

DEVELOPMENT OF A PRETEST FOR CLOTHING
CONSTRUCTION, FOR THE FIRST YEAR
STUDENTS TO BE USED IN THE
COLLEGE OF HOME ECONOMICS
IN KARACHI

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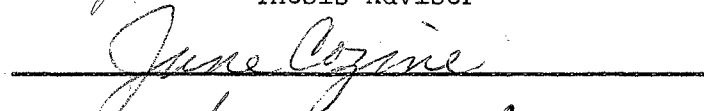
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CHAPTER I

INTRODUCTION

The purpose of this study is to develop a pretest for securing background information of the clothing construction experiences and abilities of the students entering the Home Economics College in Karachi.

The author felt the need to study this aspect of evaluation, particularly because students entering college come from varied backgrounds and hence differ greatly in their experiences and abilities in clothing construction.

At the present time, this pretest will prove very valuable to the author in planning her instructions for teaching the first course in clothing. As this is the first evaluating device of its kind to be introduced into the country the author feels that there will be much scope for its revision and improvement. The teaching of home economics as a subject in schools has been one of the major recommendations of the Council on National Education in Pakistan.¹ The author feels that in later years this pretest may have tremendous value as a placement and exemption test in the first course in clothing.

¹Report of the Commission on the National Education, Government of Pakistan, Ministry of Education (Jan.-Aug., 1959), p. 189.

Educators throughout the world have realized the need and importance of evaluating students before admitting them to higher institutions. Students are evaluated mainly on the basis of their present knowledge and the skills they possess. Evaluating competencies before instruction aids the teacher in placing the students in courses suited to their level of comprehension and ability. It may also furnish a basis for exempting students from the courses in which they prove efficient and thus avoid repetitious learning.

A pretest is taken before the instruction in a course begins. It may be used for placement, for exemption or merely for evaluating the students' background information. The use of pretests in these different ways has proved very valuable, especially in the field of home economics.

There are numerous standardized tests in various other fields which are used for placing and exempting students from certain courses, but in the clothing area there is no one standardized pretest that has been developed. Each school has developed its own pretest, suited to the level and needs of its students, the type of courses offered and the facilities available. Pretests have been found to be very beneficial both to the student and the teacher in many respects.

Army has done extensive work on evaluation methods in home economics. She states:

Limiting measurement to testing after instruction accounts for much ineffectiveness of classroom teaching in home economics as well as in other fields, and neither chronological age nor the amount of previous experience indicate

with any degree of accuracy, the level of the students' knowledge and skill.¹

In the educational progress of a student through the elementary grades, high school and college, it is of course extremely important that the student be enrolled in courses which are appropriate to her level of proficiency at any given time and that she take courses neither too difficult nor which involve wasteful duplication of earlier-learned content.

Spafford's views on pretesting are that this has been a much neglected aspect of evaluation. She states further that an increasing number of teachers are giving pretests of one type or another, some to find where learning should begin for a group, others in an attempt to base a final grade on student growth. She also states that good pretests make it possible both to avoid repetition and to eliminate gaps in student experience. They show the breadth and nature of individual differences and provide a foundation for planning a program to meet individual needs. She explains that pretests, broadly planned, motivate students by showing them the breadth of learning essential for achieving the objectives and the ways in which progress in learning may be measured.²

According to Lindquist, evaluation can guide teaching and make it more effective when it furnishes diagnoses of specific strengths

¹Clara Brown Army, Evaluation in Home Economics (New York, 1953), p. 11.

²Ivol Spafford, Home Economics in Higher Education (New York, 1956), p. 218.

and weaknesses in the pupil's achievement or capacity. The teacher may then seek to eliminate the weaknesses by using special teaching methods and emphasis on neglected aspects, or to circumvent them, by directing learning toward areas where the pupil's effort will be more fruitful. Those pupils who are capable of doing exceptional work may be discovered by evaluation techniques. The students' efforts may be guided towards special assignments and references for the fuller realization of their potentialities.¹

There are two primary reasons for giving pretests as reported by Lindquist. Firstly, they are commonly used in educational research to determine the status of the experimental and control groups at the beginning of the experiment. The results of these tests are used to determine the equivalence of the groups and by comparison with similar tests are used at the end to determine the amount of change which has taken place. In the second place, pretests are used in educational guidance to reveal the strong and weak points of the pupils at the beginning of a period of instruction and hence this serves as a basis for remedial teaching.² In his formula, Morrison gives the order of events for each instructional unit. "Pretests teach, test the result, adapt procedure, teach and test again to the point of actual learning."³

¹E. F. Lindquist, ed., Educational Measurement, American Council on Education (Washington, D. C., 1951), p. 50.

²C. C. Ross, Measurement in Today's Schools (New York, 1941), p. 370.

³Henry C. Morrison, The Practice of Teaching in the Secondary School (Chicago, 1936), quoted in Ibid.

A teacher who is concerned with the progress of her students must know their abilities and limitations and must build all teaching plans with this knowledge in mind. New learning experiences will challenge students, while repetition causes them to lose interest. The progress of the students can be measured more accurately if present information, abilities and skills are recognized by both teacher and students.

Unless there is some kind of testing and placement of students before registrations, there will be students with no experience and those with considerable experience in the same class. This heterogenous system would be discouraging to the inexperienced students as well as to the teacher.

The method of assessing individual achievement has to be solved by each college or university. Such factors as the philosophy of the institution, size of enrollment, arrangement or sequence of courses, teacher load and facilities available will affect the method of assessing student achievement.

Pretests should be evaluated every year and revisions and improvements should be made accordingly.

Smith and Tyler in their study of evaluation have stated:

Studying of the results of evaluation often leads to a reformulation and improvement in the conception of the objectives to be attained. The results of evaluation and any reformulation of objectives will suggest desirable modification in teaching and in the educational program itself. Modifications in the objectives and in the educational program will result in corresponding modifications in the program of evaluation. So, the cycle goes on.¹

¹Eugene R. Smith, Ralph W. Tyler and the Evaluation Staff, Appraising and Recording Student Progress (New York and London, 1942), p. 30.

The purpose of this study is to develop a pretest for the first course in clothing construction applicable to the first year students to be used in the College of Home Economics in Karachi.

Background of the College of Home Economics in Karachi and the Students Entering It

Until 1947, there existed only a few educational institutions for undergraduate studies in domestic science in India. As a result of the partition of the sub-continent of India in 1947, the facilities of these institutions, although limited in scope, were lost to Pakistan as they were located in Indian territory. Realizing the need and importance of instruction in home and family living for women, the All Pakistan Women's Association in cooperation with the Ford Foundation prepared a scheme for setting up a College of Home Economics in Karachi. This college is just five years old. At present there are a total of approximately 200 students and 15 staff members in the college which has a four-year degree program.

Students entering the home economics college come from varied backgrounds. Some of them have had domestic science as a subject in the first two years of college, whereas some have had domestic science as a subject in their respective high schools. These schools may be private, public or government owned, and the method of instruction depends on the governing body of the particular school. Some girls have completed one or two years of a special domestic science diploma course. Others have had private tutoring in sewing and cooking at home under the supervision of the mother or a tutor; others still have had special courses at the different sewing institutions, such as

Singer and Pfaff machine companies. A few girls have never sewn before they enter college.

Home economics is taught as domestic science in nearly all the schools in Pakistan, but the length of time and the number of courses offered differ to a great extent in every school. There are many industrial homes and sewing institutions which offer courses in clothing construction and machine and hand embroidery. These are open to students of all ages and abilities. Students may attend these institutions and homes during the three months' summer vacations which come at the end of every school year. Students entering the home economics college from these institutions may excel in construction skills, but they do not know the principles of fitting and construction. Due to this heterogeneous group that enter college, the needs and interests of each individual differ to a great extent.

The need for a study of pretesting is very valuable at this preliminary stage of the college's existence. By giving a pretest and analyzing its results, the teacher should get a better insight into her pupils' abilities and this would enable her to plan her teaching methods accordingly. In this way, teaching will be more stimulating and effective.

Evaluation of Higher Education in Pakistan

*Students are not graded on every course in Pakistan, but on their results in the final examinations which are held annually, and are in the nature of comprehensive tests on the work of two or three years of study. At the end of each academic year students are examined usually by "external" examiners attached to another university. The time

of the final examination varies in different institutions because the term may run from October to June or from July to April. Lecture courses last throughout the year without any dividing semesters. Subsidiary (elective) examinations must be passed before promotion to the second or third year honors course and the final honors examination is given at the end of the third year. A "first-class" honors degree is highly coveted, but very rarely granted. A student may take 3 or 4 papers (courses) a year, involving five or six hours of lectures per week. The required reading will vary according to the department. Every department publishes a printed syllabus for each of its courses (papers) with a list of "recommended books," but the student does not read more than a few of these (partly because of the shortage of books).

The content of instruction in both universities and colleges tends to be determined by the examination syllabus. In the colleges, lecturers have no voice in these university dictated examinations, and the student's reading becomes governed by adherence to the prescribed texts and syllabus content.

