallel to the selvedges.

Make your center back or front on the straight grain. Mark out any cutting lines with tailor's chalk on the wrong side of the fabric and if you are not using the whole width of the fabric or there is shaping, make sure you fold the fabric in half before you cut.

In order to make the sewing process even simpler, you can avoid taking fabric together by pining so that the pins are at the right angles to the edge of the fabric and the machine will easily run over them without damaging the needle.

2.6 Procedures for making Basic Stitches

This is an important part of construction of clothes, that no properly made dress can be completed without one basic stitch or the other. It is the attention paid to the hand sewn details which determines the quality of your finished garment. As hand sewing becomes less of a necessity, it becomes an increasingly desirable luxury (Watson, 1981).

Procedure is a way of doing something; it could be the correct way or normal and accepted way of doing an action work. While Glencoe (1990) defined basic stitches as the most necessary stitching crafts, the art of using stitches to join pieces of fabric together. Examples of basic stitches are:

1. Temporary stitches (even, uneven and tailor's tacking)
2. Permanent stitches (running, hemming and back stitches).

3. Decorative stitches (stem and satin stitches).

Sewing is a skill that can provide you with many hours of pleasure. Basting stitches or tacking is a temporary stitching used to mark or to hold fabric layers together. Basting should be removed from the garment as soon as the permanent stitching is completed because is no longer needed.

Procedure for Tacking

1a. Place the end of the thread across the tip of your index finger and hold in place with thumb.

b. wrap the thread around your finger tip over lapping the thread slightly.

c. Roll the thread off your index finger with thumb. The thread will twist and a loop will form as it slides off your finger.

d. Hold the loop again the thumb with your middle finger and pull on the thread with your other hand to make the knot.

Uneven basting or tacking is used for holding hems in place for stitching. Make 2.5cm stitches on top side of fabric and short 6mm stitches on the undesirable. To save time, take several stitches with your needle before pulling thread through. According to Mcloughlin (2005) hand stitches are sewing or stitching materials together with hand using needle and thread. There are a number of hand stitches which one can use to join materials, which include:

1. Tacking or basting

This is a temporary stitch used to hold two pieces of fabric together while the permanent stitching is being done. Tacking is important in the following ways:

a. To hold the garment together for fitting purposes

b. To hold hems, seams and darts in position ready for final stitching.

c. To mark construction details on the fabric.

d. To identify certain parts of garment section such as zippers, fasteners, pockets, collars and so on.

You can use a different colour thread for tacking. Tacking is done by passing the needle over and under the fabric at regular intervals. Make sure the ends of your tacking are secure.



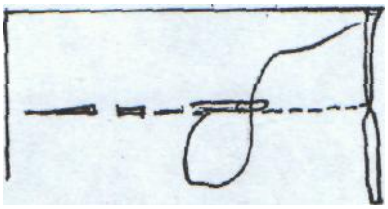
Do not Knot the thread to start, but by securing the thread with a backstitch.

Step two - work from right to left making stitches and spaces equal in width.

Step three - Finish by securing the thread with a backstitch.

2. Running Stitch

This is used for joining materials. It is also used for gathering. It is worked like tacking but uses smaller stitches. The running stitch can also be used as an embroidery stitch for making outlines and simple line effects.



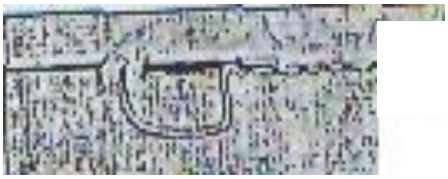
Step one - follow instructions as for tacking but secure thread with a backstitch rather than a knot.

Step two - make the stitches smaller and neater.

Note - Remember, running is a permanent stitch unlike tacking which is a temporary stitch.

3. Back Stitch

This is a secure stitch used to join seams together. It can also be used to make outlines in hand embroidery.



Step one - start by making a double stitch.

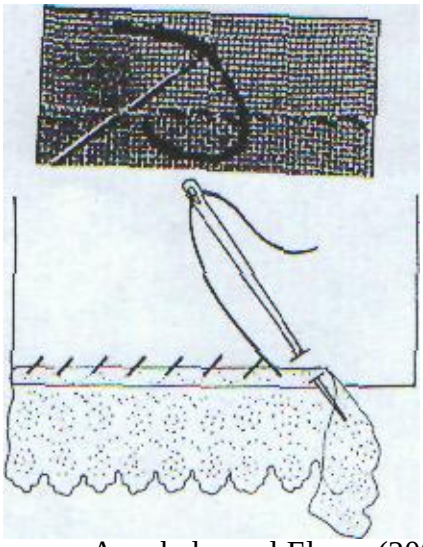
Step 2 - bring the needle out 2-3mm beyond the first stitch.

Step 3 - Put the needle back into the end of the last stitch and bring it out 2-3mm beyond and so on.

Step 4 - Finish with a double stitch.

4. **Hem stitch** -

This is a small stitch which is worked on the right side of the fabric and is used to join finished edges together, for example lace onto a hem.



Steps 1 - with the needle point towards you, insert the needle through single fold.

Step 2 = Leave 1cm of thread lying along the top edge. Pull the needle through the top of both folds and sew small, slanted and evenly spaced stitches.

Step 3 = Finish by working stitches back into the last three stitches made and secure the thread.

Anyakoha and Eluwa (2000) stated that as you manage family clothing, you need to mend clothes and other household linen when they are torn. You need to use the basic stitches and processes in your mending work. It is, therefore, important that you learn how to make basic stitches and processes.

Temporary Stitches

These are used to hold hems, seams and darts temporarily before final sewing.

1. Tacking or basting – This is of prime importance in clothing construction.
2. Tailor's tacks – This is used for transferring pattern makings to two pieces of fabric at the same time.
3. Slip stitch or basting – useful for making striped or checked fabrics and for the lapping of covered seams temporarily before the permanent stitching

Permanent Stitches

These are used to hold two pieces of fabric together permanently. Use the thread that is suitable for the fabric. Use cotton thread for cotton fabrics and nylon for the synthetic fabric.

1. Running stitches – This is basic straight stitch. It is used:

a. where there is no too much strain

b. for easily and gathering.

For seams, make stitches 2-3mm long but for learning or gathering make them 3-6mm long to make:

i Push the needle tip in and out of the fabric making small require stitches evenly spaced in straight or curved lines are desired.

ii use a long fine needle.

iii push it in and out for about half a dozen stitches before pulling the thread out.

1 Back stitches: This is a very strong hand stitch which can be used in place of straight machine stitching. It can be made to look like machine stitching on one side yet overlap on the other.

Procedure:

i place right sides of the pieces together

ii fasten on the thread by repeating the first stitch and take one long running stitch.

iii take a stitch back, then bring the needle out again a little way long the seam line.

Repeat to the desired length.

3 Hemming: this is used to hold the folded edge of garment hem into place. The stitch shows equally on both sides of the work.

To make.

i move the needle from right to left with the garment held towards the worker and the hem held over the fingers of the left hand.

ii Pick the thread up from the fabric below the folded edge of the hem.

iii then pick a thread up from the folded edge of the hem.

iv repeat until hem is completed.

Decorative Stitches

4. Stem Stitches: This is a hand embroidery stitch for outlining designs. It gives a finer line than a chain stitch. It is worked away from the worker.

To make:

i. draw or make the necessary design.

ii. Insert the needle at the tip of the line to be stitched.

iii. Bring the needle in the short distance along the line.

iv. Bring the needle out half-way down the space made in the step 'iii'

Keep the thread on the right-hand side of the line.

The thread must be kept below the needle, and the needle brought at exactly where the previous stitch finished. Arrow of back stitches shows on the wrong side.

5. Satin Stitch: This is a decorative stitch, used in hand embroidery and appliqué.

To make:

i. make the appropriate design on the fabric.

ii. Insert needle at one edge of the design.

iii. Then insert it at the opposite edge.

iv. Return to the starting edge by passing the needle underneath the material.

v. Repeat, following the outline of the design. Make stitches close together and parallel. The satin stitch can fill in any design of flowers, objects, figures, and leaves on a garment, table linen and many household types of linen.

2.7 Teaching Methods in Clothing

Teaching methods are usually selected by individual teachers considering the students background, Knowledge, environment, and learning goals. Teachers know that student learn in different ways but almost all students will respond well to praise. Students have different ways of absorbing information and demonstrating their knowledge. Teachers often use techniques which cater for a multiple of learning styles to help students retain information and strengthen understanding. A variety of strategies and methods are used to ensure that all students have equal opportunities to learn.

Method is a particular way of doing something reliably and effectively or it could be a way of solving problem or a new way of imparting knowledge to someone. Teaching is an informal discussion or lecture on a subject; it could be when a trained or an experienced person imparts knowledge to a student on a subject. Therefore, method of teaching clothing and textile is an effective way of imparting knowledge from a trained or qualified person to unqualified person who needs the knowledge and skill. According to Okorie (1999) for effective teaching to take place the skillful teacher needs to use the many different methods and techniques at his command.

Even though there is a great diversity in teaching methods and techniques there is no one that can be regarded as the best for every teaching situation. A carefully designed teaching method can work wanders in making learning effective. The success in the use of a method depends on an intelligent analysis of the educational purpose, the students in

the class, the curriculum content of the moment or the type of subject matter being taught. Olaitan (2001) said in order for a teacher to carry out effective teaching, the teachers have to use some strategies or techniques; these are grouped into three:

A. Group Technique which is divided into:

i- Discussion method

ii- Buzz method

iii- brainstorming

These are effective techniques for stimulating the learning process. It involves group interaction in which an individual express herself and listen to the opinion of others, thus forming the best ideas and judgments.

B. Teacher initiated techniques, is a technique where teacher seeks to create interest, influence, stimulates or mould opinion to promote activity, impart information or to develop critical thinking with minimum class participation; a minimum in number of related teaching aids or instructional material are used.

C. Dramatic Techniques;

i Role playing

ii Socio-drama.

These are spontaneous or unrehearsed acting out of a situation. It is a form of improvisation in which the participants assume the identity, deal with problems or issues significantly in a social relation situation. There is spontaneously an invention with an emphasis upon individual performance centered on the problem.

Bracey (2007) stated that the use of audiovisual programme which can add a whole new dimension to the needle-craft room as a source of ideas and to stimulate class

discussion. Some audiovisual programmers are instructive for example showing dyeing or cutting process that might be practicable in class. Some can be historical to give idea to the individual. The range of programmers that are available are wide, and many have teachers note guide books or worksheet to accompany them. The main types of audiovisual materials are slides, filmstrips and videocassette.

