DEVELOPMENT OF SELF-INSTRUCTIONAL LEARNING PACKETS FOR USE IN CLOTHING CLASSES

By

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CHAPTER I

INTRODUCTION

A current trend in education is toward individualizing instruction in order to meet individual differences and to develop student potential to a higher degree than has been possible in the past. The self-instructional learning packet is one way to individualize instruction. Packets are designed to specify what the student should learn, provide learning experiences to help him learn, and provide a means for evaluating his achievement. The development of a packet requires very careful planning. Silverton (22) believes "if it does nothing else, the individualized instruction movement performs a valuable service in forcing educators to define what it is they are attempting to teach . . . ."

Purpose of the Study

The purpose of the study was to develop and evaluate four learning packets to be used by students in the basic clothing construction course, CTM 1103, at Oklahoma State University, spring, 1972. The four packets included seams, seam finishes, hems, and hemming stitches.

Objectives

1. To develop four self-instructional learning packets to be used by students in preparing assignments for CTM 1103 and to design score

sheets for evaluation of the assignments.

2. To develop and administer a pre- and post-test to determine the amount gained by students from using the packets.

3. To determine whether there was a significant difference between pre- and post-test scores by use of a t-test.

4. To design a questionnaire for determining the attitude of students toward the learning packets.

Hypothseis

The hypothesis tested was that there would be no difference between pre- and post-test scores.

Assumption

The amount of gain from pre- to post-test indicates the extent to which the packets helped students accomplish the specified objectives.

Limitations of the Study

The sample was limited to fifty students enrolled in CTM 1103 at Oklahoma State University, spring, 1972. Each packet was available to students for a maximum of four weeks in the Home Economics Independent Learning Center.

Definition of Terms

1. Self-instructional Learning Packet - An individualized program designed to guide the learner toward the achievement of specific objectives.

2. Individualized instruction - An approach wherein the student can attain specified objectives at his own rate using specially designed materials.

3. Pre-test - An evaluation device used as a means of determining student knowledge in a specific subject before a given course of instruction.

4. Post-test - An evaluation device used to determine student knowledge after he completes a given course of instruction.

5. Gain - The difference between student scores on the pre- and post-test. A student who scores lower on the post-test than on the pre-test has a negative gain.

6. Sample - A step-by-step illustration of a specified technique correctly constructed using appropriate fabric.

CHAPTER II

REVIEW OF LITERATURE

Through the centuries educators have been aware that the traditional method of teaching has not been completely efficient or effective, yet they have been unable to find one specific technique which will offer maximum development of potential. Kinghorn (17) suggests that the traditional method is not effective because it does not provide sufficient motivation for learning.

In the search for ways to motivate students, many innovative approaches were developed. Among these approaches were programmed instruction, flex-modular scheduling, ability grouping, independent study, and computer assisted instruction. These approaches were designed to meet individual differences and abilities which exist among students and to increase motivation.

Individualized instruction is an innovative approach which capitalizes upon individual differences among students. Teaching machines, programmed textbooks, audio-tutorial laboratories, self-instructional learning packets, and other devices may be utilized in individualized instruction. In order for a program to be individualized O'Donnel and Lavoroni (18) consider the following elements necessary: purposeful pacing, alternative means for learning, self-evaluation, decision-making activities, and purposive interaction.

Learning Packets

Learning packets are frequently used in individualized instruction. Among the different types of learning packets are Learning Activity Packages (LAPs), UNIPACs, Learning Packets (LPs), Teaching-Learning Units (TLUs), and Home Economics Learning Packages (HELPS).

LAPs were developed at the Nova Schools in Fort Lauderdale, Florida, under the direction of Dr. James Smith, and were "most recently incorporated into the Continuous Progress Program at Hughson High School, Hughson, California . . ."(16). Variations of Nova's LAP are HIP (26), PAK (20), and KEY (20). HIP is the Hartford Instructional Packet which was developed in the Hartford, Connecticut schools. Penn Manor Schools in Millersville, Pennsylvania developed the PAK (Penn Manor Activity Kit), and the Speedier Project in Palmyra, Pennsylvania developed the KEY (Knowledge, Education and YOU).

The Kettering Foundation developed UNIPACs through Project I.D.E.A. These sets of self-instructional materials are written by teachers, sent through a quality control system with the I.D.E.A. project, then made available to all participating teachers. A "kit of materials" has been developed "which includes a self-instructional Learning Package on how to build one" (23).

LPs were developed by teachers employed as curriculum writers at Norwalk, California. Grades were assigned by the amount of progress made. Those accomplishing all the objectives received an "A". Those accomplishing fewer objectives received a "B" and so on (25).

The American Institute of Research at Palo Alto, California develops and tests "teaching learning units" (TLU) for schools in

California and Pennsylvania. The TLU (16) was designed to be an individual, two-week unit which guided students toward the achievement of specific behavioral objectives. Two unique features of TLUs are that thousands of units are produced so teachers and students may select a unit corresponding to individual needs and capabilities and a computer is used to supply information on progress of the student compared to his capabilities.

HELP packages are limited to home economics subject matter and were developed by home economics faculty members, graduate students, and other interested home economists at Pennsylvania State University (20).

Components of Learning Packets

All learning packets have similar formats, however, some packets contain components uncommon to other packets. Variation may be necessary because of the particular subject matter, population, or teacher. Different formats may be required for clarification or for strengthening the packets.

Herd (13) indicates six basic components which he believes are included in the development of most packets:

1. Rationale - a statement which justifies "why" a study of a given subject is relevant.
2. Behavioral Objectives - desired outcomes of learning expressed in terms of observable behavior.
3. Pre-test - An examination the student takes before encountering the learning activities. (The student may administer and correct it himself).
4. Learning Activities - Tasks designed to assist students in accomplishing specified objectives. These tasks provide for various forms of learning.

5. Post-test - An examination the student takes after performing learning activities. (The student may administer the post-test when he feels he is ready and he may correct it himself).

6. Secure Examination - An evaluation tool which determines the success and grade of students after completing the packets.

According to Talbert (23) "A basic concept which underlies the use of the learning package is that students will learn better if they are (1) told what it is they are to be able to do as a result of the learning experience, (2) given a set of learning experiences which help them learn to do that which they are to be able to do, and (3) then asked to demonstrate that they are able to do it." Talbert (23) contends that three components are sufficient for all learning packets. These basic components allow the student to know what he is to learn (behavioral objectives), provide him with materials and instructions (learning activities) to use in accomplishing the objectives, and permit him to evaluate himself (secure examination or post-test) to see whether he has met the objectives. It is imperative that all learning packets contain these three basic components. Additional components should be included when they strengthen or clarify subject matter or motivate a given population.