The student has to contend with the acute shortage of text books because relatively few are published in Pakistan. Foreign exchange difficulties preclude the importing of large numbers of books from abroad, and their high prices are prohibitive for most youths.

This present system of examination has been widely criticized, and for most of the students the examination has come to be more important than the process of learning. Students have postponed their study to the few weeks before the examinations and in consequence have not learned the process of regular study and application. Examinations have come to dominate higher education, and the examining function of the

university has dangerously overshadowed those of teaching and research. As internal examinations have at present no value, the external examination is the exclusive preoccupation of the student and he does not feel under strong immediate pressure to attend lectures or to secure his teachers' guidance personally or in the tutorial group.

The Commission on National Education was inaugurated by the President of Pakistan, General Mohammed Ayub Khan, on January 5, 1959. The main purpose of this commission was to reorganize and reorient the existing educational system so as to evolve a national system which would better reflect the spiritual, moral and cultural values of Pakistan.

Their recommendation concerning evaluation of students was that external examinations should be supplemented by regular internal examinations prepared and marked by the teacher throughout the academic year. They also recommended that a weightage of 25 per cent in each paper should be given for this internal evaluation by the teacher. The standing and division of the student should be determined both by the internal as well as external examinations.

As internal examinations are being given more importance, and since they will furnish a fourth of the total evaluation marks, the aim of all teachers should be to improve their methods of evaluation. The author feels this pretest will be a first step towards the achievement of the above goal and will point direction for future improvements.

Procedure

A questionnaire was prepared for securing background information from the eleven Pakistani women on the campus at Oklahoma State University. The questionnaire provided information about the domestic science

courses taught in the different schools in Pakistan. It also furnished a basis for the author to develop the pretest. Pretests and placement tests of the home economic schools in the area of clothing in the different states were also reviewed and examined for developing this test.

A pretest was developed in consultation with the faculty members of the home economics school at Oklahoma State University, the graduate seminar group in Clothing, Textiles and Merchandising Department and the Pakistani women on the campus. The pretest was given to some of the Pakistani women students for their interpretation of questions and terms. These women have had a wide background in the field of clothing and would be better able to judge the test.

Limitations

The pretest was limited only to the objective of clothing construction because major emphasis is placed on sewing techniques in most of the schools in Pakistan. The other aspects of clothing, such as design, selection, care and color are not emphasized or taught to a desirable extent. Lack of staff, textbooks and other facilities have hindered the teaching and progress of home economics in schools. The author hopes that as more emphasis is given to home economics in schools, the present pretest might be elaborated to include the other phases of clothing, such as care, selection, design and serviceability of clothing and textiles.

The limitation of time and the place where this study was done were drawbacks as they did not permit the author to collect data from the first year students of her country. Therefore the results of the pretest cannot be analyzed at the present time. Also, the number and the type

of students who answered the questionnaire were at variance from the high school graduates in Pakistan. They differed in age, maturity, experience, knowledge and skills.

Due to the great difference in the background of the students who are enrolled in the first course in clothing at Oklahoma State University as compared with the background of the students in Pakistan, data could not be collected from the freshman students at Oklahoma State University.

No pretests or placement tests in clothing have been developed in Pakistan. As this is the first study of its kind for Pakistan, the pretest is left open for criticism, improvement and revision.

It is hoped that the information gained from this study will point towards the development and use of similar evaluation instruments in other phases of home economics.

CHAPTER II

REVIEW OF LITERATURE

Pretesting as a Means of Evaluation

Education is a means of changing the behavior of an individual into desirable channels. The term "behavior" is used here in the broad sense to include thinking, feeling and acting. Learning is not effective, unless some changes in the behavior of the individual have actually taken place.

Instruction for permanent learning requires rational planning and execution, and involves several steps.

First, objectives have to be established.

Secondly, content and learning experiences to attain these objectives have to be determined.

Thirdly, an effective organization of these learning experiences has to be provided, so as to bring about desirable changes in behavior in an efficient manner.

Lastly, an essential part of education is to appraise the effects of the educational experiences to find out in what ways they have been effective and in what respects they have not produced the results desired. This part of the educational program is termed "evaluation."

Evaluation should be an integral part of the educational program, because without appraisal of the results being attained, the instructor

has no adequate way of checking the validity of his judgements regarding the values of particular learning experiences and the effectiveness of their organization in obtaining the ends of education.

Tyler gives the following definition of evaluation:

Evaluation designates a process of appraisal which involves the acceptance of specific values and use of a variety of instruments for observation, including measurement as the bases for value judgements.¹

Evaluation today is not limited to the giving of paper and pencil tests only, but involves continuous appraisal of the student both objectively and subjectively from the time he enters school till the end of instruction. In a broader sense, it is a means to appraise a student's progress intellectually, emotionally and socially, which includes his interests, attitudes, aptitudes, and appreciations of the subject.

Spafford states,

. . . evaluation means more than testing. It involves selecting and/or preparing and using instruments of measurement, studying the evidence selected to find out the procedures that have been effective in promoting learning, and the nature and causes of difficulties.²

An evaluation program is more effective when it is teacher and pupil planned. Spafford recommends a cooperatively planned evaluation program for the following reasons.

- 1) It provides for pretesting, thus showing the teacher and the pupil where the learning should begin.
- 2) It provides for self-evaluation procedures.

¹E. F. Lindquist, ed., Educational Measurement, by Ralph W. Tyler, (Washington, D. C., 1951), p. 48.

²Spafford, p. 217.

- 3) It gives evidence of the emphases being laid on the different objectives in the teaching.
- 4) It provides for diagnostic measures, so that teachers and pupils may know the nature and cause of difficulties, thus pointing to what needs to be done next.
- 5) It provides ways of evaluating progress at the end of a unit, semester or year.
- 6) A well-balanced evaluation program allows time for study of the results of measurement by both pupils and teachers and for replanning when necessary, for more effective learning experiences in the future.¹

A basic reason for the new importance of testing is that educators have rapidly come to realize that tests offer unique help in many problems of counseling, guidance and particularly in placement.

According to Chauncey and Frederiksen:

The increased importance of measurement in educational placement is attested by the rapid growth of established testing organizations and the founding of new ones, and by the number of local and regional testing programs which are in regular operation. The annual printing of the American Council Education Psychological examination alone runs to many thousand copies. The Cooperative tests, measuring achievement in a wide variety of subjects, are being employed extensively by schools and colleges throughout the country. Statewide testing programs, such as those of Minnesota, Iowa, Ohio, and Wisconsin, are assuming even greater significance in guidance and placement, and in the evaluation of educational programs.²

¹Ibid., p. 218.

²E. F. Lindquist, ed., Educational Measurement, by Henry Chauncey and Norman Frederiksen (Washington, D. C., 1951), p. 85.

Placement tests have been developed in nearly all academic subjects and are used very widely by many colleges. Some colleges have developed their own devices for the placement of their students. These tests are used for placing students in homogenous groups and also as a means of exempting students from particular courses.

Pretests, placement tests and exemption tests are similar in some respects. All three types furnish a basis for placing students in courses suited to their level of comprehension and ability. In addition, a pretest provides much more valuable information by aiding the teacher in the following respects:

- 1) to gain an insight into her pupils and to know their background;
- 2) to plan her instructions in a more effective manner;
- 3) to realize the strengths and weaknesses of her pupils;
- 4) to give individual guidance;
- 5) to motivate her pupils by showing them the breadth of learning essential for achieving the objectives;
- 6) to plan different learning experiences for individual students according to their abilities and skills;
- 7) to avoid repetition and to eliminate gaps in student experiences;
- 8) to provide a basis for curriculum revision;
- 9) to administer as a retest to measure achievement after instruction; and
- 10) to correlate the scores of the pretest and retest.

Pretesting has provided a means of placing students in homogenous groups because heterogenous groups demand more time for individual instruction. If the teacher has to teach a large class, she does not

have time for individual instruction. Poor workmanship results and consequently discouragement and dissatisfaction on the part of both the teacher and the students. Pretests, broadly planned, motivate students by showing them the breadth of learning essential for achieving the objectives and the ways in which progress in learning may be measured.

A motivating condition, according to Cook, has three inherent functions in any learning process.

The energizing function, to increase the general level of activity and effort.

The directive function, to direct the variable and persistent activity of the organism into desirable channels.

The selective function, to determine the responses which will be fixated and the responses that will be eliminated.¹

In view of these functions which he believes to be an integral part of any condition which serves to increase motivation in the student, Cook states:

Testing procedure properly conceived and executed places the control of the learning process within the educator's power as no other teaching device does. The three conditions of a motivating selection are inherent in the test situation and are important criteria in the evaluation of the measurement procedure.²

Methods and techniques of teaching of clothing can be improved by using various pretests to ascertain past experiences and ability of

¹E. F. Lindquist, ed., Educational Measurement, by W. W. Cook (Washington, D. C., 1951), p. 38.

²Ibid.

students, to determine what past experiences are common among the groups, and to discover the interests and needs of students in relation to clothing. This background information is essential for sound planning and improved instruction.