Weathered (1982) wrote on group method of teaching clothing and textile that, all teachers must know, there is a purpose behind group craft project method. The author further stressed the need to vary methods of teaching clothing and textiles by working together to create something. Weber (1990) revealed the major discovery in the history of mankind. More and more jobs that were once done by hand is now accomplished faster and easier by the computer. Computer programmed developed the information system that result in the computer being able to perform various task the pain staking job of developing a new fiber, a new dye or a new fabric weave is made much easier by the use of computer. Another machine has been developed that applied complicated colour pattern to fabric by using thousands of tiny dye jet individually controlled by a computer.

Complicated designs can be developed for pattern fabrics, lace and embroideries using sophisticated computer programs. Looms can be set up and threaded in minutes rather than hours. Computer graphics can even show the designed or researcher what the finished design will look like without the need for an actual sample. Therefore computer can be used for teaching in styling garment and finishing. Reniard (2009) noted that for effective teaching to take place, a good method must be adopted by a teacher. A teacher has many options when choosing a style by which to teach considering the students'

background knowledge before carrying out his teaching in several ways. Questioning, explaining, modeling, collaborating, and demonstrating.

Jonassen (1999) explained that Video Tapes or slides in on entertaining way of introducing content and raising issues. It usually keep groups attention, it looks professional and stimulates discussion. Discussion may not have full participation, most effective when following discussion. The author further discusses worksheet or surveys. He said that it allows students to think for themselves without being influenced by others. Individual thoughts can now be shared in large groups. Okerie (1979) opined that usually, the master teacher will use these methods in such rotation and combination as will be necessitated by existing needs.

i The lecture method. The teacher should use illustrative materials whenever possible during his lectures. This usually will increase the interest of the students in the material presented,

ii Discussion method it is used to help students to be aware of or identify mutual problems in the process of discussion. People or students tend to develop certain attitude towards the problem under discussion and put it practically.

2.8 Demonstration/Lecture Method

Demonstration is generally used by the teacher to illustrate a procedure to be followed (Leroy and Herbert, 2002). Students learn more by seeing and hearing. Popham, Schrag and Blockhus (1998), Fletcher (1974), Ndinechi (1990), all agreed that for subjects like Home Economics, typewriting, Accounting, Shorthand to be properly taught, the teacher's demonstration by all means is very important. The teacher demonstration

shows the students the various manipulations of the machine, figures, and so many which includes – what is done, why it is done, how to do it and the operation or skill is presented. A well planned demonstration can often crystallize a student's comprehension of a new concept more effectively in one or two minutes than hours of talk or pages of reading (Harrison, 2000).

Demonstration: it is divided into three; class demonstration/lecture, group demonstration and individual demonstration.

The desire for the demonstration helps to stimulate interest among the students so that they will participate actively in any activity they may be called upon to perform. The teacher should endeavor to explain only those facts which are needed to perform the skills in a competent manner. Others are:

i. text book methods
ii. problem solving methods
iii. question and answer method
iv. homework methods
v. project method
vi. field trips method

(Schrag and Blockhus 1998)

Bello (1981) noted that we see teaching as an acquisition of skills and competencies, first from our parents during our upbringing, and then from our friends and peer groups during games and other cultural activities. In order words, anything that will increase our knowledge could constitute learning and teaching it is possible to employ two or more teaching methods in a lesson in order to create and sustain the students' interest.

These are some of the formal methods of teaching clothing and textiles;

i. Lecture method

ii. Teaching method

iii. Project method

iv. Dramatic method

v. Problem solving method.

Shodeinde (2001) pointed out that with professional media personnel to support them, teachers will be able to prepare and use multi-materials to achieve one or several in structural objectives.

As colleges and universities continue to expand their training of teachers in the design and production of media, the productive of these packages will be accomplished in the school rescue centre. The cooperative effort among students, teachers and instructional designers will create mediated learning packages which are more effectively designed around the individual leaner. Commercial interests will also be involved in the packaging of instructional materials which will hopefully be systematically organized.

Glencoe (1990) said that in improving Relationship skills, one can use the following in teaching.

a. Experiencing conflict- 'conflict is the struggle that results from opposing needs, drives or wishes." Encourage them to discuss whether they think conflict is a natural or an unnatural aspect of human interaction.
b. Using photographic: Have students look at the photograph and describe what the people are doing. Ask students if this can help build strong relationships. What other activities can help build relationship skills

c. Role play, after the role play, has the rest of the students comment on how each friend handled the situation, say, ‘relationship not only involves work, but also involves skills, such as understanding others, resolving conflicts and improving attitudes.

Hart (1979) said that the general trend of teaching method for needle work as a school subject is to let each girl work at her own pace, develop special interests and independence of work through the use of all available help to be found in books, periodicals, prepared files and specimens. Whatever method or approach to this subject adopted in the school it is very important that there shall be real teaching during each lesson. Know that the students never have the opportunity to become lazy and uninterested but rather move forward steadily with a good standard of accomplishment at each stage. He continued by saying that teaching methods falls in to two main types:

A) Group teaching or demonstrating to a group, she needs to teach some processes to the students. It saves time than to teach each girl or students

B) Individual assistance in this is the large part of the lesson, devoted by the teacher to assisting individual students. It needs to be carefully done to be valued. These processes in self-help stage are an essential part of the method, it prepares them to be effective and acquitted to the skill learned.

The researchers opinion on teaching methods in clothing and textile is that most opinion are very good, but in teaching clothing and textile most methods need to be combined and used at the same time. For example, when teaching fitness, fashion, styling and construction of clothes, the following methods need to come together, discussion, brainstorming, lecture, role play and problem solving. A role play by two

students one dressing in men attires that is trousers and shirt, while the second on ladies fitted attires, coming from different directions and meet in the centre. Before then the teacher needs to lecture on the subject matter, before the role play, then students Brainstorm and the class discuss including the teacher, at the end come to a solution and that problem would be solved. It was also suggested that all students in clothing and textile should be computer literate because it pays to use computer for colour combination, styling pattern construction and so on. It will lessen the bulk and lack of interest in clothing and textile.

2.9 Electronic-Tutor-Guide in Teaching and Learning of Basic Stitches.

Using teaching materials help to maintain students' interest in their work, permit flexibility in planning and providing for individual differences among students. The researcher developed Electronic-Tutor –Guide by making the basic stitches [temporary, permanent and decorative] with their uses and procedures practically and video- taping it as a tutor-guide for student to use. According to Bahr and Reith (1989) the new developments in information technology has brought new educational concepts, and must be exploited to our benefits. In education, each new concept stimulates shift from teaching to learning from teacher oriented and teacher centered practice to learner oriented and learner centered education schools and colleges become learning houses instead of teaching house. The essence of education no longer consists of activities of a teacher (teaching programmers) but of learning activities of the students. In other words there must be deliberate shift from more common practice of chalk and talk teacher centered teaching methods to computer or electronic-tutor-guide and multimedia interactive systems. Instructions must be geared towards meeting the needs of the

individual learner. Dalton and Hannifin (1990) stated that educational effectiveness of ICTS depends on how they are used and for what purpose, and like any other educational tool or mode of educational delivery. It can work for everyone, everywhere in different ways. There have also been many studies that seem to support the claim that the use of electronic tutor guide enhance and amplifies exciting curricula, as measured through standardized testing specifically research shows that the use of computers as authors for drill and practices and for instructional delivery combined with traditional instruction, results increase in learning in the traditional curriculum and basic skills areas, as well as higher test scores in some subjects compared to traditional instruction alone. Students also learn quickly, demonstrate greater retention and are better motivated to learn when they work with Electrical-Tutor-Guides. But there are those who claim that these represent modest gains and, in any case, much of the researches on which these claims are based are methodologically flawed.

Romulo (2000) opined that transmission of basic skills and concepts that are the foundation of higher order thinking skills and creativity can be facilitated by ICTs or electronic Tutor guide through drill and practice. Educational television programmers such as: Sesame Street use repetition and reinforcement to teach the alphabet, numbers, colors, shapes and other basic concept. These of the early uses of computers, were for computer based learning (also called computer assisted instruction) that focused on mastery of skills and content through repetition and reinforcement.

Huston (2000) posited that the concept behind an "Electronic Performance Support System: (EPSS) is based on the more basic idea of using technology to integrate teaching and learning experiences with software tools to improve skills performance by

bringing individuals up to speed in their work as quickly as possible and with the minimum support from other people.

Nuerel (2002)expressed that the National Research Council (NRC) of the U.S defines learner centered environment as those that 'pay careful attention to the knowledge, skills, attitudes and beliefs that learners bring with them to the classroom'. Experience enables individuals to build mental models or schemes, which in turn provides meaning and organization to subsequent experiences. Thus knowledge is not out there, 'independent of the learner and which the learner passively receives: rather knowledge is created through an active process in which the learner transfers information from the guide which the teacher has documented.

Butzin (2002) opined that Education Policy makers and planners must first of all be clear about what educational outcomes are being targeted. These broad goals should guide the choice of technologies to be used and their modalities of use. The potential of each technology varies according to how it is used. Haddad and Draxler (1999) identifies at least five technology use in education as ;

i. Presentation
ii. Demonstration
iii. Drills and practice
iv. Interaction
v. Collaboration

Each of the different electrical facilities (ICTs) prints, audio/video cassettes, radio and TV broadcasts, computer or the internet may be used for presentations and demonstrations. Except for video technologies, drill and practice may likewise be

performed using the whole range of technologies. Butzin (2002) further explained that a class period begin with the teacher demonstrating the whole lesson. After the students find out their first assignment, some video cassettes or stations which focus on skill practice and others which focus on concept development will be given to them to learn from. Then teacher assigns instructional software on computer software at each station to tie in with the lesson objectives or different lesson with their objectives. Browne (2002) pointed out that electronic tutor guide learning is also call "anytime, anywhere". Features of ICTs are their ability to transcend time and space, ICTs make possible a synchronous learning or learning characterized by time lag between the delivery of instruction and its reception by learners. Additionally, certain type of electronic-tutor-guide such as teleconferencing technologies, enable instruction to be received simultaneously by multiple and geographically dispersed learners.

According to Butzin (2002) motivating to learn Electronic-tutor-guide such as videos, television and multimedia computer, software that combine text, sound and colour, moving image can be used to provide challenging and authentic content that will engage the students in the learning process. Butzin further explained that electronic tutor guide can enhance the quality of education in several ways by increasing learner motivation and engagement, by facilitating the acquisition of basic skills and by enhancing teacher training. Electronic guides are also transformational tool which, when used appropriately can promote the shift to a learner centered environment.

Jada (2004) explained that electronic learning offers are effective learning experiences, since the learner participates in the learning process and receives individual attention, even when the instructor and the learner are at different locations. This

participation in learning is by itself a positive learning experience. The atmosphere provide by electronic learning allows more effective interaction between the student and the instructor. Therefore, it can be as effective as the traditional classroom and in e-learning, there is reduction in the physical contact between the learner and the teacher; there is less touch.