Success of Learning Packets

Learning packets are not intended to be the answer for meeting the needs of all students. Finn (10) made a statement concerning programmed instruction which could be true for any teaching approach; "No one . . . claims that programmed learning will supplant all other kinds of instruction." Learning packets should be thought of as devices which can be extremely effective but not necessarily as the

only effective device.

The Joint Committee on Programmed Instruction and Teaching Materials found that "Experimentation conducted thus far supports the expectation that good programs, carefully developed, can significantly improve both the quality and economy of instruction" (7). This does not imply, however, that all carefully developed programs will be effective. Barcus (3) found that classroom teachers had an effect on the amount students learn from programmed packets. Hughes (15) recognized another factor which could determine the effectiveness of learning packets. She reported that teachers repeatedly emphasized that "the package would have to be adaptable for use with their own students and for their local school and community" (15).

In spite of the fact that learning packets are promising in teaching, one must remember that each packet must be carefully developed; it should be developed specifically for the case in hand; the extent learning packets influence the improvement of learners is affected by the teacher; and learning packets are not intended to supplant all other teaching devices.

Review of Related Research

Numerous individualized systems have been designed and a number of studies indicate that students learn at least equally well in individualized systems when compared with other methods of instruction.

Research Involving Individualized Instruction

The EDO and the ABLE system was designed by the Junior and Community College Division of the National Laboratory for Higher

Education (NLHE) in Durham, North Carolina. This system was employed in a number of two year colleges. "ABLE" refers to the Accountability-Based Learning Environment. "EDO" is the name for the Educational Development Officer who functions as a specialist in the improvement of instruction. He serves as a resource for faculty and conducts instructional research.

The ABLE system emphasizes a "systems approach" to instruction, capitalizing on individualized, self-paced, learner-oriented instruction. This system was based on the learning models of Benjamin Bloom and John Carroll. It includes " . . . instructional objectives, stated in behavioral terms, multiple paths to mastery of the material, and reinforcement techniques designed for varying types of students" (5). This systems approach is a process consisting of six steps:

1. The instructor derives a rationale for the course, analyzing what the students are to learn and why.

2. Learning goals are broken down into sequences of learning tasks, and each task is stated in an objective with precise performance indicators against which student progress can be measured.

3. The instructor develops a variety of self-instructional learning activities to reach the requirements of each learning task and the different learning styles of diverse students.

4. The instructor pre-tests his students to determine their individual needs and to identify at what point each should begin work in the sequence of tasks leading toward the course goal.

5. The instructor post-tests his students to determine their mastery of each task in the sequence.

6. The instructional program is continuously evaluated and revised as necessary to increase student master of the tasks, and ultimately the course.

Briley (5) reported that the EDO and ABLE system was used at one college to revise an English composition course. The revision

included a series of 37 self-instructional units. As a result of the shift from the traditional teaching method to the systems approach the proportion of students receiving "A" and "B" grades rose from 25 per cent to 75 per cent.

Research in five community colleges utilizing the EDO and ABLE system revealed that 38 per cent of the 3100 students completed their work before the end of the semester, 41 per cent at or near the end of the semester, and 17 per cent required more time. It was found that 95 per cent of the students liked the self-instructional materials. Briley (5) believes that "an active, innovative EDO and an enthusiastic and dedicated faculty can be a potent force for instructional improvement . . . ."

Walters (27) studied the effect of taped instruction on achievement in a college office machines class during 1967 and 1968. Sixty-eight students at Kansas State Teachers College who were enrolled in the office machines course participated in the study. Three control and three experimental groups were selected. All groups used the same textbook and followed an identical content, assignment, and test schedule. Three instructors participated in the study; each instructor taught one control class and coordinated one experimental class. The control group received the traditional instruction and the experimental group received all instruction from tapes prepared by the researcher.

Walters (27) concluded that the experimental group achieved a higher mean score than the control group on the criterion measures. The experimental group used slightly less time in completing assignments than the control group. Sixty-seven per cent of the students reacted favorably to taped instruction at the beginning and 97 per

cent reacted favorably at the end of the experiment.

The coordinator of the Learning Resources Center of Auburn University conducted an experiment in a large suburban high school in Southern California to determine student attitude toward various teaching approaches (14). Four hundred thirty-six students in high school biology were divided into three experimental groups and a control group. Each student participated in one of the following types of instruction: (1) independent study; (2) small-group discussion; (3) large-group instruction; or (4) a mixture of independent study, small-group discussion and large-group instruction. The latter group was designated as the control group.

Students in the independent study group were provided with teacher-made programs of instruction, teacher-made discussion questions, a room for discussion, and a room for quiet study. They were permitted to use the library at any time. Students in small-group discussion sections were provided with teacher-made questions. Each discussion group had five students. Six groups met each period. The teacher moved from group to group making suggestions when necessary. The large-groups (60-75 students) participated in lecture demonstrations.

The experimental groups were given a pre-test and post-test. Each student completed a questionnaire designed for his particular group. The questionnaire analysis revealed that in general, students believed that all instructional strategies presented during the experiment were better than their other classes. Students pursuing curricula objectives utilizing independent study expressed substantially higher attitudes than other experimental or control classes. Results of this experiment suggested that an independent study program

including programmed instruction, library usage, discussion, and quiet study working areas can improve student attitude toward classwork.

Braun (4) patterned a course of study at the University of Hawaii after Postlethwait's audio-tutorial program for teaching botany. The organizational scheme consisted of one large group lecture per week, one small group (15 students) seminar per week and an independent study period. Braun (4) instructed all groups. Twelve study units for teaching reading were used. Each unit included behavioral objectives and a series of tasks. Some units included tests which the students administered and corrected themselves.

Two midterm tests were given at times requested by the students. After tests were scored students corrected their errors and returned the tests to the professor. The final examination consisted of four alternatives: (1) to take an essay examination; (2) to instruct a group of children in reading for three weeks and submit a log of daily encounters; (3) to do an in-depth paper; or (4) to design a unit of work.

The program evaluation indicated that the majority of students preferred the new organization over the one used formerly. Participants were so enthusiastic that 250 signed a petition to increase the reading methods course from two to six credit hours "to broaden their learning through direct interaction with children" (4). Students liked the variety of learning styles, however, they wanted more discussion groups in order to provide greater course continuity and a chance to discuss problems.

Research Involving Learning Packets

Poorman (19) designed a pilot and a follow-up study for the Harvard Project Physics in 1965. Five teachers were selected to use the experimental multi-media system approach (MMSA) and five teachers served as a comparison sample. The five comparison teachers used whatever method they normally employed. The experimental classes (MMSA) used a multi-media package including: (1) textbook; (2) physics reader; (3) programmed texts; (4) 8 mm film loops; (5) 16 mm films; (6) teacher lecture; (7) small group discussion; (8) overhead transparencies; (9) laboratory exercises; (10) teacher demonstrations; and (11) chapter problems. Teachers of the non-MMSA classes had access to all materials and methods except the sound films; however, non-MMSA teachers were not given instructions as to how, when, or where, to use the methods and media. Eighty-six students in the MMSA classes and 102 students in the control class completed the Physics Achievement Test for the pre-test. The Unit I achievement test was used for the post-test.