Pretesting in the Area of Clothing

Extensive research and study have been done on pretesting as an evaluative device in the field of clothing. Today, many schools use their pretests for the placement of freshman students as a means of exempting them from certain courses and also as a retest to measure achievement after instruction. The uses of pretests in these ways have proved very successful and advantageous for both the teacher and student.

Teachers of clothing construction are recognizing that students who enroll in the beginning laboratory courses have widely different abilities and experiences. They are also realizing that the initial course must challenge the experienced as well as encourage the inexperienced students.

Wright, Smith and Henkel conducted a study at Purdue University to find out just what effect the past experience of the students had on achievement in a freshman clothing laboratory. They studied three phases of learning:

- 1) Knowledge as measured by paper and pencil lists;
- 2) Skill as measured by actual sewing construction; and

3) Attitudes as measured by the students' opinions.¹

In order to enable them to study the students' previous experiences, they analyzed the data which were secured by questionnaires and personal interviews. They organized groups on the basis of the amount and type of previous experiences, and each student was placed in one of the following groups:

Group I. Previous experiences in all fields of clothing (junior high school, senior high school, 4-H club and home experiences.)

Group II. No 4-H club work.

Group III. No high school work.

Group IV. Neither high school nor 4-H club experience.

Group V. No experience in any field.

This study enabled them to arrive at the following conclusions:

- 1) Previous experience in clothing construction is a factor in achievement in the university course.
- 2) The amount rather than the type of experience in clothing construction will have a definite effect on attitudes and achievement of the students.
- 3) The students who selected fields of specialization relating to clothing upon entering the School of Home Economics do not show any greater achievement in clothing construction, than those who selected other areas.
- 4) Students who have had previous experience in clothing construction have better attitudes towards clothing construction at the university level than those students who have had no previous experience in clothing construction.²

¹Louise Wright, Janet Smith and Jean Henkel, "Achievement in Clothing Construction," Journal of Home Economics, Vol. 43, (Oct., 1951), p. 626.

²Ibid., p. 628.

According to Army, tests are used for several different purposes in addition to the obvious one of furnishing a basis for marks. The most important ones seem to be,

- 1) to furnish much-needed tools for research;
- 2) to provide a basis for educational and vocational guidance and placement of students;
- 3) to aid in the establishment of standards.¹

She goes further to say that "all teachers recognize that there is considerable range in ability and achievement among students but few have any conception of how great these differences are."²

In a study done by Army to find the differences in the I. Q. range among hundreds of ninth-graders in twenty typical schools, she discovered that the range in I. Q. was from low moron to the genius level. The average range in high school was from high moron to distinctly superior intelligence. On a test covering the various aspects of home economics, the best student made scores more than three times as high as those of the poorest students. After instruction, more than half of the ninth graders made scores lower than the average of the highest ranking students before instruction. After instruction, less than a fifth of the students in grades eleven and twelve in these schools who had had the maximum amount of home economics instruction made higher

¹Clara Brown Army, "Evaluating Our Teaching," Journal of Home Economics, Vol. 40, (Jan., 1948), p. 7.

²Ibid., p. 8.

scores than did the best students in the ninth grade before instruction. Army states, "when individual differences are expressed in such terms, they tend to become realities which cannot be ignored either in instruction or in school administration."¹

Collins developed a pretest for placement in beginning clothing courses at Southern Illinois University and studied the different uses to which pretests may be put. She arrived at the following conclusions:

Pretests

- 1) Help to determine the area in which students are weak and strong.
- 2) Aid in exempting students from elementary courses and thus permit them to progress at their own speeds.
- 3) Determine the placement of transfer students.
- 4) Can be administered to high school students for the purpose of discovering promising students who should be encouraged to attend college.
- 5) Can be used with adult instruction groups.
- 6) Aid instructors to improve instruction through analyzation of test results.
- 7) Aid in planning curriculum revision.²

In 1959 Hoskins developed a pretest to use for students in a basic clothing course in the colleges and universities of New Mexico. She administered this test to several groups and analyzed the results. She

¹Ibid.

²Mildred Hart Collins, "A Pretest for Placement in Beginning Clothing Courses at Southern Illinois University," (unpub. Research Report, Southern Illinois University, Aug., 1956), p. 16.

found that the means of all groups (selected sample as well as the individual schools) were between 50 and 59 with the exception of the school in which homemaking classes were small. The mean of this school was 63.87. Since there were no extreme scores, she feels that the test is neither too easy (no perfect scores) nor too difficult (no zero scores).¹

From her study she found that in the item analysis, the discriminating items indicated some difference between the true-false and multiple choice items. In the 35 most discriminating items, 24 were multiple choice and 9 were true-false items. She feels that the test is valid and reliable as evidenced by the test results. She also feels that the great value of the test lies in the diagnosis of the areas of strength and weaknesses of individual students. Hoskins feels that although the understanding of the principles underlying the skills involved in clothing construction is essential, the level of the skills needs to be evaluated if the pretest is to be used successfully as an exemption instrument. She recommends that a practical test accompany the written pretest. In this practical test, the student would do independent work for a specified amount of time and would be graded on ability to follow instructions and on the speed, accuracy and quality of the work completed. In addition to the use of the pretest for exemption, Hoskins feels that the results for the practical and written

¹Mercedes Nelson Hoskins, Construction of a Basic Clothing Pretest for Use in the Colleges and Universities in New Mexico (New Mexico State University, University Park, New Mexico, May, 1959), p. 2.

pretest:

- 1) Could be an aid in the amount and kind of emphasis in course work,
- 2) Could help increase motivation in the students, and
- 3) Be an aid in placement of transfer students.¹

Bray developed a paper-and-pencil test at the University of Minnesota which she used to section students in clothing construction courses and to measure achievement after instruction at Macdonald Institute in Guelph, Ontario. The test was designed to measure the students' knowledge of clothing selection and construction. Students entering in September, 1947, were placed in sections on the basis of the pretest scores. The 14 students who received the highest scores were in group A, the advanced group, and the remaining 54 in group C, the beginners' group. The students were also asked to list the number of garments they had made independently and under supervision. This information was used in classifying borderline cases; thus those with more previous experience were put in the more advanced section. At the end of the course, the test was administered as a retest to 60 students. Coefficients of reliability were computed and were .91 for the pretest and .78 for the retest.²

A revised form of the test was given to 61 students in September, 1948. Sectioning was done in the same manner as the previous year. At the end of the course the revised test was administered as a retest to

¹Ibid.

²Edith Bray, "The Development and Use of a Paper and Pencil Test for Determining Placement of College Students in Clothing Courses and for Measuring Achievement after Instruction," (unpub. M. S. Thesis, University of Minnesota, 1949), p. 31.

53 students.

After completing the study the author feels justified in making the following statements:

- 1) That the test which was developed, proved to be a valid device for classifying students in beginning clothing classes.
- 2) That this test is reliable for accurate measurements.
- 3) That this test is more discriminating when used as a pretest than when used as a retest.
- 4) That students with ability and experience in clothing can accomplish more work in clothing classes and spend less time in the clothing laboratory.
- 5) That in classes that have been divided on the results of pretest scores, there is a greater opportunity for teacher-student planning and as a result students may have a greater interest in the subject.¹

Saddler (in 1945) developed a prediction test at Iowa State College to section students according to their sewing ability for the elementary clothing construction course. This test consisted of a paper and pencil section to determine the acquisition of information and a practical test to test sewing ability. The coefficients of reliability obtained on the Saddler test by the split-score method after the Spearman-Brown Formula had been applied were .84 for the paper and pencil section. The correlation between the two sections of the test was .67.²

In 1947, Evans made a study on pretesting to determine whether a suitable substitute could be found for the Saddler practical subtest.

¹Ibid.

²Jane Saddler, "Placement Test for College Home Economics Students," (unpub. M. S. Thesis, Iowa State College Library, Ames, Iowa, 1945), as quoted in Ibid., p. 5.

The criterion selected was the final examination score in the elementary clothing construction class. Evans studied a number of variables including mechanical aptitude tests, The American Council on Educational Psychology Exam for College Freshmen, the high school average, and both the paper-and-pencil and practical sections of the Saddler Construction Test. Evans found from her study that the high school average and the intelligence test scores showed very little relationship to clothing construction as measured by the criterion. Evans' findings differed from those of Saddler in the relative usefulness of the two sections of the test. Her results indicated that the practical subtest could be eliminated from the prediction battery without serious loss. When the O'Connor Finger Dexterity Test was combined with the paper-and-pencil subtest the correlation was .53. This proved to be highly significant and could be a possible substitute for the construction problem of the prediction test.¹

Scholtes continued the search for the best possible substitute for the practical sub-test and found the Minnesota Spatial Relations Test (Speed and Error Section) a satisfactory alternate. She also developed a Finger Dexterity Background Questionnaire which added to the effectiveness of the prediction.

Following Scholtes's study, the battery of tests used for the purpose of sectioning has been:

- 1) the Saddler Paper-and-Pencil Test,

¹Virginia Evans, "Prediction of College Clothing Construction Achievement by Means of Mechanical Aptitude Tests and the Saddler Clothing Construction Test," (unpub. M. S. Thesis, Iowa State Library, Ames, Iowa, 1947), quoted in *Ibid.*, p. 6.