Ofsted (2004) explained that electronic-tutor-guide can catalyze the paradigmatic shift in both content and pedagogy that is at the heart of education reform in the 21st century. If designed and implemented properly, electronic-tutor-guide supported education can promote the acquisition of the knowledge and skills that will empower students for lifelong learning. Electronic-tutor-guide especially computers and internet technologist enables new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. Ofsted further said that learners therefore, learn as they do and whenever appropriate, work on real-life problems in-depth, making learning less abstract and more relevant to the learner's life situation. Electronic guide enhanced learning, promotes increased learner engagement. Electronic tutor guide enhanced learning 'just-in-time' learning in which learners can choose what to learn when they need to learn it.

Bracey (2007) stated that the use of computers and electronic guide is useful in drill and practice, tutorials, stimulations, instructional management, supplementary exercises, programming, database development and writing using word processors. These uses can either be stand-alone electronic learning activities or computer. Electronic learning activities or computer activities which reinforce material introduced and taught by teachers. Bracey went further to explained Computer Assisted Instruction (CAI). This

is the use of the microcomputer for drill and practice, tutorial or simulation activities offered either by themselves or as supplements so traditional teacher directed instruction.

Gery (2009) stated that electronic teaching portfolios are multimedia documents. They allow technology for inclusion of more than just printed documents. For example, you can include video footage of yourself teaching, an audio receiver providing context and reflection on the portfolio, or instructional computer programs or code you have written.

2.10 Empirical Studies

The following empirical studies related to this study were reviewed:

Okeke (2005) conducted a research work on Improving Students' skill Acquisition through Effective Teaching of Clothing and Textiles Education in Institutions in Anambra state. The study adopted a survey research design. The population comprised of all the lecturers and students in the tertiary institutions offering Home Economics in Anambra state. The sample consisted of 21 lecturers and 90 students randomly drawn from the population. Several copies of questionnaire were used for data collection and data were analyzed using frequencies and mean scores. The findings indicated among others that, there was lacked of adequate facilities and equipment for teaching clothing and textiles, lack of skilled clothing and textile lecturers, use of difficult pattern drafting terms, lack of enough books on clothing construction, poor motivation of students by the lecturers. Recommendations were made among others that, State Ministry of education should provide necessary facilities for the improvement of students' skill acquisition through improved clothing and textile education.

The researcher objective and null hypothesis were not tested, if not better findings and results would have been collected. However, the present study and the previous study identified that there are problems in acquiring skills in clothing and textiles especially in tertiary institutions, which should be given attention for proper rectification.

Butzin (2002) conducted a research on Decade of success of young children using Tutor guide. The objectives of the study include; determining how students can learn independently, find out the effect of tutor guide on students learning. 411 teachers and students were sampled for the study and data were collected through the use of questionnaire. The data collected were analyzed using descriptive statistics of standard deviation and correlation coefficient while regression analysis was to test the hypotheses.

The findings revealed that out of their first assigned learning, students were able to score high marks for their independent learning. Also, some students focused on skill practice, while others focused on concept development. The station activities encompass synthetic (hand-on) learning as well as auditory and visual modalities. The teacher assigns instructional software at each computer station to tie in with the lesson objectives and it was found that students demonstrate better learning achievement with tutor guide. In a nutshell, the findings over a decade's worth of research on Project Child students have shown that they have scored consistently higher on standardize tests than their counterparts in traditional classrooms, and that the positive effective of the programmed have increased over time. Project Child students also exhibited better attitudes towards school and learning, and better discipline as well. The researcher recommended among others that the government should computerize every aspect of teaching and learning. The work is useful to the current research since the work was on the effect of tutor guide

on students' learning which the current research also focus on. It also demonstrated how the tutor guide should be applied which serves as a guide to the current research.

Belawati (2002) conducted a research on Electronic Tutorials to enhance Learners support at university of Terbuka, Indonesia. Belawati said since its establishment in 1984 as the first open learning institution in Indonesia, the universities Terbuka has made great strides in making their education available to Indonesians, having served more than 400,000 students nationwide in 14 years of existence. The mandate of the university is not only to expand, but to improve the quality of education and to make it more relevant to National development. Therefore, it becomes imperative to investigate the topic; Electronic Tutorials to enhance Learners support at university of Terbuka. The objectives of the study include; determining the factors affecting the effective implementation of Electronic Tutorials, compare the effect of traditional tutorial models and Electronic Tutorials on students learning. A sample of 342 students and teachers were used for the study. These two (2) methods were used over 2 semester period and the results revealed high rates for both students and teachers on Electronic Tutorials. This is comfortable with the use of technology, the rate scores were also due to enough time for proper practice in the classroom. The participation of students depends on their interest in electronic tutorials. The researcher recommended that while internet and fax technologies have the potential to enhance learning support at universities Terbuka, practical steps must be taken to improve tutor-to-computer radios, upgrade the computing and e-mailing skills of both academic staff and students. More aggressively, to promote the electronic tutorial model, the authorities should collaborate with external institution to create more internet access points. The

sample population was too small if not a better result would have been gotten. However, the study is relevant to the current research, because both researches are on ways to improve the quality of education through Information Technology and make it more relevant especially the practical courses.

In another study, NECTEC (2002) conducted a research on ICT for Poverty Reduction Programs/Projects in Thailand. The objectives of the research include; determining to use Electronic Tutor guide to promote the teaching of science subjects, find out the effect of ICT on the learning of science subjects. 152 local secondary schools of interest were sample and 1,113 students and teachers were used for the study. Questionnaire was the instrument used to gather data. The data collected were analyzed using mean and standard deviation. The findings of the study revealed that the use of Electronic tutor guide has improved the learning of science and technology. The researcher recommended that schools in Thailand should develop an easy-to-use web authoring application called the "Digital Library Toolkit" that allowed teachers to create based lessons or instruction, The government of Thailand should create National cultural commission called "Thai cultural information system" which help in generating information for the Library. The researcher believed that universities or tertiary institution even secondary schools education could be developed and promoted through electronic-tutor-guide especially courses that needs a lot of drills and practice.

The researcher did not test any hypothesis to further probe into the research questions if not a better result would have emerged. However, the study is relevant to the current research, because both researches are on ways to improve the quality of

education through Information Technology and make it more relevant especially the practical courses.

Martin and Lundstrom (1999) conducted a research on the attitudes of vocational Home Economic teachers towards computer. The objective of the study was to investigate ways and areas of the content in which computers were utilized, the types of computer application currently used and to determine computer programming and software desired by teachers, how computers were used professionally outside of class time, and to determine computer training teachers have. The sample size was 196 vocational Home Economics teachers teaching in Elapse school District in Texas, the instrument for data collection was questionnaire; descriptive statistics such as frequencies percentages were used to analyze the research questions and spearman's rank correlation coefficient and Wilcoxon test were used to test the hypotheses.

The findings revealed that the content areas in which vocational Home Economics teacher frequently used computers in their classrooms were in teaching food and nutrition, childcare and development, fashion, clothing, sewing and textiles, then consumer economics education. The findings also revealed that majority of the teachers would like courses dealings with the employment of computers in teaching. . The study is similar to the current study because the study helped to derive the main variable in the topic of this study (Electronic-Tutor-Guide). The study was also helpful to the current research because it shade light on how computer as electronic equipment utilized in the teaching of Home Economics.

2.11 Summary of the Review of Related Literature

The review of related research gave a broad spectrum of various authors' ideas on how to improve students' skills in clothing through the use of electronic-Tutor-Guide in Colleges of Education. Clothing is as old as history of civilizations. Theoretical frameworks related to the study were reviewed. These include the work of Jonassen who proposed a model of developing constructivist learning and diversity in teaching in the classroom. Clothing has been important since pre-history time, the culture throughout the world both primitive and modern have used clothing or body ornament for protection, self-expression, group identity, status and ceremonies as well as in attempting to conform to the prevailing code of modesty. Procedures for making basic stitches were also discussed, that is temporary, permanent and decorative stitches. Skill acquisition in clothing was also discussed in the literature reviewed and how the two methods (demonstration/lecture and Electronic Tutor Guide methods) would be used in teaching the skills.

The gap created by past research was that the teacher lectures and demonstrates in the class, while students only sit to listen and watch. The students hereafter are expected to do themselves, at these level difficulties of recalling the procedure is experience and some sessions of the practical are forgotten and in ability to carry on. The present study has bridge this gap by introducing the electronic-Tutor-Guide which involves the use of modern facilities like; CD Rom, television, disk, video tape, computer, DVD and teleconferencing to promote and facilitate content of recalling and retention in the learner .Also the learner or student can learn on their own using the disk which the lecturer has documented for their independent learning;

where they do not understand, they can pose the DVD player and replay for more understanding. The researcher also viewed that Electronic-Tutor-Guide can enhance the quality of education in several ways by increasing learner motivation and engagement, by facilitating the acquisition of basic skills especially in clothing. Therefore, the gap in the literature review especially the Empirical study that result of the study has helped to filled are as follows:

i. It has filled the gap of easier ways of learning .

ii. it has helped in acquisition of skills independently without the help of an instructor or teacher

iii. it has made provision for distance learning and Electronic-Learning.

iv. New method of learning and teaching clothing has been provided.

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CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This chapter presents the design and methodology used for this study under the following sub-headings:

3.1 Research Design.

3.2 Population for the study

3.3 Sample Size and sampling procedures

3.4 Instrument for Data Collection

3.4.1 Validation of the instrument

3.4.2 Pilot study

3.4.3 Reliability of the instrument

3.5 Procedure for Data Collection

3.6 Procedure for Data Analysis

3.1 The Research Design

The experimental and descriptive research designs were adopted for the study. The experimental design was used for the development of Electronic-Tutor-Guide and teaching of Basic stitches using the Electronic-Tutor-Guide and Demonstration method; which were equivalent or comparable in all characteristics of interest (Ary, Jacobs and Razavieh, ,2002] The method was selected because the study aimed at comparing Electronic-tutor-Guide and Demonstration method of teaching basic stitches in clothing. Experimental design according to Olayiwola (2007) permits randomization of subjects to groups and provides some degree of control over

possible extraneous or confounding variables that might affect either the internal or external validity or both. Descriptive design was used for reporting the learning process used for the Demonstration of the three basic stitches (temporary, permanent, decorative) as well as translating the research findings into functional used.

3.2 Population for the Study

The population for the study comprised of all the NCE 1 students of Home Economics Education in Federal College of Education, Pankshin and College of Education, Gindiri. The total population of the students in the two institutions was two hundred and ninety-nine (299) for 2010/2011 session.