Poorman (19) found that the MMSA classes finished in 30 days while the non-MMSA classes finished in 24-47 days (a mean time of 40 days). There were no significant differences between experimental and control class means on the pre- and post-test.

Teichert (24) experimented with modified individual instruction in beginning German at the University of Georgia in 1971. The purpose of the study was to determine: (1) if beginning German students could achieve higher scores on the departmental tests and a standardized achievement test using learning packages and a basic text in a structured approach than those students taught by a conventional approach;

(2) if the experimental group would have fewer dropouts and failures; and (3) the attitude of the experimental group toward the materials and method of instruction.

One hundred seventy-eight students were involved in the pilot study and 79 in the follow-up study. Seventeen of the 79 students in the main study made up the two experimental classes which were taught by Teichert (24). They were given the Pinsleur Language Aptitude Battery as pre- and post-test. In addition, the MLA-Cooperative Foreign Language Test was administered as part of the post-test. Departmental midterm and final examinations were used as measures of mastery of German. An analysis of covariance was computed using departmental scores and MLA-CFLT total scores as covariates.

Results indicated that the use of learning packages had a significant effect on student achievement at the .01 level and that there were significantly fewer dropouts and failures in the course using learning packages than in the course using other devices. The questionnaire analysis indicated that the students in the experimental group liked the learning packages as a teaching device.

Hughes (15) conducted a study at Cornell University on the preparation, use, and evaluation of curriculum packages. Six hundred four high school juniors and seniors in 32 classes were taught by 29 teachers in 26 schools (large and small city schools, central rural schools, suburban schools, and area vocational schools). The primary purpose of the study was to prepare a unit for slow and low-average learners. Standard intelligence tests were used to determine whether slow and low-average students were included in the sample. Results of the intelligence tests showed that 35 per cent of the students were

slow learners, 29 per cent low-average learners, 26 per cent high average learners, and 13 per cent above average learners.

The packages were evaluated using (1) tests taken over the package information during the study; (2) teachers' judgement of the worth of the package after they had used it; and (3) measurement of student gain. Pre- and post-test scores revealed that students made significant gains. In general teachers liked the idea of curriculum packages. Hughes (15) reported that "More favorable comments came from those teachers who liked trying something new and who felt that the programs were within the students' reading level." Data indicated that packages were useful to a number of different teachers having large classes including students of the academically less able.

Research Conducted at Oklahoma State University Using Learning Packets

Collier (6) developed and evaluated two self-learning packages for kitchen cutting tools and kitchen ranges. The format for the packages was similar to that of HELPS. Forty junior and senior students enrolled in a household equipment course, fall, 1970, were divided into two experimental and two control groups. A pre-test was administered to each student before packages were made available. The pre-test was given to determine the student's level of proficiency for each learning objective. One experimental group used the package on cutting tools and one experimental group used the package on ranges. The two control groups received instruction by the traditional teaching method but had access to the same filmstrips and readings as did the two experimental groups. All groups were allowed two weeks to complete the course of study, after which a post-test was administered.

A thirty minute conference was scheduled with each student in order to ascertain the student's attitude toward the packages and toward this method of learning.

The t-test was used to determine any significant difference between unit achievement test scores and final examination scores. (The final examination was developed by the course instructor, not the researcher). The final examination, which was administered six weeks after the package on ranges and two months after the package on cutting tools, was used to measure the retention of the subject matter of students using packages as compared with students taught by the conventional method. Students' grade point averages were statistically analyzed using the t-test to determine whether a difference in ability existed between Experimental Group I and Experimental Group II. The t-test and the individual conference were used to determine the achievement and attitude of students and to measure the effectiveness of the learning package as compared to the traditional method of teaching.

No significant difference was found in the level of learning or in academic ability between Experimental Group I and Experimental Group II. The majority of the students liked the learning packages.

Collier (6) recommended that packages be introduced into a course gradually with frequent appointments with students until they are self assured. She also suggested that several students be scheduled together to report on progress, findings, and to discuss problems. She indicated that instructions should be complete and clear.

Gilliam (11) conducted a study which included the development of

booklets with tapes for teaching the class, Heritage in Housing and Interior Design. Forty-two students were randomly divided into groups A and B. Group A studied a booklet on Queen Ann period furniture while Group B studied similar material using notebooks compiled from library readings, museum illustrations, and other historical reference materials. After the Queen Ann unit was completed, Group B used a booklet on Louis XV furniture styles and Group A was assigned the usual outside assignments for Louis XV period. One week was allowed for completing each booklet or assignment.

After booklets were completed an identification test was administered to both groups. Students viewed 50 illustrations and were asked to identify the historical style of the illustration as it was shown. Statistical analysis indicated that use of booklets with tapes is as effective a method for teaching identification of historical styles of furniture as the usual outside assignment. A survey revealed that students using booklets learned the same amount of information in much less time than students assigned the usual outside work.

Shimonek (21) conducted a study in 1971-72 for the purpose of developing and evaluating a self-paced learning unit. Her objectives were (1) to develop a self-paced learning unit for use in basic clothing construction; (2) to determine the effectiveness of the unit by measuring gain in student achievement through use of a pre-post test; (3) to investigate the degree of correlation which existed between per cent of gain on the post-test and each of the following variables: cumulative grade point averages, ACT English scores, and ACT composite scores; (4) to design an instrument for determining student attitude toward the self-paced learning unit; and (5) to investigate the

relationship between student attitude and each of the following variables: cumulative grade point average, classification, and major field of study.

Four packages were developed with the use of LAPs as a guide. Packages were used in a pilot study and revised to clarify content. The main study included 49 students enrolled in basic clothing construction during the spring, 1972. Students were given a pre-test before packages were made available. Ten days were allowed for completing the packages. After the ten day period a post-test was administered and the students completed an evaluation sheet. A t-test was used to determine the difference between pre- and post-test scores. The degree of correlation between gain on post-test and cumulative grade point average, ACT English scores and ACT composite scores was determined.

Results of the t-test indicated that the difference between pre- and post-test scores was significant at the .001 level. No significant degree of correlation was found between per cent of gain on post-test and cumulative grade point average, ACT English scores, or ACT composite scores. There was little or no relationship between student attitude and cumulative grade point average, classification, and major field of study. Student evaluation of the learning packages indicated that the majority of the students preferred packages over lecture. A majority of the students indicated that they preferred only a part of the course material in packages. About half of the students commented that they liked being able to repeat material in the packages or skim parts containing information they already knew.