- 2) the Finger Dexterity Background Questionnaire,
- 3) the Minnesota Spatial Relations Test (Speed and Error Section).¹

Patson examined and made necessary revisions in the Saddler Paper-and-Pencil Test, examined and reviewed the weighting of the items of the Finger Dexterity Background Questionnaire and found an effective substitute for the Minnesota Spatial Relations Test.

She prepared an item analysis sheet on the available answer sheets of the Saddler Paper-and-Pencil test of 175 girls who had taken the elementary clothing construction course and who had been placed in the correct section of Textiles and Clothing 224, according to the teacher's judgement. She made a separate analysis of the students placed in each of the X, Y, and Z sections as a basis for the revision of the text. She determined her criteria for formulating, accepting, revising or deleting test items and made the necessary revisions. She added several items to the test, relating to procedures currently taught in the clothing construction course at the Iowa State College. She also analyzed the Finger Dexterity Background Questionnaire and four spatial relations tests.

The five tests and the revised questionnaire were administered to 142 students enrolled in the elementary clothing construction course in 1952. Correlations between the final examination in the construction course and the scores on the various tests and the questionnaire were calculated.

¹Mary Cleta Scholtes, "Selection of a Test Battery for the Prediction of College Clothing Construction Achievement," (unpub. M. S. Thesis, Iowa State College Library, Ames, Iowa, 1948), quoted in *Ibid.*, p. 31.

Patson recommends that more data be collected to evaluate the effectiveness of the revisions and additions to the Saddler Paper-and-Pencil test, and the adjustments of the weighting of the items in the Finger Dexterity Background Questionnaire. The correlation between the revised Saddler Paper-and-Pencil test and the final examination was .216 and between the Finger Dexterity Background Questionnaire and the final examination it was .145 with 138 degrees of freedom. These correlations are lower than what Scholtes obtained, due to the changes made by Patson on the test, which decreased the discriminating power of the questions.¹

Davis in 1952 studied the value of the freshman placement test in clothing and textiles as a placement measure, the predictive value the placement test for future success in clothing and textiles courses, and the validity of the tests used.

She accepted the following basic assumptions:

- 1) The Cooperative Test in Textiles and Clothing and the Iowa State College test are valid ones.
- 2) One could obtain some basis for evaluating the placement test as a placement and predictive device by correlating future grades with the placement test score.²

She gathered information from 133 students in the Division of Home Economics, West Virginia University, and used it in her report. Students were not included unless complete information was available

¹Katherine Nellie Patson, "Prediction of Construction Achievement Using Saddler Clothing Test, Dexterity Questionnaire and Four Spatial Relations Tests," (unpub. M. S. Thesis, Iowa State University, Ames, Iowa, 1952), p. 37.

²Mildred Jean Davis, "Clothing Placement Tests for Entering Freshmen in the Division of Home Economics at West Virginia University 1948-51, Inclusive," (unpub. M. S. Thesis, Morgantown, West Virginia, 1952), p. 37.

for them. Those students having incomplete data were transfer students and students entering school at the mid-year. She correlated the data, each item with the placement test score and made an analysis of them.

She arrived at the following conclusions:

1. From a study of the coefficients of correlation, there appears to be a noticeable tendency for the placement test score to parallel the percentile rank made on the ACE psychological examination.
2. There is apparently a greater relationship between the placement test and the ACE percentile rank than between the former and clothing and textiles subjects.
3. A greater relationship is evidenced for freshmen and sophomores between the variables than for juniors and seniors. A different test was given to freshmen and sophomores than was given to juniors and seniors.
4. The result given in Number 3 above would seem to indicate that the test given to freshmen and sophomores, the Cooperative Test in Textiles and Clothing, is a more valid placement and predictive device.
5. From an analysis of mean grades and of students exempt from Home Economics 2 and those not exempt, the available data show a difference of as much as nearly one whole letter grade. This would give some indication that the placement tests are valid ones for exempting students from Home Economics 2.
6. In studying the relationships between the placement test and clothing and textiles subjects, it was found that there appears to be some, but not a great, tendency for the placement test score to coincide with clothing and textiles grades.¹

From Purdue University, Wright reported the effect of the previous experience of students in a course in clothing construction. Information was obtained from each student with respect to the amount and kind of previous experience she had received. From these data, each girl

¹Ibid., p. 35.

was placed in one of the five categories:

- 1) Experience in all fields,
- 2) No 4-H club work,
- 3) No high school work,
- 4) Neither 4-H club nor high school work,
- 5) No previous experiences.

It was found that students who had a great deal of former experience had significantly greater success in the Freshmen Clothing Laboratory than any of the remaining groups. They also indicated a greater interest in the clothing course. The amount and type of previous experience in clothing construction had a definite effect on attitudes and achievement of the students. The amount rather than the type of previous experience indicated greater interest and achievement on the part of the students. Achievement was greater when the student-teacher relationship was satisfactory.¹

Malloy studied the value of pretests in clothing, at the Stillwell High School, and found it very helpful in planning her classes for teaching clothing. Her main problem was to find out what students enrolled in homemaking knew about clothing.

The results of the pretest indicated that the abilities of the students varied to a great extent. According to the author, the very

¹Louise Janet Wright, "The Effect of Students' Previous Experience on Achievement in a University Course in Clothing Construction," (unpub. M. S. Thesis, Purdue University, 1949), quoted in Collins, p. 13.

short pretests are of the greatest value, for they take little class time yet give both student and teacher a picture of the material that should be included in the unit.¹

She was able to draw the following conclusions from her study:

- 1) Simple pretests provide valuable information in planning the clothing unit in each year of homemaking.
- 2) Whenever possible, the pretests should be short, yet measure the goal desired.
- 3) The pretests used should be changed each year as the needs of the students change and new ideas develop.
- 4) The use of evaluation instruments should result in the development of both new instruments and new practices.
- 5) Pretests are not only presented as instruments to be used, but as suggestions for teaching.
- 6) Progress of the individual can be measured when pretests are given at the beginning of a unit.
- 7) Information gained through the analysis of the results of pretests helped develop a satisfactory unit in clothing for each class in Stillwell High School.

Malloy feels that the value of pretests is apparent to persons who have actually used and tried them. In this case the information secured was extremely valuable to her in planning the learning experi-

¹Leola Patton Malloy, "The Value of Pretests in Clothing Construction as Determined by Experiences at Stillwell High School," (unpub. M. S. Thesis, Oklahoma A. and M. College Library, Stillwater, Oklahoma, 1951), p. 41.

ences for her clothing classes.¹

A well-developed teacher-made test is said to be one which is valid, reliable, easy to give and easy to score.

Putnam analyzed fifty teacher-made tests and read several books on testing. She collected about 100 recommendations and combined them into 79 suggestions. She was successful in devising a checklist for teachers to use for preparing and evaluating their tests.

The checklist included the following aspects:

- 1) general make-up of the test;
- 2) the content to be included in the test;
- 3) the forms of the different kinds of test items, namely completion, matching, multiple choice, true and false and essay questions.²

This device was very helpful to the author in developing the pretest.

Summary

Extensive research and studies have been done with pretesting, especially in the area of clothing and textiles. The results of these studies indicate that teaching can be more challenging, stimulating and effective by giving pretests. The pretests have been found to have numerous advantages as an evaluative device, and have been very beneficial to the teacher as well as to the student. The main value of

¹Ibid., p. 43.

²Florence E. Putnam, "Improving the Teacher-made Tests," Practical Home Economics, (May, 1941), pp. 168-169.

pretesting found by all researchers were:

- 1) for placing students in homogenous groups;
- 2) for exempting students from the first course in clothing;
- 3) for gaining background information about the students to determine where learning should begin.

CHAPTER III

METHODS AND PROCEDURE

Since the main purpose of the study was to develop a pretest in clothing and textiles to be used in the College of Home Economics in Karachi, Pakistan, it seemed advisable for the author to become informed on the types of clothing experiences which the students entering college might have had. A questionnaire was developed and (eleven) Pakistani students who were studying home economics at Oklahoma State University checked the questionnaire. The findings from the questionnaire were used as one of the bases for developing the pretest.

Copies of pretests and placement tests were secured from staff members of the clothing and textiles department of the University of Georgia, University of Minnesota, Oklahoma State University and Pennsylvania State University. These were reviewed and proved to be helpful in making the decisions as to the types of items to include.

As home economics is a new subject in Pakistan and is not taught in all the schools, the author felt that it would be best to limit the pretest to two objectives. These two objectives centered on (1) techniques and principles of clothing construction and (2) the principles involved in the use of the sewing machine.

Preparation of Questionnaire and Summary of Findings

The purpose of this questionnaire was to secure information as to the type of clothing construction experiences the students might have had before entering college. This included the type of training, type and number of garments made and for whom, the kinds of fibres used, the extent of sewing experience, textbooks used, kinds of sewing machine used, drafting experiences and degree of skill in various construction processes. (See Appendix A for the Questionnaire on Clothing Experiences.) The eleven women who took the questionnaire were all graduate students from Pakistan who had been awarded Ford Foundation grants in order to study for a master's degree in home economics at Oklahoma State University. They will be returning to Pakistan as teachers in the different home economics colleges in Pakistan.