The breakdown of the population for the study is given in Table 3.1

Table 3.1 Population for the Study

S/No	Names of Institution	Number of students
1	Plateau state college of Education, Gindiri	97
2	Federal college of Education, Pankshin	202
	Total	**299**

Source: Record office of the two institutions, (2010/2011)

3.3 Sample Size and Sampling Procedures

Proportionate random sampling method was used to select Electronic-tutor-guide and Demonstration groups. It is a general and effective method used in experimental research design to determine cause and effect (dependent and independent) relationship between the two variables. It is also in line with Gay and Diehl (1992) who suggested a sample size of thirty (30) subjects for the groups in an

experimental design. Roscoe (1975) also stated that a small sample size from the parent population in an experimental design is convenient.

The procedure for selecting the sixty students from the population of ninety seven (97) students in Plateau state college of Education, Gindiri was simple random (hat drawn method). The researcher wrote sixty (60) 'Yes' and thirty seven (37) 'No' on pieces of papers. The papers were folded in scramble form and put in a container and shaken very well before the students were asked to pick one each.

The same procedure was applied to select students that were used for the experiment in Federal College of Education, Pankshin. There were sixty (60) 'Yes' and one hundred and forty two (142) 'No'. The students that pick 'Yes' were used for the experiment. The assignment of the two schools to Electronic-Tutor-Guide and Demonstration groups was also by chance effect. The researcher wrote thirty (30) 'E' (Electronic-Tutor-Guide) and thirty (30) 'D' (Demonstration). Those that picked 'E' fell into Electronic-Tutor-Guide group and those that picked 'D' fell into Demonstration group.

The breakdown of the sample size is given in Table 3.2

Table 3.2: Sample Size for the Study

S/No	Names of Institution	Number of students
1	Plateau state college of Education, Gindiri	60
2	Federal College of Education, Pankshin	60
	Total	**120**

Source: Field study, 2011

3.4 Instrument for Data Collection

Two instruments on the procedures in making the categories of basic stitches were used to generate relevant data for the study. The instruments were questions for the pre-test and post-test. The instruments were rated over hundred percent [100] each, and adopted from the Basic stitches[temporary, permanent and decorative] that is pre-test and post-test. The questions for both pre-test and post-test comprised of twenty five objectives questions and ten questions to re-arranged procedures of the Basic stitches, this comprised of 35 questions.(See appendix II and III, pages 83-92 for details.)

3.4.1 Validation of the Instrument

In order to insure that the instruments were valid, the questions of both pre-test and post-test were given to two senior lecturers and one expert in the department of Vocational and Technical Education, Ahmadu Bello University, Zaria. They examined and vetted the instrument in respect to its relevance for this study. Their corrections and criticism improved the instruments' format.

3.4.2 Pilot Study

After the validation of the instrument, a pilot study was conducted in Federal College of Education, Zaria (FCE, Zaria) in Kaduna state using a sample of twenty (20) Home Economics students, where ten (10) students were randomly selected into experimental group and the other ten (10) students into control group. The choice of this school was influenced by its location because it offers clothing with similar characteristics with the area of study. The data collected from the pilot study were

subjected to statistical analysis using descriptive statistics (mean and standard deviation) and inferential statistics (t-test statistics).

3.4.3 Reliability of the Instrument

The reliability of the instrument was determined by the statistical analysis of the data collected from the pilot study. The split-half method was used to determine the reliability of the instrument. The instrument was divided into two halves of odd and even numbers. The spearman Rank Order Correlation Coefficient was used to calculate the reliability of one half and Spearman Brown Prophecy formula was used to calculate the reliability coefficient. The reliability coefficient calculated was 0.76 which is positive and high, hence the instrument was adjudged reliable and stable. This is in line with Nworgu (2006) who stated that a reliability coefficient of 0.6 and above is high and the instrument for which it is calculated is reliable.

3.5 Procedure for Data Collection

Four weeks was used to collect data for this study.

Phase 1- In the first week, the students in both the Electronic-tutor-guide group and Demonstration/Lecture group in the two colleges were given pre-test on basic stitches. The reason was to find out the previous knowledge the students had on basic stitches(temporary, permanent ,decorative)

Phase2- In the second week the students in the Electronic-Tutor-Guide were taught Basic stitches(temporary, permanent and decorative) using Electronic-Tutor-Guide. Each student was given the Tutor-Guide that the researcher developed to use on desk-

top and make basic stitches independently. This gave them the opportunity to pose and or replay several times where they do not understand.

Phase 3- In the third week, the students in the Demonstration/Lecture[control] group were also taught Basic stitches [temporary, permanent, decorative] using Demonstration/Lecture in the class.

Phase 4-In the fourth week the students in both the Electronic-Tutor-Guide group and Demonstration/Lecture group were administered post-test by the researcher and two research assistants on the same three areas of Basic stitches (temporary, permanent and decorative).The scripts were collected ,marked, scored and recorded using marking scheme as shown in appendix IV, [page 103.]

3.6 Procedure for Data Analysis

The mean performance of students for both the pre-test and post-test for the experimental and control group (ETG and Demonstration groups) was computed and compared. Mean and standard deviation were used to analyze the data to answer the research questions generated for the study. Independent sample t-test was used to test the hypotheses one, two and three. This is in line with Nworgu (1991) who said that t-test is one of the most effective methods of comparing means of two groups mean. The hypotheses were tested at0.05 level of significance. However the mean and standard deviation were the major statistical tools used for all the three research questions generated in the course of this study.

Decision Rule: If the calculated t-test value is less than the table value, the null hypothesis was confirmed and if the calculated t-test value is greater than the table value, the null hypothesis was disconfirmed.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

The study ‘‘Comparative study on Effect of Electronic-Tutor-Guide and Demonstration/Lecture Method of Teaching on Skill Acquisition in Clothing in Colleges of Education in Plateau State. ‘The study made use of 60 students from College of Education Gindiri divided into two equal groups for Electronic- Tutor - Guide [Experimental group] and Demonstration [Control group]. The same numbers were also sampled from Federal College of Education Pankshin divided into two equal groups as well. In each method the students’ pre-test and post-test scores were recorded and the two Independent sample t-test statistics was used to compare the effect of the treatment on the subjects .All hypotheses were tested at 0.05 alpha level of significance.

4.1 Distribution of respondents.

Table 4.1 The breakdown of Respondents according to Colleges of Education in frequencies percentages

Colleges of Education	Frequency	Percentage
College of Education Gindiri	**60**	**50.0**
College of Education Pankshin	**60**	**50.0**
Total	**120**	**100.0**

Sources: Field study on distribution of respondents (2012)

The table above showed that two colleges of educations were sampled. A total of 60 students were selected from College of education Gindiri representing 50.0 while the

same number and representation were sampled from Federal College of Education Pankshin.

4.2 Research Questions.

Analysis of students 'performance in Basic stitches (temporary, permanent and decorative).The analysis is presented in table 4.2, 4.3 and 4.4

Research Question One: *What is the level of skill acquired by students taught Temporary stitches [even, uneven and tailor's tacking] using Electronic-tutor-Guide and those taught using Demonstration/Lecture method.*

Table 4.2 Differences in the skills acquired by students in temporary stitches [even, uneven and tailor's tacking] taught using Electronic-tutor-Guide and Demonstration/Lecture method of teaching in Colleges of Education.

Groups	N	Mean	Std. Deviation	Std. Error Mean
ETG Experimental Group Temporary	60	20.4667	3.18080	.41064
Demonstration Control Group Temporary	60	16.7167	2.62383	.33873

Source: Field study and statistical analyses (2012)

Based on the data presented in table 4.2 there were sixty students each group from the two colleges, that is the Experimental groups in colleges of Education Gindiri and College of Education Pankshin and sixty students for Control groups in the two Colleges. According to the descriptive table above, the mean skill acquired by students in temporary stitches were 20.4667 standard deviation of (S.D) of 3.18080 and standard error (S.E) of .41064 by students taught using Electronic-

Tutor-Guide. On the other hand those taught using Demonstration/Lecture method had the mean of 16.7165, standard deviation (S.D) of 2.62383 and standard error (S.E) of .33873.Thus, with the mean score of 20.4667 for Electronic-Tutor-Guide as against the mean score of 16.7167 for Demonstration/Lecture method, it shows that students exposed to Electronic-Tutor-Guide had comparatively higher skills acquired than those taught with Demonstration, in temporary stitches.

Research Question Two: *What is the level of skills acquired by students in permanent stitches (running, back and hemming) using Electronic-Tutor-Guide and Demonstration/Lecture method of teaching in Colleges of Education.*

Table 4.3 Differences in the level of skill acquired in permanent stitches (running, back and hemming) using Electronic- Tutor-Guide and Demonstration/Lecture method of teaching in Colleges of Education.

Groups	N	Mean	Std. Deviation	Std. Error Mean
ETG Experimental Group Permanent	60	32.6833	3.84219	.49602
Demonstration/Lecture method Control group permanent	60	27.0333	4.14143	.53466

Source: Field study and statistical analyses (2012)

The data in Table 4.3 revealed that there were sixty students each group from the two Colleges of Education Gindiri and College of Education Pankshin and sixty students for Control groups in the two Colleges. The group exposed to Electronic-

Tutor-Guide had the mean of 32.6833, standard deviation (S.D) of 3.84219 and standard error (S.E) of .49602. On the other hand, students taught with Demonstration/Lecture method had the mean performance of 27.0333, standard deviation of 4.14143 and standard error (S.E) of .53466. This outcome revealed that students taught with Electronic-Tutor-Guide had comparatively higher skills acquired than those taught with Demonstration/Lecture method, in permanent stitches.

Research Question Three: *What is level of skills acquired by students in Decorative stitches (stem, satin and cross-stitches) taught using Electronic- Tutor-Guide and Demonstration/Lecture method of teaching in colleges of Education.*

Table 4.4 Differences in the level of skills acquired by students in Decorative stitches (stem, satin and cross-stitches) taught using Electronic- Tutor- Guide and Demonstration/Lecture method of teaching in their means and standard deviation in the two colleges of Education.

Groups	N	Mean	Std. Deviation	Std. Error Mean
ETG Experimental Group Decorative	60	20.4833	2.19005	.28273
Demonstration/Lecture method Control group Decorative	60	17.5667	2.63848	.34063

Source: Field study and statistical analyses (2012)

The outcome of Table 4.4 revealed that sixty students taught using Electronic-Tutor-Guide had mean performance of 20.4833, standard deviation (S.D) of 2.19005

and standard error (S.E) of .28273. On the other hand, those taught using Demonstration/Lecture method had the mean performance of 17.5667, standard deviation (S.D) of 2.63848 and standard error (S.E) of .34063. Thus, with the mean performance of 20.4833 for Electronic-Tutor-Guide as against 17.5667 for Demonstration/Lecture method, it showed that students taught with Electronic- Tutor-Guide had comparatively higher level of skills acquired than those taught using Demonstration/Lecture method, in decorative stitches.