Past studies have indicated that learning packets are at least

as effective in teaching as the traditional method and that students using packets can learn in much less time than students taught by the traditional teaching method. In all of the cases reviewed, students preferred using learning packets over the traditional method.

CHAPTER III

METHODOLOGY

The objectives of the study were: (1) to develop four self-instructional learning packets to be used by students in preparing assignments for CTM 1103 and to design score sheets for evaluation of the assignments; (2) to develop and administer a pre- and post-test to determine the amount gained by students from using the packets; (3) to determine whether there was a significant difference between pre- and post-test scores by use of a t-test; and (4) to design a questionnaire for determining the attitude of students toward the learning packets.

Fifty students enrolled in the basic clothing construction course, CTM 1103, spring, 1972 composed the sample for the study. Four self-instructional learning packets were developed for student use in preparing assignments. The packets included seams, seam finishes, hems, and hemming stitches.

Development of the Learning Packets

Each packet consisted of (1) behavioral objectives, (2) directions, (3) general information, (4) step-by-step fabric samples, (5) step-by-step procedures for constructing a sample, and (6) ideal standards for a sample. Packet 1 is included in Appendix A to illustrate the format. It was not possible to arrange the pages in Appendix A in the order they were arranged within the packet. The packet was organized so the

two pages referring to one sample were attached side by side in a manila folder. If a third page was necessary for one sample, one page was placed on top of another and attached so the top page could be lifted.

Three by three inch samples illustrating the various techniques were carefully constructed using a fabric on which machine stitching could easily be seen. Samples were constructed from appropriate fabric (i.e., sheer fabric was used for a French seam and denim was used for a flat-felled seam) and mounted within the packet. (Samples have been omitted from the packet in Appendix A).

One test was devised for each packet. A table of specifications was constructed for each test.

The preparation of a table of specifications includes the following steps:

1. Identify the learning outcomes and content areas to be measured by the test.

2. Weight the learning outcomes and content areas in terms of their relative importance.

3. Build a table in accordance with these relative weights by distributing the test items proportionately among the relevant cells of the table.

The resulting two-way table indicates the type of test needed to measure the learning outcomes and course content in a balanced manner.

The numbers in each cell of the table indicate the number of test items to be devoted to that area. The number of items assigned to each cell is determined by the weight given to each learning outcome and each subject-matter area (12).

A table of specifications for each test used in the study can be found in Appendix B.

Use of The Learning Packets

Five copies of each of the four packets were placed in the Independent Learning Center four weeks before an assignment was due. All students used all four packets. To eliminate excessive note taking, students were provided with a copy of the procedures and standards listed in each packet. Since the packets were developed to replace the lectures on these topics, students were dismissed one hour of classtime for each packet they were required to complete. The student could use the packet during this time or at a time of his choosing and he could repeat the packet as many times as he desired, but the material was not covered in lecture or in the laboratory class.

Administration of Tests and Questionnaire

A pre-test including written and performance items was given before each packet was made available. After the written portion of the test students were asked to construct samples illustrating specific construction techniques using fabric and other equipment which was provided. These samples were evaluated by the researcher and the resulting scores composed the performance portion of the pre-test. A post-test was administered after completion of a packet (four weeks after the pre-test). The written portion of the pre- and post-tests were identical. After completing each packet students handed in samples illustrating the specific construction techniques as an assignment. It was assumed that each student constructed the samples he handed in rather than having someone do it for him. The assignments were evaluated by the researcher and the resulting scores composed the performance portion of the post-test.

A one page questionnaire was designed for use in evaluating student attitude toward the packets. Open-end and multiple choice questions were included. After using all packets, students completed the questionnaire. (See Appendix C.)

CHAPTER IV

ANALYSIS OF DATA

Data obtained from the pre-tests, post-tests, and questionnaire were used in evaluating the four self-instructional learning packets. Each of the tests was composed of two portions: written and performance. Written portions were scored by computer and performance portions were scored subjectively by the researcher using a rating sheet. Gain on the written and performance portions was determined separately.

A t-test was used to determine whether gain from pre- to post-test was significant. For the written portion, scores from each of the four packets were compared separately. The major purpose of the four packets was to assist students in developing specified skills in clothing construction. The performance portion of the post-test consisted of samples which students handed in as assignments. One rating sheet was used to score all samples of each student on both pre- and post-test. Because of this, scores on the performance portion for all four packets were totaled and treated as one test.

Analysis of Written Portion of Tests

On the written portion of the test, the t-value for paired samples was significant at the .001 level for all four packets. The mean values from pre- to post-test increased a minimum of 23 points

(test 3) and a maximum of 40 points (test 1). A comparison of scores on written pre- and post-tests can be found in Table I.

TABLE I

COMPARISON OF PERCENTAGE SCORES ON WRITTEN PRE- AND POST-TEST FOR FIFTY STUDENTS

Packet	Pre-test				Post-test				Gain	t-value*
	Low	High	Mean	SD	Low	High	Mean	SD		
1	15.8	84.2	42.74	15.17	36.8	100	82.82	13.98	41	15.8
2	21.1	57.6	40.42	9.17	26.3	84.2	66.95	13.07	27	12.1
3	0.0	76.5	49.06	17.00	29.4	94.1	72.12	16.11	23	8.7
4	5.0	50.0	31.10	10.85	10.0	95.0	64.30	21.55	33	11.4

*All values were significant at the .001 level with 49 degrees of freedom.

Scores of individual students on all four written pre- and post-tests can be found in Appendix D. Eighty-four per cent of the students showed an increase in score from pre- to post-test on all four tests. On test 1, 96 per cent of the students gained; on test 2, 92 per cent of the students gained; on test 3, 84 per cent of the students gained; and on test 4, 90 per cent gained. (See Table II).

TABLE II

PERCENTAGE OF SCORES WHICH INCREASED, DECREASED, OR REMAINED THE SAME ON THE WRITTEN PORTION OF PRE-POST TESTS

Test	Increased	Remained the same	Decreased
1	96	0	4
2	92	2	6
3	84	12	4
4	90	6	4

The percentage of students scoring above seventy increased tremendously from pre- to post-test. On all pre-tests few students scored above seventy while the majority of scores on all four post-tests were made in this category. (See Figures 1, 2, 3, and 4.)