The responses were tabulated as shown in Appendix A. From studying the findings it was found that:

- 1) All of the group had done hand sewing and all but one had done machine sewing.
- 2) Eight of the eleven of the group had had sewing experiences in school. The extent of this training ranged from one to five years.
- 3) Only one member of the group had had experience in a sewing institution but all of them had received training at home.
- 4) The majority of the group had constructed more than one type of garment. The garments most frequently checked were child's dress, kameez and shalwar.
- 5) All of the group had used cotton more extensively than any other fibre, but silk, linen and nylon were checked.

- 6) More than half of the group listed that they had sewn a great deal without supervision.
- 7) The majority of the group had sewn for themselves as well as for others.
- 8) Only two of the group had used some kind of reference books while sewing.
- 9) A third of the group had had some experience with drafting, and had drafted garments such as a blouse, kameez, a child's dress and man's shirt.
- 10) The majority of the group indicated that they had performed most of the construction methods fairly well and with little or no help.

On the whole the individuals who checked the questionnaire had had a moderate amount of experience in constructing a variety of garments. Training had been given both in the home as well as the school. Since numerous sewing institutions have recently been established in Pakistan, the students entering the College of Home Economics in Karachi are likely to have a wider and more varied background.

Development of the Pretest

A modification of the steps for developing evaluation instruments suggested by Smith and Tyler was followed in developing the pretest.

This included the following steps:

- 1) Formulating objectives,
- 2) Classification of objectives,
- 3) Definition of objectives in terms of behavior,
- 4) Suggesting situations in which the achievement of the

objectives will be shown,

- 5) Selecting and trying promising evaluation methods,
- 6) Developing and improving appraisal methods,
- 7) Interpreting results.¹

Objectives which had been formulated by the author in a previous course were used for developing the pretest. These objectives were developed from information gained from the syllabus of the Home Economics College in Karachi pertaining to the first course in clothing and textiles.

The following are the overall objectives of the first course in clothing.

- 1) To apply principles of good grooming related to:
 - a) Body care and body cleanliness,
 - b) Good health and proper diet and its effect on personal appearance,
 - c) Good posture and its effect on appearance.
- 2) To apply principles of color and design to clothing considering its effects:
 - a) On the becomingness of a garment,
 - b) On personality,
 - c) On the wearer.

¹Smith, Tyler and the Evaluation Staff, pp. 1-30.

- 3) To develop the ability to plan a satisfactory wardrobe considering:
 - a) Season,
 - b) Family status,
 - c) Color and design.
- 4) To learn and apply principles of care and storage of clothes relating to:
 - a) Orderly arrangements of closets and drawers,
 - b) Laundering, pressing and caring for different kinds of fabrics.
- 5) To apply information and understanding in intelligent selection and purchasing of clothing considering:
 - a) Family status,
 - b) Income.
- 6) To learn the principles and techniques of construction and develop skill in:
 - a) Drafting a pattern from body measurements,
 - b) Constructing a simple garment with sleeves.
- 7) To develop the ability to use and care for the sewing machine.

A detailed testing of specific content or subject matter was compiled and served as a framework for developing the test items. The objectives and content used for the pretest are listed below.

- 1) To develop the ability to use and care for the sewing machine.

The Sewing Machine

Its care and use

- a) Identification and functions of the different parts of the sewing machine.

- b) Simple machine adjustments
 - i) adjusting the tension
 - ii) adjusting the length of the stitches
 - c) Cleaning and oiling the machine.
- 2) To learn the principles and techniques of construction and develop skill in,
- a) Drafting a pattern from body measurements,
 - b) Constructing a simple garment with sleeves.

Construction Techniques and Principles

- a) Drafting,
 - Basic principles of drafting.
- b) Taking body measurements
 - i) posture while taking measurements,
 - ii) position of tape while taking measurements,
 - iii) amount of ease to allow.
- c) Cutting a garment to insure correct grain and matching of design
- d) Economical placement of pattern in relation to grain
- e) Transferring markings on fabrics by means of:
 - i) tailor's chalk,
 - ii) tracing wheel and tracing paper
- f) Basting 1) pin basting, 2) thread basting
- g) Sewing techniques
 - i) turning a corner
 - ii) finishing edges
 - iii) adjusting or regulating fullness in a garment, by means of darts, easing, gathering, plaits, shrinking,

- and tucks.
- iv) cutting bias
- v) reinforcing certain parts of a garment
 - (a) using interfacing
 - (b) using tape
- vi) reinforcing stress points at end of machine stitching or tying knots
- vii) attaching fasteners, such as
 - (a) buttons
 - (b) buttonholes (worked)
 - (c) hooks, eyes and snaps
 - (d) eyelets
 - (e) loops
- h) Attaching collars
 - i) convertible
 - ii) non-convertible
- i) Set-in sleeves
 - i) with fullness
 - ii) without fullness
- j) Pressing fabrics
 - i) during and after construction
 - ii) with and without moisture

The objectives were further classified according to the type of behavior and the subject matter involved.

After studying various types of test situations which might be used as a means for securing evidence of the competencies possessed by the entering students, it was decided to use a paper-pencil type

of test. The objective type of questions were selected because this technique makes it possible to measure different kinds of knowledge in a short period of time. Three types of test items were used, namely, multiple choice, matching and the true and false. These types of questions have been found to possess great objectivity because of the consistency of the scores which can be obtained by the different scorers.

As these types of questions are not frequently used in Pakistan, a brief explanation is given of the test items. The multiple choice questions ordinarily have two parts: a direct question or an incomplete sentence called a stem and a series of alternative responses, only one of which is correct or better than any of the others. The influence of guessing can be eliminated from these questions and a high reliability can be obtained. An example of a multiple choice question as given in the pretest is as follows.

When straightening an (untreated) fabric in preparation for cutting

- ___ 1) pull the longer corners of the material
- ___ 2) pull the shorter corners of the material
- ___ 3) pull the selvages of the material

From the above example it is seen that each of the incorrect answers sound plausible to those who do not really know the answer.

The matching test item is a form of multiple choice question. There are several forms of matching questions but they are all fundamentally alike in that two or more sets of items are to be matched. These types of questions are very useful in testing students' ability to recognize relationships. The following is an example of a matching

question as given in the pretest.

Most simple adjustments for regulating loose and tight stitches are done on the upper tension. Match the reasons for poor stitching on the right hand column with the resulting appearances on the left hand column.

<u>Results</u>	<u>Reasons for poor stitching</u>
___ 1) the stitches on the upper side look fat, bulgy, loose and sometimes looped.	a) loose upper tension b) tight upper tension
___ 2) the stitches on the upper side appear straight and rodlike	
___ 3) the stitches on the under side appear straight and rodlike	
___ 4) the stitches on the under side look fat, bulgy, loose and sometimes looped.	

Difficulties encountered in developing the pretest

Certain difficulties were experienced in the development of the pretest. One of the disadvantages which the author encountered was the selection and simplification of the terms most frequently used in Pakistan. These terms had also to be acceptable to the leaders in the field of clothing and textiles at Oklahoma State University. The author also had to be satisfied as to the congruity and appropriateness of the terms involved. She attempted to minimize this difficulty by eliciting the opinion of the Pakistani women on the campus. This gave informative

views by women in the field of home economics, who also were a link between Oklahoma State University and Pakistan. Another technique which helped towards solving the difficulty was the use of parallel terms in context. For example, a term frequently used in the United States is "grade"; the parallel term in Pakistan is "taper, stagger or layer." In the statement of the test it was given "grade (taper, stagger or layer)."

Another major difficulty arose in the selection of pertinent and relevant subject matter for the pretest. The information gained from the questionnaire helped to identify kinds of clothing construction techniques with which entering students would most likely have had experience. The more complicated types of techniques were omitted because it was felt that such material was too advanced for entering students.

One further difficulty in the development of the pretest was the development of a key to use in scoring. Frequently a panel or jury of qualified educators is used. In this instance, the graduate students and the staff members of the Clothing, Textile and Merchandising Department at Oklahoma State University served in this capacity. For certain test items there was disagreement as to the correct answer. The reasons for such disagreement was that there are frequently more than one acceptable method for a single construction technique. Each instructor naturally has her own methods and teaches her students by what she considers the quickest and simplest method. In some instances it seemed desirable for the author to use her own judgement as to which would be most applicable to use in Pakistan since there was lack of agreement among the panel members.

As a result of the above experiences a tentative or first draft of a pretest was completed. The pretest as appears in Appendix B was developed. It is planned that this will be administered to the students enrolled in the first year in the Home Economics College in Karachi in the fall of 1960. The results of this test will furnish a basis for the author to plan her teaching instructions. Revisions will be based on the findings, and interpretation of the findings will be used for the further development of the test.

CHAPTER IV

SUMMARY AND SUGGESTIONS

From a review of related literature it was discovered that extensive research has been done to determine the competencies of the students before instruction, especially in the field of clothing and textiles in various institutions in the United States. These studies have aided the teacher in providing learning experiences suited to the level and ability of her students, thus resulting in making teaching more challenging and stimulating.