4.3 TESTING OF NULL HYPOTHESES

This study raised three research questions and three null hypotheses that aimed at achieving the study's objectives. Therefore the pre-test and post-test scores of both Electronic-Tutor-Guide and Demonstration/Lecture method groups were statistically analyzed at the significant level of 0.05 and the results interpreted. For null hypotheses one, two and three independent sample t-test statistic was used. In the test of null hypotheses, if the calculated value is less than or equal to the critical value at 0.05 level of significant the null hypotheses will be accepted. This implies no significant difference between the variables. On the other hand, if the calculated value, the null hypotheses will be rejected. This implies that significant difference exist between the variables. Though the detail performance of the students is as seen in appendix IV the summary of results from table 4.5 to 4.7 were used for testing the three null hypotheses.

Null hypothesis one(H_O1):The null hypotheses stated that there is no significant difference in the level of skills acquired in temporary stitches(even, uneven and

tailor's tacking) among students taught using electronic-tutor- guide(Experiment)and those taught using demonstration/lecture (control) methods in colleges of education.

Justification for statistical technique: of2-independent sample t-test statistic. The two independent samples were taught to students with Electronic-tutor-guide and those taught by Demonstration/Lecture method measuring their level of acquired skills in temporary stitches (quantitative variables)

Table 4.5

Variable	Groups	N	Mean	Std. Dev	Std. Error	t calculated	t critical	df	Sig (p)
Skills acquired in temporary stitches	**Electronic Tutor Guide (experimental)**	**60**	**20.4667**	**3.1808**	**.4106**	**7.045**	**1.96**	**118**	**0.00**
	Demonstration/Lecture method (Control)	**60**	**16.7167**	**2.6238**	**.3387**				

Source: Field study and statistical analyses (2012) p< 0.05, t > 1.96 at df 1187

Table 4.5 data showed the result of independent t-test analysis used for testing the difference between the performance of students exposed to Electronic-tutor-guide and Demonstration/Lecture methods. The data from the table above revealed that the group exposed to Electronic-tutor-guide had mean performance of 20.4667, standard deviation(S.D)of 3.1808 and standard error (S.E) of .4106, while those taught using Demonstration/Lecture method had mean performance of 16.7167, standard deviation(S.D)of 2.6238 and standard error(S.E) of .3387.The calculated t- was 7.045,while the t- critical was 1.96 with the degree of freedom (df) as 118.Hence the null hypothesis which state that there is no significant difference between students taught using electronic-tutor-guide (experimental) and those taught using

Demonstration/Lecture(control)methods in their level of skills acquired in temporary stitches in colleges of education; is hereby by rejected. This implies that there were significant differences in the skills acquired in temporary stitches between electronic-tutor-guide and demonstration/lecture group. The electronic-tutor-guide group acquired skills in temporary stitches significantly better than the demonstration/lecture group.

Null hypothesis [H_O2]: The null hypothesis stated that there is no significant difference in the level of skills acquired in permanent stitches (running. back and hemming) among students taught using electronic- tutor- guide (experimental) and those taught using demonstration/Lecture (control) method in colleges of education.

Table 4.6 Independent t-test statistics on the difference in the level of skills acquired in permanent stitches between students taught using electronic- tutor- guide (experimental) and those taught using demonstration/Lecture (control) methods in colleges of education.

Justification for statistical technique; of 2-independent sample t-test statistic; The two independent samples are students taught with Electronic-tutor-guide and those taught Demonstration/Lecture method measuring their level of acquired skills in permanent stitches(quantitative variables)

Table 4.6

Variable	Groups	N	Mean	Std. Dev	Std. Error	t calculated	t critical	df	Sig (p)
Skills acquired in Permanent stitches	Electronic Tutor Guide (experimental)	60	32.6833	3.8421	.4960	7.747	1.96	118	0.000
	Demonstration/Lecture method (Control)	60	27.0333	4.1414	.5346				

Source: Field study and statistical analyses (2012) ***p < 0.05, t > 1.96 at df 118***

The data from table 4.6 showed that the group taught using electronic-tutor-guide had mean of 32.6833, standard deviation(S.D)of 3.8421 and standard error (S.E) of .4960.On the other hand those taught using Demonstration/Lecture method had the mean of 27.0333,standard deviation (S.D) of 4.1414 standard error (S.E) of .5346.The t calculated was 7.747, while the t critical was 1.96 with the degree of freedom as 118.Therefore, the null hypothesis which stated that there is no significant difference between students taught using electronic-tutor-guide(Experimental) and those taught using Demonstration/Lecture (control) method in their permanent stitches in colleges of education, is hereby rejected. This implies that there was significant difference in the skills acquired in permanent stitches between students taught using electronic-tutor-guide and those taught using demonstration/Lecture method in colleges of education. This showed that electronic-tutor-guide group performed better than the demonstration group.

Null hypothesis Three (H_O3): The null hypothesis stated that there are no significant differences in the level of skills acquired in Decorative stitches (stem, satin cross-

stitches) among students taught using electronic-tutor guide (Experimental) and those taught using Demonstration/Lecture (control) methods in colleges of education.

Table 4.7 Independent t-test statistics on the difference in the level of skills acquired in decorative stitches between students taught using electronic-tutor-guide (Experimental) and those taught using Demonstration/Lecture (control) methods in colleges of education.

Justification for statistical technique: of 2-Independent samples t-test statistics. The two Independent samples are students taught with Electronic-tutor-guide and those taught by Demonstration/Lecture method measuring their level of acquired skills in decorative stitches (quantitative variables)

Table 4.7

Variable	Groups	N	Mean	Std. Dev	Std. Error	t calculated	t critical	df	Sig (p)
Skills acquired in Decorative stitches	**Electronic Tutor Guide (experimental)**	**60**	**20.4833**	**2.1900**	**.2827**	**6.589**	**1.96**	**118**	**0.00**
	Demonstration/Lecture method (Control)	**60**	**17.5667**	**2.6384**	**.3406**				

Source: Field study and statistical analyses (2012) p< *0.05,* *t > 1.96 at df 118*

The data from Table 4.7 showed that the group exposed to Electronic-tutor-guide had the mean performance of 20.4833, standard deviation(S.D) of 2.1900 and standard error(S.E)of .2827.On the other hand those taught by Demonstration/Lecture method had mean performance of 17.5667, standard deviation(S.D) of 2.6384 and standard error (S.E) of .3406.The t calculated was 6.589, While the t-critical was 1.96 with the degree of freedom (df)as 118.Cconsequently, the null hypothesis which

stated that there is no significant difference between students taught using electronic-tutor-guide(Experimental) and those taught using Demonstration/Lecture(control) methods in their decorative stitches in colleges of education, is hereby rejected. This implies that there was significant difference in the skills acquired in the decorative stitches between students taught using electronic-tutor-guide and those taught using demonstration/lecture method in colleges of education. This means that electronic-tutor-guide group performed better than demonstration group in decorative stitches.

4.4 Discussion of Findings

The research work was on, 'Comparative study on the Effect of Electronic-Tutor-Guide and Demonstration/Lecture Method of Teaching on Skills Acquisition in Clothing in Colleges of Education in Plateau State.' In order to achieve the objectives of the study, the researcher involved two distinct teaching which comprised of Electronic-tutor-guide and Demonstration/Lecture method. Two colleges of education and NCE1 classes were used comprising of 60 students each from the two colleges, namely Gindiri college of Education and Federal College of Education Pankshin.

In research question one table 4.2 there was mean performance of 20.4667 and 16.7167 between the two groups which showed that Electronic-tutor-guide had higher mean performance. A further test of the item using null hypothesis one revealed significant difference between the two groups. This findings agreed with Huton (2000) who believed that the concept behind an 'Electronic Performance support System' (EPSS)is based on the more basic ideas of using technology to integrate teaching and learning experiences with software tools to improve skills performance

by bringing individuals up to speed in their work as quickly as possible and with the minimum support from other people.

In research question two table 4.3the mean performances of the two groups were 32.6833 and 27.0333 which showed that Electronic-tutor-guide had higher mean performance in comparison with the Demonstration/Lecture method. A further test of the item using hypothesis two revealed that there is significant difference between the performances of students exposed to the two methods. The findings is supported by the view of Butzin (2002)motivating to learn using Electronic-tutor-guide such as videos, television , and multimedia computer, software that combine text, sound and colour; moving image can be used to provide challenging and authentic content that will engage the students in the learn process. Butzin further explained that electronic-tutor-guide can enhance the quality of education in several ways by increasing learn motivation and engagement. By facilitating the acquisition of basic skills and enhancing teacher training. Electronic guide are also transformational tool which, when used appropriately can promote a shift to learner centered environment.

In research question three table 4.4the mean performance between the two groups stood at 20.4883 and 17.5667.The result revealed that Electronic-tutor guide had higher mean performance in comparison with Demonstration/Lecture method. A further test of the items using hypothesis three revealed that there is significant difference between the performances of students exposed to the two methods. This finding is supported by Jada (2004) explanation that electronic learning offers are effective learning experiences, since the learner participate in the learning process and receives individual attention, even when the instructor and learner are at different

locations. This participation in learn is by itself a positive learning experience. The atmosphere provide by electronic learning allows more effective interaction between the students and the instructors. Therefore, it can be effective as the traditional classroom and in e-learn there is less touch.

4.5 Summary of major finding.

The following are the summaries of the major findings;

-There is significant difference in the level of skills acquired in temporary stitches between the performances of students exposed to Electronic-tutor-guide and those taught by Demonstration/Lecture method, even though those exposed to Electronic-tutor-guide had higher mean performance.

-Significant difference exist in the level of skills acquired in permanent stitches between the performances of students taught using Electronic-tutor-guide and those taught by Demonstration/Lecture method thus, those taught with Electronic-tutor-guide had higher mean performance.

-Significant differences exist in the level of skills acquired in decorative stitches between the performances of students exposed to Electronic-tutor-guide and those taught by Demonstration/Lecture method, even though those exposed to Electronic-tutor-guide had higher mean performances. The Electronic-tutor-guide method, their mean performances were 20.4667, 20.4833, and 32.6833 against Demonstration/Lecture method with mean performances of 16.7167, 17.5667 and27.0333 respectively.

CHAPTER FIVE

SUMMARY,CONCLUSION AND RECOMMENDATION

This chapter presented summary, conclusion, recommendation and suggestions for further study.