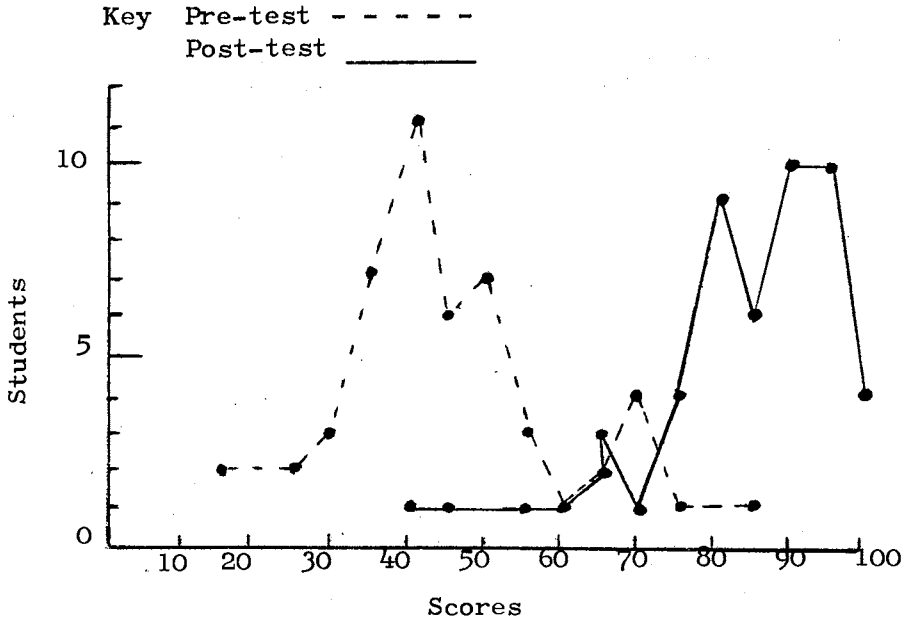


Figure 1. Comparison of Pre- and Post-test Scores, Packet 1

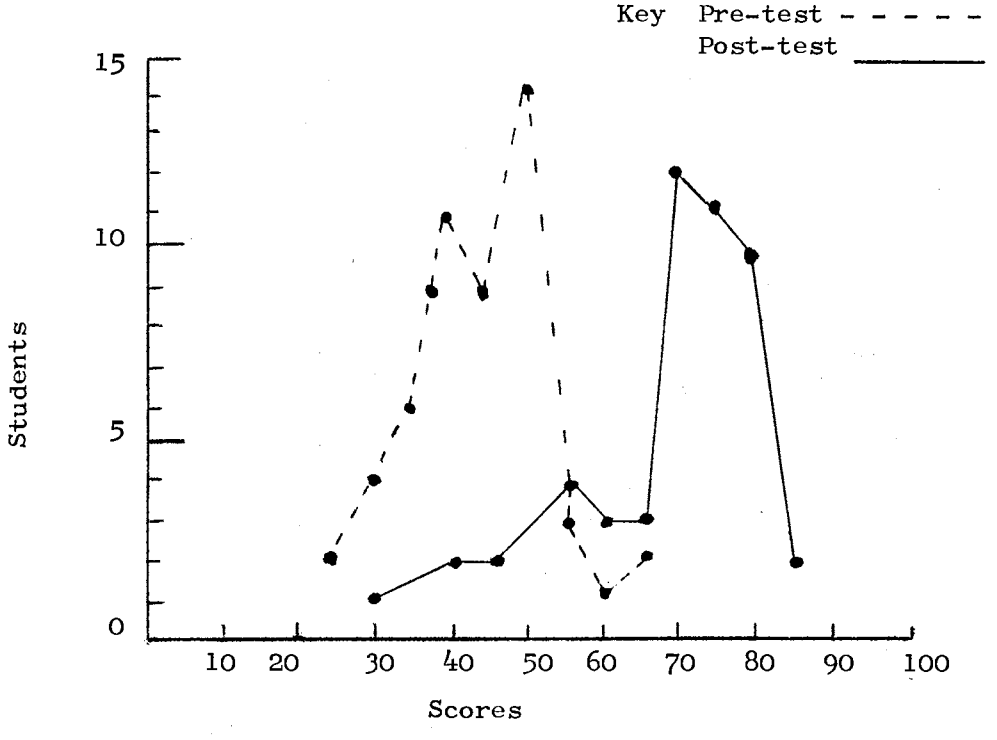


Figure 2. Comparison of Pre- and Post-test Scores, Packet 2

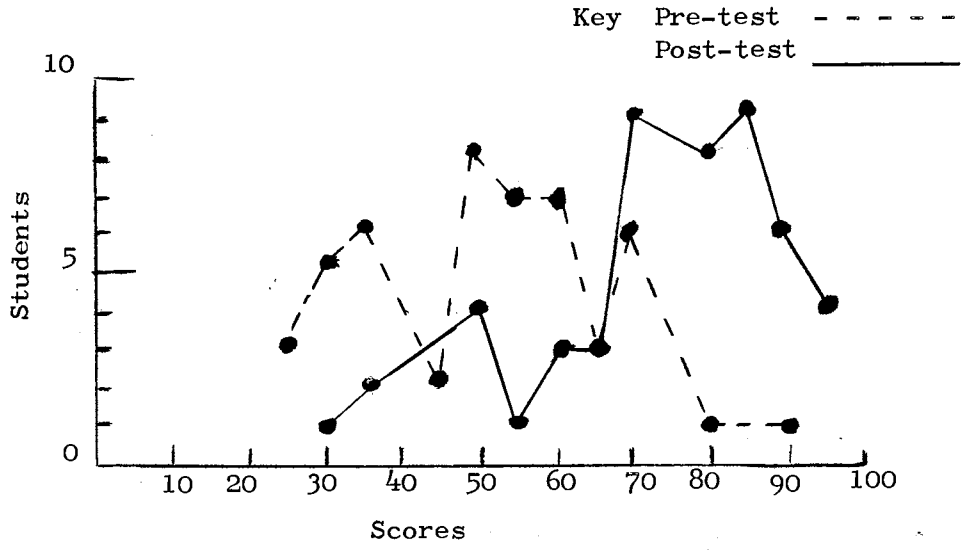


Figure 3. Comparison of Pre- and Post-test Scores, Packet 3

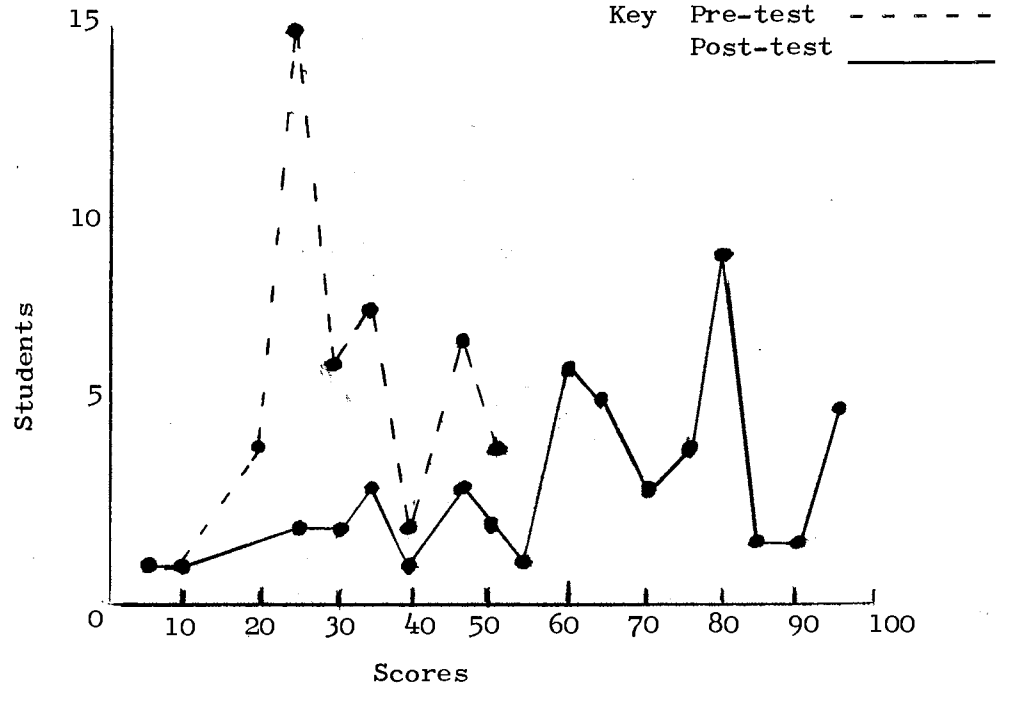


Figure 4. Comparison of Pre- and Post-test Scores, Packet 4

Analysis of Performance Portion of Tests

Four categories were used in rating the samples constructed for the performance portion of the post-tests: (1) constructed correctly, accurately, and neatly--three points; (2) constructed correctly but needs improvement--two points; (3) constructed incorrectly--one point; (4) not attempted--0 points. The percentage of students who rated in each category can be found in Appendix E.

Before completion of the packets at least 82 per cent of the students did not attempt to construct the specified samples. After completion of the packets, 96 per cent attempted all samples and at least 77 per cent constructed each sample correctly. The majority of the students rated higher on samples constructed for packet 1 than for any other packet.

Scores on the performance portion of pre- and post-tests were compared using the t-test. There was a significant difference at the .001 level of confidence. (See Table III.) These findings did not support the hypothesis of no difference between pre- and post-test scores; therefore, the hypothesis was rejected.

TABLE III

COMPARISON OF SCORES ON PERFORMANCE PRE- AND POST-TEST

Test	N	Low	High	Mean	SD	t-value
Pre-test	50	0	14	5.4	3.7	
Post-test	50	31	54	41.5	5.9	42.97*

*Significant at the .001 level with 49 degrees of freedom.

Responses to the Questionnaire

A questionnaire was designed to obtain student attitude toward the packets and to obtain information for improving the packets. (See Appendix C.) After using the four packets, students completed the questionnaire. Responses to the questionnaire may be found in Table IV. The questionnaire revealed that at least 96 per cent of the students thought the packets and samples were helpful while approximately two per cent thought the packets were of no use and the samples hard to understand. Step-by-step procedures for making each sample were given in each packet. Eighty-two per cent stated that the procedures were helpful in clarifying samples while approximately two per cent stated the procedures were clear without looking at the samples. All the students stated that the procedures were necessary even though samples were available.

Guidelines (standards) for each completed sample were listed to help students evaluate their samples. The majority of students (80%) stated that the standards were helpful in describing how samples should look when finished. A small percentage stated standards were not helpful and not necessary.

General information about each technique was included in each packet. This information included statements about the purpose of the technique, distinguishing features between techniques, fabrics appropriate for specific techniques, and areas within garments where given techniques could be used. The general information also included illustrations of types of garments on which each technique could be appropriately used. The majority of students stated that the general information was interesting but not helpful in understanding how to

TABLE IV

SUMMARY OF STUDENT RESPONSES TO THE QUESTIONNAIRE CONCERNING THE SELF-INSTRUCTIONAL LEARNING PACKETS

	ITEM		NO.	%
1.	Packets were -	helpful.	49	98
		of no use.	1	2
2.	Fabric samples were -	helpful.	48	96
		hard to understand.	2	4