The purpose of this study was to develop a pretest to determine the competencies of the students entering the Home Economics College in Karachi, Pakistan. The pretest was developed in consultation with the staff and graduate students of the Clothing, Textiles and Merchandising Department at Oklahoma State University.

The author used several sources as an aid in developing the pretest. A questionnaire was prepared to determine the clothing construction experiences of the Pakistani women studying at Oklahoma State University. The information gained from this questionnaire furnished the basis to determine the level of questions and the subject matter content to be included in the test. The author reviewed pretests and placement tests which had been developed in clothing by various institutions in Georgia, Pennsylvania, Oklahoma and Minnesota to help

her in making decisions as to the type of questions to include in the test. The author also reviewed textbooks on evaluation and on tests and measurements to learn the different steps in developing an evaluation device. Studies which had been reported from 1948 to 1959 on pretesting in the area of clothing were examined and they helped the author in deciding on the form of the pretest. To determine the subject matter which should be included in the pretest, the overall objectives formulated by the author in a previous course served as a guide.

The pretest was limited only to the aspects on clothing construction and the use and care of the sewing machine. The questions included in the pretest were on the principles and techniques of clothing construction and the fundamental principles of the use and care of the sewing machine. The type of questions prepared in the pretest were multiple choice, matching and true and false. The pretest was given to some of the Pakistani women for their interpretation of terms.

Suggestions for future use of the Pretest

The author plans to give this pretest this fall to her students after discussing it with the other members of the clothing staff at the College of Home Economics in Karachi. As this will be her first year of teaching, she feels that the pretest will aid her in planning her instructions for teaching. Due to the limitations she had to confront by not doing the study in her own country, she makes the following suggestions for the future use and refinement of the pretest.

- 1) Make continuous improvements and revisions on the pretest after analysis of the results.

Conclusions & recommendations

- 2) Revise the questionnaire and make it applicable for the first year students in the Home Economics College in Karachi.
- 3) Make improvements and revisions on the test after getting information from the different secondary schools about the kind of courses taught in home economics.
- 4) Develop the pretest to include the other phases taught in the first course in clothing and textiles.
- 5) Encourage promising students to pursue advanced courses in clothing and textiles.
- 6) Develop a standardized pretest which would be applicable to the different home economics colleges in Pakistan.
- 7) Develop a comparable test for the measurement of achievement after instruction.
- 8) Use the pretest in the future for placement of students according to their abilities.
- 9) Eventually use the test as a part of an exemption test when home economics is more extensively developed as a subject in the schools.
- 10) Stimulate other teachers of home economics to give pretests in their classes.

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APPENDIX A

Dear

As partial requirement for the fulfillment of my master's degree, I am in the process of constructing a pretest in clothing, to be used in the College of Home Economics in Karachi, Pakistan.

Dr. Jessie Warden, Head of the Clothing, Textile, and Merchandising Department, is my thesis advisor. We believe that you give a pretest or placement test to your students, and we thought that it would be very helpful for me to review this material. It will be kept confidential, and no parts of it will be used without your permission.

Mildred Witt, a candidate for the Doctor of Education degree here at Oklahoma State University, is interested in developing some devices to evaluate incoming freshmen's competencies in clothing selection and construction. She would be interested in reviewing your pretest, too.

I would appreciate it if you forward a copy of any pretest in clothing construction which you may have used recently.

Enclosed you will find a self-addressed stamped envelope for your convenience in replying. I would appreciate hearing from you at your earliest possible convenience as I have to submit my thesis on May 9 and leave the States in early June.

Sincerely,

Nargis Gaya
Graduate Student
Oklahoma State University

Jessie Warden, Head of Department
Clothing, Textiles and
Merchandising

Questionnaire to Determine Clothing Construction Experiencesof Students Entering the College of Home Economics,Karachi, Pakistan, with Responses of ElevenPakistani Students Recorded

Date _____

1) Name _____
(Last) (First) (Middle)2) Home Address _____
(City) (State)

3) Name of school last attended _____

4) Location of last school attended _____

5) Date attended _____

6) Have you ever done any sewing? _____ Yes _____ No
If you have never done any sewing, return these sheets to the instructor as soon as you have filled in the above blanks.11 Hand sewing only10 Machine sewing only

7) Check the blank which indicates where you have sewn and for what length of time.

8 a. In school.

Circle number of years

(1) 2 (3) (4) (5)

Total number of students-- 1 3 3 1

1 b. At a private sewing class.1 c. At an industrial home.

_____ d. At home with the help of an instructor.

2 e. At home from your family members

_____ f. From sewing machine companies (Singer, Pfaff, etc.).

_____ g. List others.

- 8) In the left hand column write the approximate number of each type of garment which you have made under the fibre with which you have worked.

No. of Students	Garments	Material Used						
		Cotton	Rayon	Wool	Silk	Linen	Nylon	and others
5	Sari blouse	5			3	3		
4	Dress	4			1			
5	Pajamas	4	1		2			
4	Slip	5			2			
1	Coat	1			1			
7	Kameez	8	2	1	5	2		
6	Shalwar	6			4			
8	Child's dress	7	1	2	3	2	2	
	List others							
1	Petticoat	1	1					
1	Bed linen	1						

- 9) Check the statement you feel best describes your sewing experience.

3 I have sewn very little but always under supervision.

1 I have sewn very little but with little supervision.

2 I have sewn a great deal, but always under supervision.

8 I have sewn a great deal and without supervision.

- 10) Please indicate the number of persons for whom you have sewn.

1 I have sewn for myself only.

10 I have sewn for myself and others.

If you check No. 2, then check below to be more specific.

9 Infants 9 Girls 3 Boys _____ Men 9 Women

11) When sewing did you refer to any kind of textbooks? Yes No

If yes, please write the name of the books. 2

12) What kind of machine did you sew on?

 8 Treadle machine 6 Hand machine 1 Electric machine

13) Have you had any experience with drafting? 4 Yes No

If yes, please list the number and kinds of garments drafted.

 3 a. Blouse

 3 b. Kameez

 3 c. Frock

 1 d. Knickers

 1 e. Shirts

 1 f. Men's pajamas

- 14) The following is a list of experiences you may have had in your sewing. Place an X in the column that most nearly fits your experience.

Type of Experience	Have never done	Have done but forgotten now	Can do fairly well	Can do with little or no help
1. Cutting out a garment			4	4
2. Making a garment using				
1. stay stitching	1. 2		4	2
2. tucks	2. 1		3	3
3. gathers	3.		5	3
4. unpressed pleats	4.		3	3
5. pressed pleats	5. 1		2	2
3. Finishing seams				
1. using pinking	1. 2		2	
2. overcasting	2. 2		2	
3. edge stitching	3.	1	2	2
4. Making				
1. fell seams	1.		5	3
2. lapped seams	2. 1		3	4
3. French seams	3. 2		5	3
5. Making garment with				
1. set-in sleeves	1.	1	2	4
2. seam at waistline	2. 1		4	2
3. attached collar	3. 1	1		1
6. Making				
1. hand worked buttonholes	1. 2		2	4
2. bound buttonholes	2. 3			1
7. Hemming a garment				
1. using hem tape	1. 1			4
2. with edge pinked	2. 1		2	4
3. edge stitched under	3.		3	2
8. Using				
1. fitted facing	1.		3	3
2. bias facing	2.		3	3
3. bias binding	3.		3	3

APPENDIX B

PRETEST
for
FIRST YEAR STUDENTS
in CLOTHING

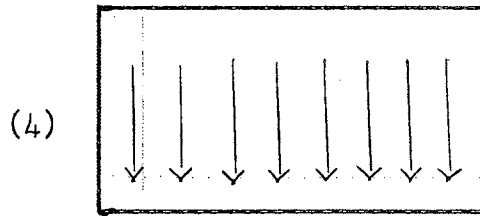
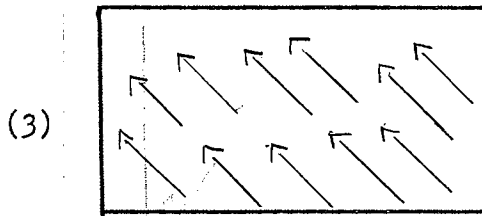
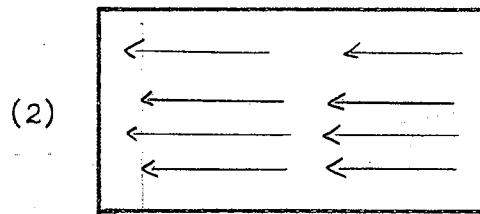
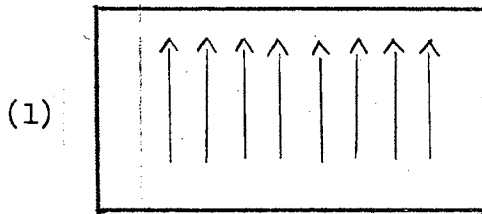
NAME _____

DATE _____

Part A

Multiple Choice: Select the best answer for each question.

1. _____ is the true bias of a fabric as illustrated.