5.1 Summary

The study titled 'Comparative study on the effect of electronic-tutor-guide and demonstration/Lecture method of teaching on skills acquisition in clothing in colleges of education. 'The major objective was to compare the level of skills acquired by students in clothing taught using Electronic-Tutor-Guide and those taught using Demonstration/Lecture method in Colleges of Education. The study aimed at achieving three specific objective among which in included; to compare the level of skill acquired in the temporary stitches (even, uneven and tailor's tacking) by students taught using Electronic-tutor-guide and those using Demonstration/Lecture method of teaching in colleges of education. In line with these specific objectives three research questions were raised which include; what is the level of skill acquired in temporary stitches (even, uneven and tailor's tacking) among students taught using Electronic-tutor-guide and Demonstration/Lecture method of teaching in colleges of Education. Based on the three research questions, three null hypotheses were postulated which include; there is no significant difference in the level of skill acquired in Temporary stitches (even, uneven and tailor's tacking) between students taught using Electronic-Tutor-Guide and Demonstration/Lecture method of teaching in colleges of Education. The research questions and null hypotheses were

formulated so as to provide statistical validity to various solutions proffered for the objectives of the study.

The research design for study was experimental and descriptive design. 299 NCE1 students offering clothing in colleges of education in plateau state form the population of the study, from which 120 was selected as the sample for the study. The technique used for the study was simple random sampling (Hat drawn).The instrument used for collection of data for study were pre-test and post-test on basic stitches. Data collected from the pre-test and post-test were statistically analyzed. The three null hypotheses were tested at 0.05 level of significant. Hypotheses one, two and three were rejected.

Finally, the findings from the data analyzed revealed that there was significant difference in the level of skills acquired in temporary stitches between student exposed to Electronic-tutor-guide and those taught by Demonstration/Lecture method even though, the mean performance of students exposed to Electronic-tutor-guide was higher.

The findings revealed that there was significant difference in the level of skill acquired in permanent stitches between students exposed to Electronic-Tutor-Guide and Demonstration/Lecture method. This was evident in the higher mean performance of those exposed to the Electronic-tutor-guide method.

There were significant differences in the level of skill acquired in Decorative stitches between students taught using Electronic-Tutor-Guide and Demonstration/Lecture method of teaching in colleges of Education. This means that

Electronic Tutor-Guide group performed better than Demonstration group in skill acquired in decorative stitches.

5.2 Conclusion

Based on the findings of the study, it was concluded that since students' level of skills acquisition was better under the Electronic-Tutor-Guide method than in the demonstration/lecture method it means that Electronic-tutor-guide method of teaching clothing skills is more effective method. In order for the students to develop proper clothing skills, it means that students who were taught by demonstration method will not be able to develop in acquiring appropriate clothing skills. It was also concluded that Electronic-tutor-guide method lead to better skill acquisition in temporary, permanent and decorative stitches. Since better skills are acquired in clothing, more students will be motivated to enroll in clothing section.

5.3 Recommendations

The following recommendations are put forward based on the findings;

1. Clothing teachers should be encouraged to use Electronic-tutor-guide method in teaching basic stitches skills of clothing, so as to bring about better performance and acquisition of skills by students.

2. There is the need for colleges of education to provide enough modern electronic gadgets for clothing teachers to enable them to teach skills in basic stitches.

3.There is the need for the college authorities to encourage clothing to go for in-service training to acquire additional qualification electronic guides, so as to enable teach skills in basic stitches in clothing.

5.4 Suggestions for Further study.

The researcher suggests that further studies can be carried out on similar topics in other states of the federation for the purpose of better generalization.

-Effect of Electronic-Tutor-Guide method of teaching on skills acquisition by students on Cake Decoration in colleges of Education in Nigeria.

Addition to Knowledge.

This study has added easier way of learning and acquiring skills independently without instructor or teacher.

- Developing of electronic-tutor-guide on the three (3) areas of basic stitches (temporary, permanent and Decorative) for the independent learning.
- It has become a major instrument (apparatus) for teaching skills acquisition

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APPENDIX I

Home Economic Section,
Department of Voc. & Tech.
Faculty of Education,
Ahmadu Bello University,
Zaria.

Dear Respondents,

REQUEST TO FILL QUESTIONNAIRE

I am a postgraduate student of the above named institution; conducting a research on: "Comparative study on the effect of Electronic-Tutor-Guide and Demonstration/Lecture method of teaching on skill acquisition in Clothing in Colleges of Education".

Please assist by expressing your intelligent and honest opinion in providing answers to the following questions and participating in the practical aspect on basic stitches. You are assured that all information obtained shall be kept strictly confidential. I therefore solicit for your maximum cooperation and contributions to make this study a success.

Thank you for accepting to be part of the study.

Yours sincerely,

Lucy P. Shok.
(Med/Educ/14732/2007-08)

Appendix II

PRE-TEST FOR BOTH EXPERIMENTAL AND CONTROL GROUPS

1 Which is not of temporary stitch?

a Uneven stitch

b Tailor's tacking

c Even stitch

d Stem stitch

2 Permanent stitches are-

a back stitch, running and hemming.

b even, uneven and tailor's tacking.

c stem, satin and cross-stitches.

d long and short, even, and overcastting.

3 All are decorative stitches except one.

a tailor's tacking

b satin stitches

c cross-stitches

d stem stitches

4. Basic stitches could also be called—

a starting point.

b foundation stitches

c ending stitches

d machine stitches

5. What is use of tacking?

a for successful sewing

Behold two (2) fabrics together before permanent sewing

c. a and b

d none of these.

6 What the use of permanent stitches

a stitches that cannot be remove easily

b to hold two or more pieces of materials together

c also for decorative stitches

d all of the above.

7 what is decorative stitches?

a It could be Embroidery stitches

b It can be used for designing alphabets

c It can be used for designing flowers

d none of these.

8 The strongest and the most used basic stitch is—

a running stitches

b embroidery stitches

c back stitches

d stem stitches

9 Which amongst these is a neatening stitch?

a stem stitch

b embroidery stitch

c hemming

d seams

10 Tailor's tacking can be used for –

a designing patterns

b Transferring patterns

c all of the above

d none of the above

SECTION B'

RE-ARRANGE THE PROCEDURES IN MAKING BACK STITCHES, STEP BY STEP.

a) – take a stitch back, then bring the needle out again a little way along the same line;

Repeat to the desired length.

b) – place the right side of the pieces together

c) – fasten on the thread (by back stitch } and take one long running stitch

d) – end with a back stitch

A – b,a,c,d

B – b,c,a,d

C – a,b,c,d

D – b,c,d,e

MARKING SCHEME.1-10=10 marks each

1. a
2. a
3. b
4. c
5. d
6. a
7. c
8. c
9. b
10. b

Appendix III

POST-TEST

ANSWER ALL QUESTIONS IN SECTIONS 'A' AND 'B'

SECTION 'A'

OBJECTIVE QUESTIONS
TICK THE CORRECT ANWERS.

TEMPORARY.

1. What is the use of tacking?
    a. For successful sewing
    b. Hold two (2) fabrics together.
    c. 'a' and 'b'
2. Tacking serves as a……..
    a. Temporary stitch
    b. Permanent stitch
    c. Decorative stitch
3. Long and short stitches can also be called……
    a. Even tacking
    b. Uneven tacking
    c. Tailors tacking
4. Which of this stitch is used for transferring patterns?
    a. Back stitch
    b. Satin stitch
    c. Tailors tacking
5. Which of these stitches can be used for decorative?
    a. Tailors tacking
    b. Uneven tacking
    c. Running stitches

PERMANENT STITCHES

6. Basic stitches are----------
    a- temporary, stem and cross-stitch.
    b- Temporary, permanent and decorative.
    c- Decorative, back stitches only.
7. Which of the stitches can be used as a decorative stitch----------?
    a- Tailors tacking.
    b- Uneven
    c- Running stitches.
8. Running stitches is the most ----------of the stitches
    a- Basic
    b- Important
    c- Tacking

9. Running stitches can be used for ----------
    a- Seams and joining fabrics
    b- Gathers
    c. ‘a’ and ‘b’
10. Pick up as many stitches as your fabric and needle will allow.
    a- Back stitch
    b- Running stitch
    c- Decorative stitch
11. One of the strongest hand stitches is
    a- Hemming
    b- Back stitch
    c-Running stitch.
12. Back stitches are used for ------
    a- Repairing
    b- Seams
    c. ‘a’ and ‘b’
13. Back stitches has ---------- appearance
    a- Zigzag
    b- Machine
    c- Smooth
14. ---------- stitch overlap on the wrong side.
    a- Even tacking
    b- Satin stitch
    c- Back stitch
15. Putting the right side together before stitching is for----------
    a- Hemming
    b- Stem
    c- Back stitch.
16. Stitching that is done by bringing it out one stitch ahead is call----------
    a- Satin stitch
    b- Hem stitch
    c- Back stitch
17. Hemming stitches are used for ----------
    a- Tacking
    b- Sewing
    c – Neatening
18. Stitches done when you roll the fabric on the middle finger of your hand is called
    a- Hemming
    b- Cross-stitch
    c- Tacking

19. Which is true of hemming?
    a- Decorative stitches
    b- Temporary stitches
    c- Permanent stitches.

20. Hemming can appear on--------
    a- Right side only
    b- Wrong side only.
    C- Both sides.

DECORATIVE STITCHES

21. Stem stitch is----------
    a- Decorative stitches
    b- Temporary stitches
    c- Permanent stitches.
22. Stem stitch give a ---------- line.
    a- Fine
    b- Chain stitch
    c- Open stitch
23. Satin stitch are----------
    a- Not close and horizontal
    b- Close and diagonal
    c- Close and parallel.
24. What are satin stitches?
    a- Fillings in any designs.
    b- Running stitches
    c- Flowers.
25. When cross-stitches are done, it gives a cross on----------
    a. both wrong and right side.
    b. only the right side.
    c. only the wrong side.

SECTION 'B'

RE-ARRANGE:

TICK CORRECT ANSWER TO THE PROCEDURES IN MAKING BASIC STITCHESSTEP BY STEP.

(1) PROCEDURE FOR EVEN TACKING.

a. Length of thread and space should be even or equal neatness of the finished work.
b. Work from right to left.
c. Bring the thread back from the last stitch; push the needle forward to make the back stitch along the area to be evenly sewn.
d. Start with a back stitch by pulling the needle through the fabric and gong back into the fabric
e. Work in and out into the last stitch.
   (a)- a, b, c, d, and e.
   (b)- b, d, e, c, and a.
   (c)- e, d, c, b, and a.