		not needed.	0	0
3.	Procedures were -	helpful for clarifying samples if used when viewing samples.	41	82
		clear without looking at samples.	1	2
		confusing even when viewing samples.	7	14
		unnecessary if samples are available.	0	0
		(No answer to item three.)	1	2
4.	Standards were -	helpful in describing how samples should look when finished.	44	88
		not helpful.	2	4
		not necessary.	4	8
5.	General information was -			
		of no help in distinguishing between samples.	7	14
		interesting but not helpful in understanding how to make each sample	30	60
		unnecessary.	8	16
		(No answer to item five.)	5	10
6.	The packets -	could be shortened.	24	48
		did not include enough information.	2	4
		were brief and complete	23	46
		(No answer to item six.)	1	2
7.	The packets would be more helpful if a sewing machine were available so that one could make samples while using packets?			
		Yes	29	58
		No	21	42
8.	Would you rather -	have packets available to use when making each sample.	43	86
		see a demonstration, then make each sample.	6	12
		make samples without the packets	1	2

make each sample. Approximately one-fourth of the students stated that this information was unnecessary.

Approximately one-half of the students (48%) stated that the packets could have been shortened while most of the others (46%) thought the packets were brief and complete. Slightly more than one-half of the students (58%) indicated that the packets would have been more helpful if a sewing machine had been available while they were using the packets. Eighty-six per cent preferred the packets to a demonstration or to constructing samples without the packets.

In response to an open-end question, approximately one-half of the students listed the fabric samples as the part of the packet they liked most of all. One student suggested that the packets be optional and five specified that procedures should be clarified.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the study was to develop and evaluate four self-instructional learning packets. The objectives of the study were: (1) to develop four self-instructional learning packets to be used by students in preparing assignments for CTM 1103 and to design score sheets for evaluation of the assignments, (2) to develop and administer a pre- and post-test to determine the amount gained by students from using the packets, (3) to determine whether there was a significant difference between pre- and post-test scores by use of a t-test, and (4) to design a questionnaire for determining the attitude of students toward the learning packets.

The sample was composed of fifty students enrolled in CTM 1103 at Oklahoma State University, spring, 1972. A pre-test, including both written and performance items, was given before each learning packet was used. After completion of each packet a post-test was administered. A t-test indicated that the difference between pre- and post-test scores was significant at the .001 level on both performance and written portions of the test.

To obtain the attitude of the students toward the learning packets, students completed a questionnaire. The majority of the students (86%) preferred using packets to learn the construction techniques over viewing demonstrations or learning to construct samples

without the packets.

Conclusions

The self-instructional learning packet is a device which can help students develop skill in clothing construction. The majority of the students liked using the packets; however, some students indicated that they needed other devices available in order to provide for student differences. The packets should be revised in accordance with the recommendations listed below.