2. The selvage of a fabric is

- 1) the lengthwise grain of the fabric.
- 2) the crosswise grain of the fabric.
- 3) the right edge of the fabric.
- 4) the firmly woven lengthwise edges of the fabric.
- 5) the left edge of the fabric.

3. When being measured for a garment, a person should stand
- 1) very erect.
 - 2) her usual posture.
 - 3) relaxed, comfortable.
4. Hip measurements usually should be taken
- 1) wherever the fullest part of the hip comes.
 - 2) six inches below waist.
 - 3) seven inches below waist.
 - 4) lower in back than in front.
5. While taking measurements the tape should be held
- 1) loose enough to allow for shrinkage.
 - 2) snug but not tight.
 - 3) loose enough to allow for growth.
 - 4) tight, then add an inch to it.
6. The amount of ease to allow for the waist of a kameez is
- 1) one-half to one inch.
 - 2) one to two inches.
 - 3) two to three inches.
 - 4) four inches.
7. The amount of ease to allow at the hipline in a straight hanging skirt of a kameez is
- 1) one to two inches.
 - 2) two inches.
 - 3) three inches.
 - 4) four inches.

8. The amount of ease to allow for the bust in a saree blouse is

- 1) one to two inches.
- 2) two to three inches.
- 3) three to four inches.
- 4) four inches.

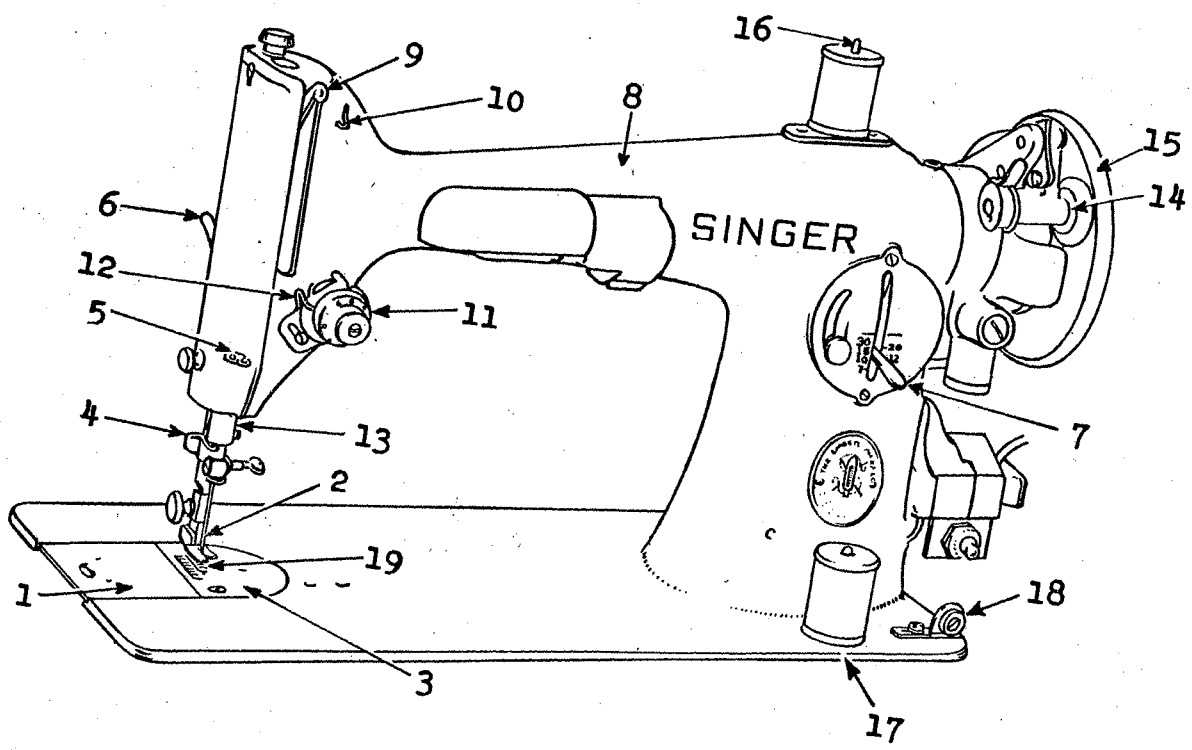
9. Most simple adjustments for regulating loose and tight stitches are done on the upper tension. Match the reasons for poor stitching on the right hand column with the resulting appearances on the left hand column.

Results

- 1) The stitches on the upper side look fat, bulgy, loose and sometimes looped.
- 2) The stitches on the upper side appear straight and rodlike.
- 3) The stitches on the under side appear straight and rodlike.
- 4) The stitches on the under side look fat, bulgy, loose and sometimes looped.

Reasons for poor stitching

- a) loose upper tension
- b) tight upper tension



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10. From the attached diagram, write the names of the "principal" parts of the head of the machine, the corresponding numbers of which are given below.

1. _____	7. _____
3. _____	10. _____
4. _____	11. _____
6. _____	12. _____
9. _____	14. _____

11. Match the numbers on the machine diagram with the function given below.

- _____ a. Holds the material firmly in place when you are stitching.
- _____ b. Controls the tightness or looseness of the thread from the reel.
- _____ c. Pulls up the slack in the thread each time a stitch is made.
- _____ d. Carries the fabric under the presser foot with each stitch.
- _____ e. Is the small sharp blade attached to the presser bar.
- _____ f. Loosen this before winding bobbin.
- _____ g. Covers the bobbin case.
- _____ h. Pressure on this makes the machine run.
- _____ i. The placement of this shows the direction from which the needle is to be threaded.
- _____ j. Should always be down when you are adjusting the upper tension.

12. It is usually necessary to adjust the tension on the machine
1. when the length of the stitches are smaller than the regular stitches.
 2. when the length of the stitches are longer than the regular stitches.
 3. when the stitches appear too tight or too loose on either the upper or lower side of the material.
13. When the upper thread is loose while sewing, which of the following might cause this difficulty?
1. The bobbin is set incorrectly in the bobbin case.
 2. The stitches per inch are too small.
 3. The upper tension is loose.
 4. The lower tension is loose.
14. When the bobbin thread is loose while stitching, which of the following might be the cause of this difficulty?
1. The needle is set in the machine backwards.
 2. The machine is not oiled properly.
 3. The upper tension is loose.
 4. The lower tension is loose.
15. When straightening an (untreated) fabric in preparation for cutting
1. pull the longer corners of the material.
 2. pull the shorter corners of the material.
 3. pull the selvages of the material.

16. The frequent breaking of the upper thread while sewing is usually due to
1. the needle is set incorrectly in the machine.
 2. the machine needs oiling.
 3. the stitches are too long.
 4. the needle is not placed in the fabric at the beginning of stitching.
17. Staystitching (staylining) is usually done
1. 1/8" from the stitching line in the seam allowance.
 2. 1/4" from seam edge.
 3. 1/8" in from the seam edge.
 4. on the seam line.
18. The color of the thread used for staystitching (staylining) should be
1. a contrasting color from that of the fabric.
 2. a shade lighter than the fabric.
 3. a shade darker than the fabric.
 4. same color as that of the fabric.
19. The number of stitches to an inch for staystitching (staylining) should not be
1. more than the number of stitches used for actual sewing.
 2. less than the number of stitches used for actual sewing.
 3. same number of stitches as that used for sewing.

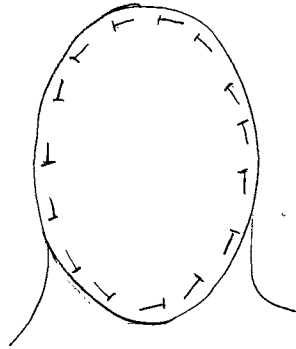
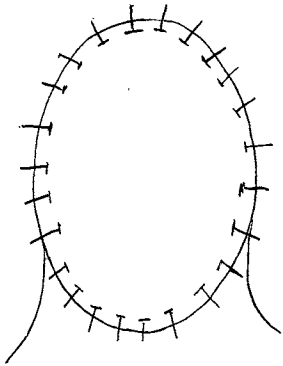
20. The main reason for staystitching (staylining) is
1. to prevent ravelling while sewing.
 2. to prevent stretching while sewing.
 3. to prevent seams from ravelling when the garment is worn.
 4. to keep the fabrics from puckering while stitching the seams.
21. For a fabric to keep its shape well while sewing, one should consider
1. marking broader seams.
 2. handling fabric carefully.
 3. marking with chalk.
22. When placing the fabric on the machine for sewing, which method is generally followed?
1. Placing the bulk of fabric on the right of presser foot.
 2. Placing the bulk of fabric on the left of presser foot.
 3. Placing it in any position on the machine.
23. When turning a square or sharp corner while sewing, which method would you follow?
1. Lift presser foot with needle raised when you reach the corner, turn the fabric and continue sewing.
 2. Lift presser foot, letting needle remain in the fabric, turn the fabric and stitch.
 3. Continue sewing and turn corner without lifting the presser foot.