(2) PROCEDURE FOR UNEVEN TACKING.

a. Finished stitch should be long and short
b. Work from right to left.
c. Start with aback stitch.
d. Work in and out to the last stitch.
   (a) c, d, a, and b.
   (b) d, c, b, and a.
   (c) b, c, d, and a.
   (d)

(3) PROCEDURE FOR TAILOR'S TACKING

a. place pattern on the double layered fabric.
b. cut the thread; do not cut through the loop. This is to prevent risk of the tacks pulling out of the fabric.
c. pull the fabric layers apart and cut threads between for a series of tailor's tacking
d. Separate the layers cut the threads between. Leaning tuffs on both layers.
e. work from right to left
f. Start with unknotted double thread
g. tack a second stitch over the first leaving rather long loop of the same length as the first of 25mm or 2.5cm (a) a, b, c, e, f. (b) d, f, e, b, c. (c) a, e, f, g, b, c, d.

(4) PROCEDURE FOR BACK STITCH.

a. fasten on the thread (by back stitch) and take one long running stitch.
b. take a stitch back, then ring the needle out again a little way long the same line. Repeat to the desired length
c. place the right side of the piece together.
d. start with a back stitch.

(a) d,a and b.
(b) a,b,c and d.
(c) d,b,and a.
(d) c,d,a, and b

5. PROCEDURE FOR RUNNING STITCHES.

a. Start from left to right with a back stitch rather than a knot.
b. push the needle tip in and out of the fabric smaller and neater; every spaced in straight or curve lines as desired.
c. Push in and out for about half (1/2) a dozen stitches before pulling the thread out.
d. End the stitch with a back stitch.

(a) a,b,c and d. (b) d,a,b and c. (c) d,a,c and b.

6. PROCEDURE FOR HEMMING.

a. repeat until the hem is complete.
b. work from right to left with a garment held towards the worker and the hem held over the finger of the left.
c. turn beyond the tracking stitch, insert the needle through the turned edge and pick up 1/8 and pick up over the same sport for a start.
d. tick hem in position, but not close to the folded edge.

(a) c,a,b and d (b) d,c,b and a. (c) a,b,c and d.

7. PROCEDURE FOR STEM STITCHES

a. draw and make the necessary design.
b. bring the needle in the short distance along the line.
c. insert the needle at the tip off the line to be stitched.
d. bring the needle out half-way down the space made in the distance along the line.

(a) d,a,c and b (b) a,b,c and d (c) a,c,b and d.

8. PROCEDURE FOR SATIN STITCH.

a. insert the needle at edge of the design, then insert it at the opposite edge.
b. return to the starting edge by passing the needle underneath the material.
c. repeat, following the outline of the design. Make stitches close together and parallel.

d. finished satin should fill in any design of flowers, objects, figures etc neatly.
e. make the appropriate design on the fabric.
(a) e,a,b,c,d (b) b,c,d,e,a (c) c,b,d,e

9 PROCEDURE FOR CROSS-STITCHES.

a. start with a back stitch.
b. space as for as they are long to form a diagonal design
c. make a series of horizontal stitches about ¼ "to 3/8" (6-9mm) wide.
d. there should not be a cross behind the work.
e. then reserve director and continue making horizontal stitches at the same location as the precarious stitches to form an 'x' design.
(a) a,c,b,d. (b) a,b,c,d,e. (c) e,d,c,b and a.
.
10 Basic stitches could also be
a. all the
b. stitches
c. in clothing
d. foundation of

(a) a,b,c,d. (b) d,a,b,c. (c) b,d,c,a.

APPENDIX IV

POST-TEST:SECTION 'A' OBJECTIVE QUESTIONS

MARKING SCHEME.

1-25 = 2marks each

1. c- 'a' and 'b'
2. a- Temporary stitch
3. b- Uneven tacking
4. c- Tailors tacking
5. c- Running stitches
6. b- Temporary, permanent and decorative.
7. c- Running stitches.
8. a- Basic
9. b- Gathers
10. b- Running stitch
11. b- Back stitch
12. c. 'a' and 'b'
13. b- Machine
14. c- Back stitch
15. c- Back stitch.
16. c- Back stitch.
17. c – Neatening
18. a- Hemming
19. c- Permanent stitches.
20. b- Wrong side only.
21. a- Decorative stitches
22. a- Fine
23. c- Close and parallel
24. a- Fillings in any designs.
25. b. only the right side.

SECTION ‘B’
MARKING SCHEME
EACH QUESTION CARRIES FIVE (5) MARKS

1. (b)- b, d, e, c, and a.
2. (c) b, c, d, and a
3.(c) a, e, f, g, b, c, d.
4. (d) c,d,a, and b
5. (a) a,b,c and d.
6. (b) d,c,b and a.
7.(c)a,c,b and d.
8. (a) e,a,b,c,d
9. (b) a,b,c,d,e.
10. (b) d,a,b,c.

APPENDIX V

BASIC STITCHESAND PROCEDURES.

Basic stitches are the most necessary stitching crafts, the art of using stitches to join pieces of fabric together. Learn the correct way to do these stitches and form good habit of work, for this is the only foundation for the development of skills in needle work.

TYPE OF STITCHES

Stitches are grouped into two(2) categories:

a. Temporary stitches

b. Permanent stitches.

TEMPORARYSTITCHES.

As the name suggests, these are stitches that are used temporarily and are removed as soon as they have served their purpose (s). Therefore, a soft, cheap, white or coloured cotton tacking thread is usually used, which is much less strong than sewing cotton and will easily it is cut into stitches.

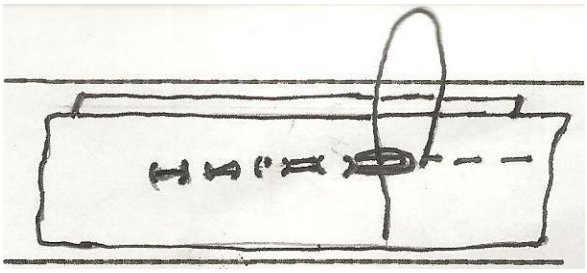
USES

1. Temporary stitches are used for holding hems, seams and darts together before the final sewing or permanent stitch.
2. For transferring fitting lines from pattern onto materials
3. As a guide to machining.
4. To mark construction details on the fabric
5. To identify certain parts of garment sections such as zippers, pockets, collars etc.

There are three(3) types of ticking's

Ai. EVEN TACKING

The stitches of even tacking are equal in length on both sides of fabric. The spaces are of equal length with the stitches, e.g. of even tacking:



To make: A knot should never be used to begin tacking as a machine needle can be blunted or even break, if it stitching into a hard knot.

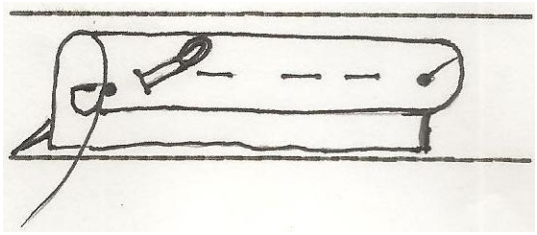
a. Work from right to left.
b. Start with a back stitch by pulling the needle through the fabric again.
c. Bring the thread back from the start again push the needle forward to make the back stitch.
d. Then work a regular large running stitches along the area to be eventually sewn.

Aii. UNEVEN TACKING

This could also be long and short stitches. This produces long and short stitches, e.g. long and short tacking, thus:

It is used for:
a. Joining interfacings and linings to garments.
b. Making lines into fabrics.
c. Holding hems.

Uneven tacking is made in the same way with even basting.

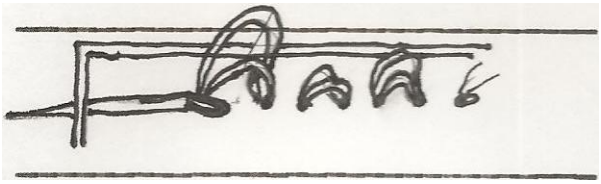


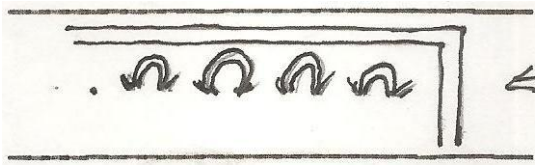
To make:

1. Work from right to left.
2. Start with a back stitch.
3. Work in and out with
   .
4. Finished stitch should be long and short.

Aiii. TAILOR'S TACKING.

These are used to transfer patterns marking to two places of fabrics at the same time, e.g. notches, darts and other important details shown on printed and perforated paper patterns. They are only suitable for thick strong cloth.





To make:

i. Placed the pattern on the double layer fabric.
ii. Work single tailor's tack or series from right to left.
iii. Work with unknotted double thread.
iv. For single tacks, take small stitch through the pattern and fabrics layers leaving a Thread end of 25mm or 2.5cm long.
v. Take a second stitch over the first leaving rather a long loop of the same length as the first.

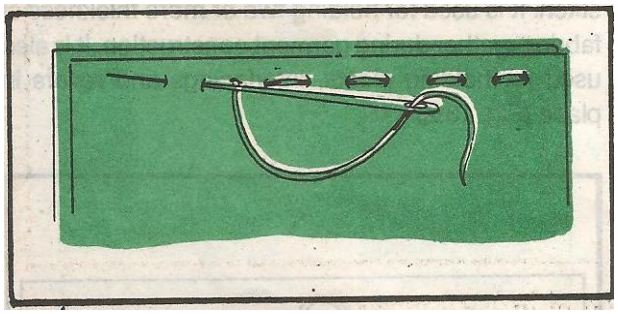
PERMANENT STITCHES.

These are used to hold two pieces (2) of fabric together permanently. Use thread that is suitable for the fabric. Use cotton thread that is suitable for the fabric and nylon for synthetic fabrics . Some of the permanent stitches are also use as decorative stitches. Stitches used for joining seams together are:

Bi. RUNNING STITCH

This is basic straight stitch. It is used:

a. Where there no much strain.
b. For easing and gathering, e.g. for seams, make stitches 2-3mm long but for easing or gathering make them 3-6mm long.

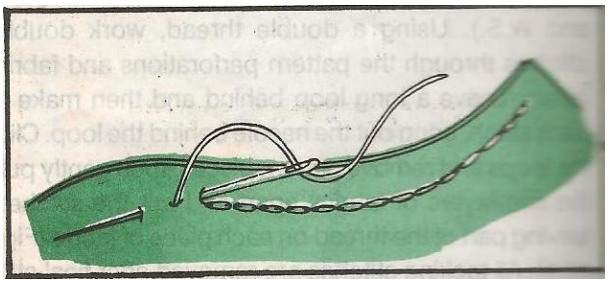


To make:

i. Start with a back stitch rather a knot.
ii. Push the needle tip in and out of fabric smaller and neater; every space in Straight or curved lines as desired.
iii. Push in and out for about half(1/2) a dozen stitches before pulling the thread Out.
iv. End the stitch with a back stitch.