Recommendations for Improving the Packets

1. Redesign the unit so that one pre- and post-test is used for the packets instead of four.

2. Provide a sewing machine so that students can construct their samples while using the packet.

3. Include some means of self-evaluation in each packet.

4. Use an item analysis from the pre- and post-tests to revise and improve these instruments.

5. Conduct a pilot study before using the learning packets so that information and instructions to students can be made more explicit.

Recommendations for Further Study

1. Conduct a study to determine the amount of time required to attain specific objectives through use of packets as compared to other teaching devices.

2. Conduct a study comparing achievement of students using packets with achievement of students using other devices such as films, demonstrations, and/or textbooks.

3. Provide various learning devices to determine which are chosen by students identified as fast or slow learners and/or high or low achievers.

4. Revise the packets and the tests; then repeat the study using a larger sample.

SELECTED BIBLIOGRAPHY

(1) Ahman, Stanley Jr., and Marvin Glock. Evaluating Pupil Growth. Boston: Allyn and Bacon, Inc., 1969.

(2) Bane, Allyne. Tailoring, 2nd ed. New York: McGraw-Hill, 1968.

(3) Barcus, Delbert, John L. Hayman, Jr., and James T. Johnson, Jr. "Programming Instruction in Elementary Spanish." Phi Delta Kappan, Vol. 44 (March, 1963), 269-272.

(4) Braun, Frederick G. "Individualization: Making It Happen." The Reading Teacher, Vol. 25 (January, 1972), 316-318.

(5) Briley, Thomas S. "The Edo and the ABLE System for Instructional Improvement." Audiovisual Instruction, Vol. 16 (December, 1971), 39-42.

(6) Collier, Marilyn Jones. "Design, Implementation and Evaluation of Self-Learning Packages for Kitchen Cutting Tools and Kitchen Ranges." Unpublished Master's thesis, Oklahoma State University, 1971.

(7) "Criteria for Assessing Programmed Instructional Materials 1962 Interim Report." Audiovisual Instruction, Vol. 8 (February, 1963), 84-89.

(8) Doerr, Catherine M. Smart Sewing. New York: The Macmillan Company, 1967.

(9) Erwin, Mabel D., and Kinchen, Lila A. Clothing for Moderns, 4th ed. London: The Macmillan Company, 1969.

(10) Finn, James P. "Teaching Machines Audio-Instructional Devices for the Teacher." NEA Journal, Vol. 49 (November, 1960), 41-44.

(11) Gilliam, Betty June. "An Experiment in Teaching Period Furniture Identification With Individual Study Unit." Unpublished Master's thesis, Oklahoma State University, 1970.

(12) Gronlund, Norman E. Constructing Achievement Tests. New Jersey: Prentice-Hall, Inc., 1968.

(13) Herd, Arthur A. "Successful Practices in Individualized Instruction." National Association of Secondary School Principal Bulletin, Vol. 55 (December, 1971), 75-82.

(14) Hug, William E. "Independent Study Evokes Good Student Attitudes." Science Education, Vol. 54 (April-July, 1970), 115-117.

(15) Hughes, Ruth P. "Development and Evaluation of a Curriculum Package on Preparation for a Dual Role." Journal of Home Economics, Vol. 61 (May, 1969), 350-358.

(16) Jones, Richard V. "Learning Activity Packages: An Approach to Individualized Instruction." Journal of Secondary Education, Vol. 43 (April, 1968), 179-184.

(17) Kinghorn, Jon Rye, and Jon G. Paden. "Individualized Instruction Especially Helpful to Non-Conforming Students." Pennsylvania School Journal, Vol. 119 (February, 1971), 204, 205, 235.

(18) O'Donnel, Patrick A. and Charles W. Lavaroni. "Elements of Individualized Instruction." Educational Digest, Vol. 36 (September, 1970), 17-19.

(19) Poorman, Lawrence Eugene. "A Comparative Study of the Effectiveness of a Multi-Media Systems Approach to Harvard Project Physics With Traditional Approaches to Harvard Project Physics." Indiana University, School of Education-Studies in Education. Thesis Abstract Series, (1967), 298, 199.

(20) Shear, Twila and Elizabeth Ray. "Home Economics Learning Packages." Journal of Home Economics, Vol. 61 (December, 1969), 768-770.

(21) Shimonek, Sally Beth. "Self-Paced Learning Packages in Basic Clothing Construction." Unpublished Master's thesis. Oklahoma State University, 1972.

(22) Silverton, Robert E. "Auto-Instructional Devices-Some Theoretical and Practical Consideration." Journal of Higher Education, Vol. 31 (1960), 481-486.

(23) Talbert, Ray L. "A Learning Activity Package-What Is It?" Educational Screen and Audiovisual Guide, Vol. 47 (January, 1968), 16-21.

(24) Teichert, Herman Uwe. "An Experimental Study Using Modified Individualized Instruction in Beginning College German." Dissertation Abstracts International, Vol. 30 (April, 1972), 5539-A.

(25) Tramel, Mary E. "Use Norwald's Idea and Most of Your Teenagers Will Learn at Their Own Pace." American School Board Journal, Vol. 155 (March, 1971), 46, 47.

(26) Van Vlack, Milton. "Curriculum Materials Feature Learning Activity Packages." Educational Screen and Audiovisual Guide, Vol. 48 (October, 1969), 12, 13, 28.

(27) Walters, George Kauffman. "The Effect of Taped Instruction on Achievement in College Office Machines." Dissertation Abstracts International, Vol. 29A (January-February, 1969), 1985A-2832A.

APPENDIX A

DIRECTIONS FOR SEAMS PACKET

1. Read each folder.

2. After completing the packet, try to do the following:

   A. Identify the purpose of each seam.
   B. List specific criteria for determining a properly constructed seam.
   C. Identify steps in making each seam.
   D. Identify appropriate fabric for each seam.
   E. Give an example of the location of each seam within the garment.
   F. Give an example of types of garments for which each seam is appropriate.
   G. Identify the disadvantages of each seam and reasons it is a disadvantage.
   H. Distinguish between each type seam.

3. If you are able to do the above you have accomplished the objective of this packet.

4. If you can NOT do the above, you need to review until you can.

ASSIGNMENT

On the right of this folder are examples of standards for EACH seam you are to hand in. The following informs you of information necessary to complete the assignment on seams.

1. YOU can obtain a group of 7 pages from the attendant. It will contain this assignment sheet, standards for EACH seam, and procedures for each seam you are to hand in.

2. After making each seam, check the standard you feel your seam does NOT meet.

3. Attach the standards to the left of the file folder. Place the standards for the French seam first, the flat-felled seam second, the welt seam third, and the lapped seam fourth. (You may make one of the two types of welt seams given).