24. Listed are several ways of finishing darts. Check the best method listed
- 1. by tying a knot a few yards before reaching the point of the dart.
 - 2. by tying knots at both ends of the dart.
 - 3. by retracing machine stitches outside original stitching and into the garment.
25. Which do you consider is an acceptable method of transferring markings on a rose colored poplin fabric?
- 1. By means of pins.
 - 2. By means of a tailor's chalk.
 - 3. By means of tracing wheel and dark blue tracing paper.
26. Check (X) in the left hand column for the reasons for your answer in 25.
- 1. It saves a lot of time.
 - 2. The markings are distinct.
 - 3. The markings will remain on the fabric for a longer period.
 - 4. It is a very easy device to use.
27. When applying a collar to the bodice neckline, if the collar is slightly smaller than the neckline, the method you would follow is
- 1. by stretching the collar to fit the neckline.
 - 2. by clipping the seam edge of the collar at various places and letting it stretch to fit the neckline.
 - 3. by putting gathers at the neckline and shrinking it to fit the collar.

28. When setting a sleeve in the armseye the ease in the sleeve is distributed

- 1. throughout the armseye.
- 2. just at the top of the armseye.
- 3. in the front portion of the armseye.
- 4. in the back portion of the armseye.
- 5. mostly on the upper bias portions of the armseye.

29. When pinning a sleeve in the armseye check the illustration which shows the correct position for placing the pins:



- 1. Perpendicular to the seam edge
- 2. Parallel to the seam edge

30. When setting a sleeve in the armseye, the sleeve usually has more fullness. Which statement would you consider correct for taking care of the fullness of the sleeve?

- 1. Cut the armseye seam a bit lower.
- 2. Put darts at the top of the sleeve and fit the armseye.
- 3. Distribute the ease evenly on the upper portion of the sleeve cap.
- 4. Sew a broader seam on the sleeve.

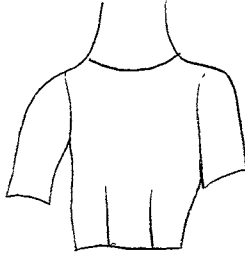
Part BTrue and False Questions

Circle the following statements true or false.

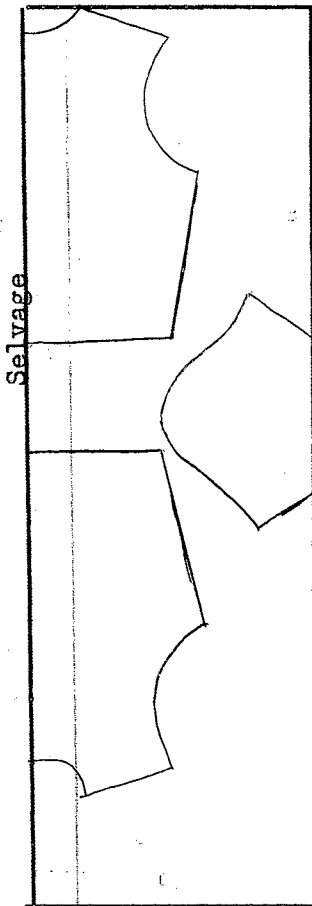
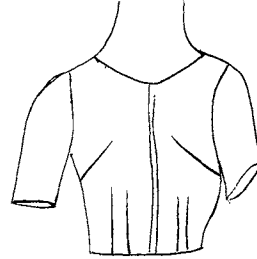
- T F 31. The size of the needle to be used in a machine depends on the weight and thickness of the fabric and thread being used.
- T F 32. To grade (taper, stagger or layer) enclosed seams gives a smoother finish and helps to remove bulk.
- T F 33. The purpose of staystitching (staylining) is to prevent edges from ravelling.
- T F 34. Seams and darts should be pressed before intersecting (joining) to another seam.
- T F 35. The center front line of the bodice pattern should usually be placed in the direction of the warpwise yarn of the material.
- T F 36. Ease is allowed in a garment for alteration purposes.
- T F 37. The fabric used for interfacing a garment should be heavier than the actual material.
- T F 38. The same number of stitches per inch are required for sewing fabrics of different weights.
- T F 39. The needle should be lowered in the material before clamping the presser foot.
- T F 40. The same kind of thread used in the reel and bobbin is one requirement for obtaining good stitches.
- T F 41. The seam allowances in the armseye are always pressed towards the garment.
- T F 42. The seam allowances in the armseye should be clipped at various places to ensure smooth fitting.
- T F 43. Darts are sewn in a garment mainly for decorative purposes.
- T F 44. The back and front waist measurements of most women are identical.
- T F 45. The size of the buttons used may determine the spacing of the buttonholes.

46. Check the layout you would follow for placing your blouse pattern on a plain cotton fabric.

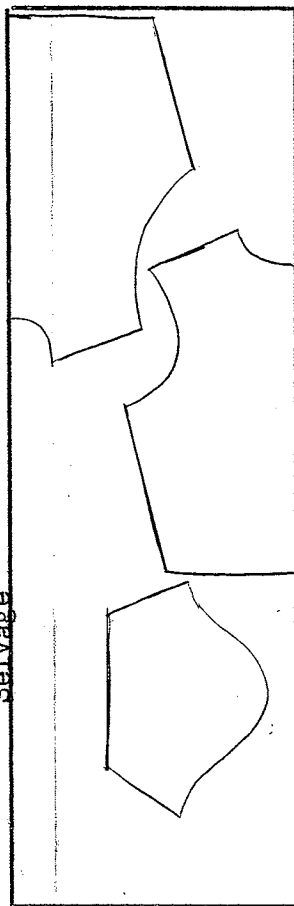
BACK



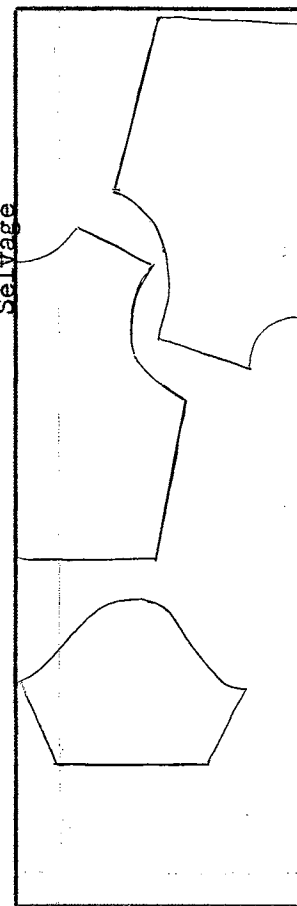
FRONT



___(1)



___(2)



___(3)

VITA

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Candidate for the Degree of

Master of Science

Thesis: DEVELOPMENT OF A PRETEST FOR CLOTHING CONSTRUCTION FOR THE
FIRST YEAR STUDENTS TO BE USED IN THE COLLEGE OF HOME
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Education: Attended grade school in Bombay, India, and Karachi,
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Karachi University, with a major in Chemistry and Micro-
biology, in April, 1956; received the Master of Science
degree from Karachi University with a major in Chemistry
in April, 1958; completed requirements for the Master of
Science in Home Economics in May, 1960.

KEY FOR SCORING

<u>Item</u>	<u>Correct Answer</u>	<u>Item</u>	<u>Correct Answer</u>
1.	<u>3</u>		c) <u>thread take up</u>
2.	<u>4</u>		d) <u>feed dog</u>
3.	<u>2</u>		e) <u>thread cutter</u>
4.	<u>1</u>		f) <u>clutch screw</u>
5.	<u>2</u>		g) <u>slide plate</u>
6.	<u>2</u>		h) <u>knee bar or</u>
7.	<u>4</u>		<u>foot feed</u>
8.	<u>1</u>		i) <u>last thread guide</u>
9.	1) <u>a</u>		j) <u>presser foot</u>
	2) <u>b</u>	12.	<u>3</u>
	3) <u>a</u>	13.	<u>3</u>
	4) <u>b</u>	14.	<u>4</u>
10.	1) <u>slide plate</u>	15.	<u>2</u>
	3) <u>throat plate</u>	16.	<u>1</u>
	4) <u>thread cutter</u>	17.	<u>1</u>
	5) <u>clamp</u>	18.	<u>4</u>
	9) <u>thread take up</u>	19.	<u>1</u>
	7) <u>stitch adjuster</u>	20.	<u>3</u>
	10) <u>thread guide</u>	21.	<u>2</u>
	11) <u>upper tension adjuster</u>	22.	<u>2</u>
	12) <u>thread guide</u>	23.	<u>2</u>
	14) <u>bobbin winder</u>	24.	<u>2</u>
11.	a) <u>presser foot</u>	25.	<u>2</u>
	b) <u>upper tension</u>	26.	<u>4</u>

<u>Item</u>	<u>Correct Answer</u>
27.	<u>2</u>
28.	<u>5</u>
29.	<u>1</u>
30.	<u>3</u>
31.	<u>T</u>
32.	<u>T</u>
33.	<u>F</u>
34.	<u>T</u>
35.	<u>T</u>
36.	<u>F</u>
37.	<u>F</u>
38.	<u>F</u>
39.	<u>T</u>
40.	<u>T</u>
41.	<u>F</u>
42.	<u>T</u>
43.	<u>F</u>
44.	<u>F</u>
45.	<u>T</u>
46.	<u>3</u>