Bii BACK STITCHES.

This is a very strong hand stitch which can be used in place of straight machine Stitching. It can be made to look like machine stitching on one side yet overlap on the other,

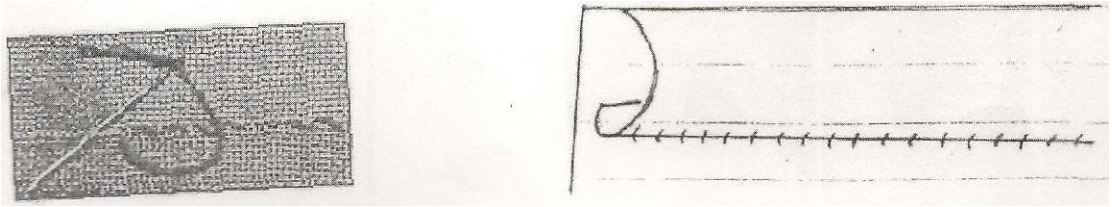


To make:

a. Place right side of the pieces together.
b. Fasten on the thread (back stitch) and take one long running stitch.
c. Take a stitch back, then bring the needle out again a little way long the seam line. Repeat to the desire

Biii. HEMMING

This is used to hold the folded edges of a garment hem into place. The stitch is invisible on the right side.

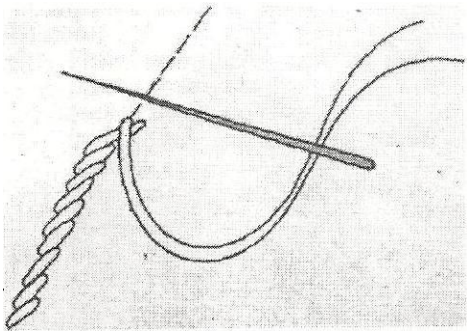


To make:

a. Work from right to left with a garment held towards the worker and the hem held over the finger of the left.
b. Turn beyond the tacking stitch, insert the needle through the turned edge and pick 1/8 and pick up over the same sport for a start.
c. Repeat until the hem is completed.
d. Pick hem in position, but not closed to the folded edge.

Biv. STEM STITCHES.

This is a hand embroidery stitch for outlining designs. It gives a finer line than open stitch like chain stitch .It worked a way from the worker. The thread must be kept below the needle, and the needle brought out exactly where the previous stitch finished. Arrow of back stitches shows on the wrong side.

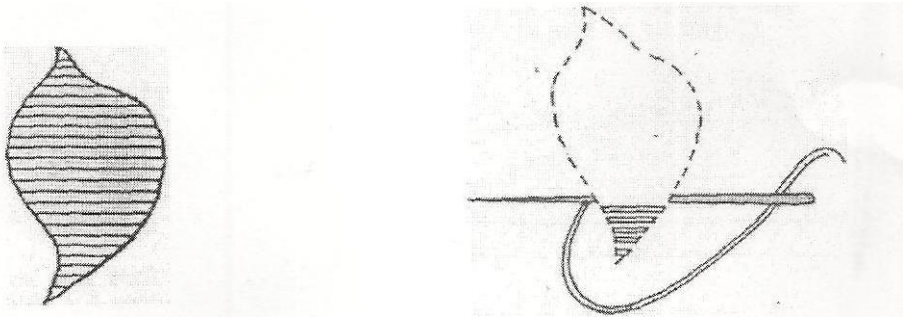


To make:

i. Draw and make the necessary designs.
ii. In the needle at the tip off the line to be stitched.
iii. Bring the needle in the short distance along the line.
iv. Bring the needle out half-way down the space made in a distance along the line.

Bv. SATIN STITCH.

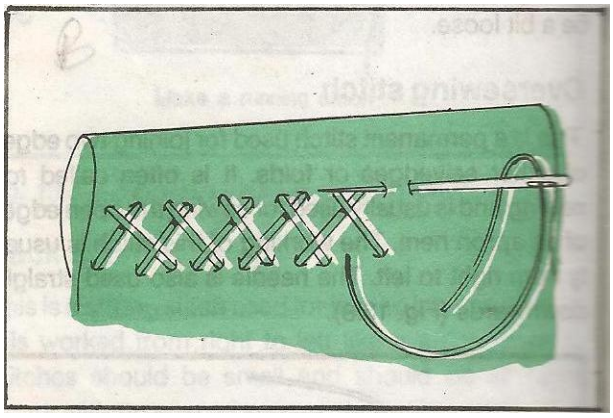
This is a decorative stitch, which can be used in hand embroidery, appliqué etc. Make stitches close and parallel.
The satin stitch can fill in any design of flowers, objects figures and leaves on a garment or table and house-hold linen.



To make:

i. Make the appropriate design on the fabric.
ii. Insert the needle at the edge of the design, and then insert it at the opposite edge
iii Return to the starting edge by passing the needle underneath the material.
Iv Repeat, following the outline of the design. Make stitches close together and Parallel.
iv. Finished satin should fill in any designed of flowers, objects figures etc. neatly

Bvi. CROSS-STITCHES.



To make:

i. Start with a back stitch.
ii. Space as far as they are long to form a diagonal design.
iii. Make a series of horizontal stitches ¼" to 3/8"(6-9mm)wide.
iv. There should not be a cross behind the work.
v. Then reserve direction and continue making horizontal stitches at the same location as the previous stitches to form "x" design.

APPENDIX VI

SUMMARY OF PERFORMANCES ON TEST 1&2

FEDERAL COLLEGE OF EDUCATION PANKSHIN.
PRE-TEST, POST-TEST RESULTS

EXP. GROUP (ETG - GROUP) CONTROL GROUP (DEMS GROUP)

S/NO	PRE-TEST	POST-TEST		PRE-TEST	POST-TEST
1	50	74		49	53
2	31	63		58	78
3	65	85		39	59
4	61	77		54	65
5	29	63		58	75
6	22	56		54	87
7	38	79		47	68
8	37	65		22	50
9	49	78		34	63
10	48	64		43	61
11	38	65		26	66
12	68	64		44	70
13	54	72		39	60
14	40	79		40	51
15	62	81		24	57
16	41	70		32	50
17	58	71		33	63
18	33	68		43	51
19	57	71		45	66
20	59	81		54	50
21	37	71		40	60
22	52	69		31	50
23	43	72		37	57
24	52	68		38	66
25	47	64		29	58
26	59	73		31	54
27	42	72		43	70
28	32	67		50	63
29	37	72		46	68
30	49	64		20	54
Total	1571	2187		1246	1843

PLATEAU STATE COLLEGE OF EDUCATION GINDIRI

PRE-TEST, POST-TEST RESULT

EXP. GROUP (ETG - GROUP) CONTROL GROUP (DEMS GROUP)

S/NO	PRE-TEST	POST-TEST		PRE-TEST	POST-TEST
1	34	64	1	26	46
2	45	78	2	37	66
3	33	82	3	45	58
4	44	54	4	23	46
5	45	80	5	48	58
6	51	82	6	46	50
7	25	64	7	50	53
8	47	79	8	41	52
9	47	74	9	36	58
10	54	84	10	27	64
11	56	84	11	33	69
12	34	70	12	37	60
13	47	71	13	46	70
14	38	76	14	32	56
15	60	86	15	36	65
16	40	73	16	40	77
17	46	75	17	42	69
18	23	73	18	45	50
19	25	71	19	48	60
20	47	79	20	28	59
21	63	86	21	35	70
22	49	80	22	50	71
23	76	88	23	29	58
24	40	79	24	55	65
25	58	84	25	51	68
26	43	71	26	62	80
27	52	78	27	52	66
28	36	72	28	31	62
29	74	86	29	25	55
30	27	73	30	47	67
Total	1358	2296		1203	1848

EXPERIMENTAL GROUP

COLLEGE OF EDUCATION GINDIRI

S/NO	TEMPORARY STITCHES SCORES	PERMINANT STITCHES SCORE	DECORATIVE STITCHES SCORE
1	21	28	20
2	23	34	23
3	23	37	23
4	18	39	24
5	23	35	22
6	21	39	20
7	23	27	18
8	24	35	21
9	18	33	20
10	21	37	22
11	21	37	23
12	23	32	20
13	20	30	20
14	20	30	20
15	20	38	25
16	19	32	21
17	21	34	21
18	25	34	19
19	23	34	18
20	25	34	22
21	23	37	24
22	24	36	21
23	20	41	22
24	22	35	21
25	21	37	23
26	22	32	19
27	20	21	35
28	8	31	20
29	22	39	25
30	7	32	21
Total	**600**	**1021**	**653**

CONTROL GROUP

1	14	21	11
2	17	39	19
3	15	28	15
4	12	22	12
5	15	28	15
6	13	24	13
7	14	25	14
8	13	24	15
9	15	26	17
10	17	23	19
11	18	31	20
12	16	26	18
13	21	30	19
14	15	26	17
15	17	29	19
16	22	33	22
17	20	20	21
18	12	24	14
19	16	25	19
20	19	22	18
21	20	30	20
22	21	32	18
23	15	25	15
24	15	26	19
25	18	29	20
26	20	36	21
27	19	30	17
28	16	28	18
29	14	25	16
30	18	29	20
Total	497	795	506

EXPERIMENTAL GROUP, FCEPANKSHIN

1	20	33	21
2	17	28	18
3	23	38	24
4	21	35	21
5	16	28	19
6	17	24	15
7	22	35	22
8	18	26	21
9	21	34	23
10	18	29	20
11	20	24	21
12	18	27	18
13	21	31	21
14	23	34	23
15	22	36	23
16	21	30	19
17	22	31	18
18	20	30	18
19	21	32	18
20	24	36	21
21	20	32	19
*22	21	31	17
23	22	30	20
24	20	30	18
25	18	29	17
26	21	33	19
27	21	31	20
28	18	27	17
29	21	31	20
30	18	29	17
Total	605	924	575

CONTROL GROUP

1	14	23	16
2	22	33	24
3	16	25	18
4	18	28	19
5	20	34	21
6	24	41	22
7	18	32	18
8	13	22	15
9	16	28	19
10	16	28	17
11	18	28	20
12	19	30	21
13	17	25	18
14	15	20	16
15	15	25	17
16	16	20	14
17	17	28	18
18	16	20	15
19	18	29	19
20	15	21	14
21	16	27	17
22	13	23	14
23	18	23	16
24	20	28	18
25	16	25	17
26	14	25	15
27	17	33	20
28	17	26	20
29	18	31	19
30	14	24	16
Total	506	805	533