4. Attach the seam samples on the right side of the file folder. Place the samples in the following order starting at the top of the file folder:

   1. French seam sample
   2. Flat-felled seam sample
   3. Welt seam sample
   4. Lapped seam sample

CHOICE OF SEAMS

A designer has a choice of many types of seams. Each type of seam has advantages and disadvantages. Some add strength; some create a decorative effect; some improve the total appearance while others combine several qualities. However, each seam is undesirable when used in an inappropriate fabric, placed on the garment in an unsatisfactory position and/or chosen for an inappropriate function. The designer must choose a seam in relation to fabric, design, and function of garment. She must also know the proper steps in making each seam and be able to determine whether the finished seam is properly made.

This group of packets will aid the designer in learning types of seams, fabrics for which each seam is appropriate, locations within the garments where each seam might be used, garments for which each seam is appropriate, procedures for making each seam, and standards for judging the quality of the seam.

Only the most commonly used seams are reviewed in detail, but less commonly used seams are briefly described.

NOTICE:

Specific standards are listed within each folder for the particular seam described in that folder. In addition to those standards, ALL SEAMS should meet the following GENERAL STANDARDS.

GENERAL STANDARDS FOR ALL SEAMS

1. The thread should match the fabric.
2. The tension should be balanced.
3. The stitching should be straight.
4. Regular machine stitching should be used.
5. The seam should be finished on the seam line.
6. The seam should be pressed without creating lips on the right side.
7. After pressing, the seam allowance should not leave an imprint on the right side.
8. The stay stitching should not show on the right side.
9. The seam should lie flat, free of puckers or wrinkles.
10. The seam allowance should be even in width.

FRENCH SEAM

The French seam is one type of enclosed seam which can be used for strength and to prevent raveling; however, the main purpose of French seams is to conceal raw edges on sheer fabric. From the right side of the garment it appears to be a plain seam but is actually a seam within a seam.

DISADVANTAGE

Since the French seam places many thicknesses of fabric within a seam it is undesirable for use on heavy or bulky fabric. French seams are also less successful on curved seams such as armseye or yoke seams; however, if handled carefully they can be successful on some sheer fabrics.

Mock French seams (also known as simulated French and self-bound seams) have the same appearance as the French seam. The Mock French seam is a better choice for curved seams while the self-bound seam can replace French seams on straight seams because it encloses seams as the French seam does. See the folder on "Less Commonly Used Seams" for procedures on the Mock French and self-bound seams.

The FRENCH SEAM is suitable for:

FABRIC: Transparent and lightweight fabrics.

GARMENTS: Garments that are made of sheer fabrics where a wide seam edge would show through unattractively, such as on blouses and lingerie.

GARMENT LOCATIONS:
1. Children's clothes - straight seams such as shoulder and side seams.
2. Lingerie - sleeve underarm seams, armseye and side seams.

Steps in Making a FRENCH SEAM

PROCEDURE 1 **PROCEDURE 2** **PROCEDURES 3-6**

PROCEDURES:

1. Make a plain seam, wrong sides together, stitching a 3/8" seam. This line of stitching determines the width of the finished seam. The larger this seam the narrower the finished seam will be.
2. Trim the seam allowances, holding the two together, to slightly less than ¼".
3. Press the seam open.
4. Fold the right sides of the fabric together with the stitching exactly on the fold line.
5. Press, and pin or baste if necessary.
6. Stitch on the original seam line of the garment to give a seam ¼" wide or slightly narrower.

IDEAL STANDARDS FOR THE FRENCH SEAM

1. After plain seam is made, seam allowances should be trimmed to slightly less than ¼".
2. The finished seam should be free of bulkiness.
3. The finished seam allowance should be narrow, about ¼" in width.
4. The finished seam should be free of ravels on the right side.
5. The French Seam should also meet standards for ALL SEAMS which are included in the packet, "Choice of Seams".

FLAT-FELLED SEAM

A flat-felled seam (also referred to as a felled seam) is durable with no raw edges. The main purpose of flat-felled seams is to add strength to garments. Because two rows of stitching show on the right side of the garment this seam must be stitched with extreme accuracy. Although it is difficult to make a flat-felled seam on a curve, it can be done, if handled carefully, on medium or light weight fabrics.

DISADVANTAGE

It is difficult to get the two lines of stitching perfectly straight.

The FLAT-FELLED SEAM is suitable for:

FABRIC: Light to medium weight fabric.

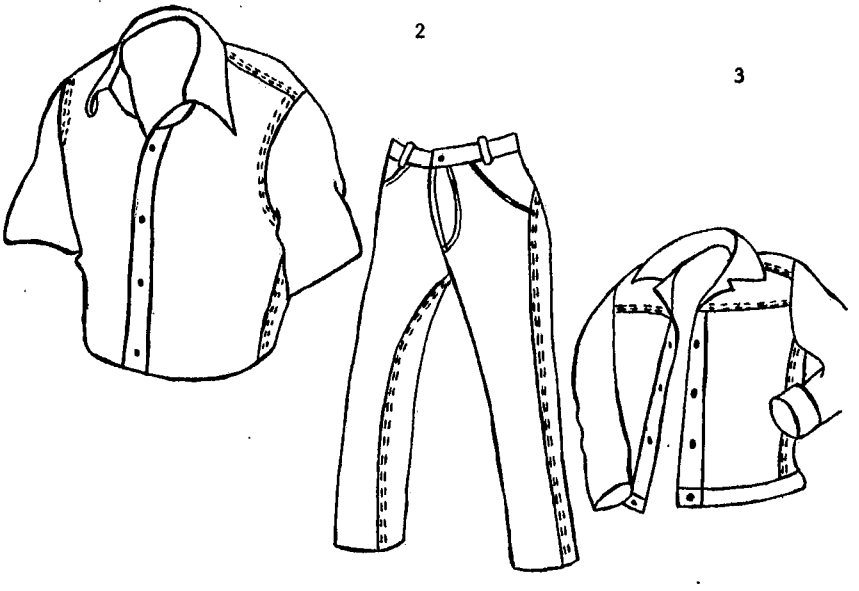
GARMENTS: Garments that must withstand hard wear and repeated launderings such as uniforms, play clothes, and boys' and men's clothing.

GARMENT LOCATIONS:
1. Shirt or blouse - shoulder and side seams, armseye seam.
2. Slacks - in seam and side seams.
3. Jackets - side, shoulder, center back, armseye yokes.

1

2

3



Steps in Making a FLAT-FELLED SEAM

PROCEDURES:

1 & 2 | 3a | 3-b, c, d, e

PROCEDURE:

1. With WRONG sides together, make a plain seam stitching on the seam line.

2. Press seam allowances open to avoid lips, then press both allowances in the same direction as follows:

   Shoulder seams - to front or back
   Yoke seam - downward
   Side seam - to back
   Center back seam - to left

3. Enclose the seam in the following way:

   a. Trim the lower seam allowance to a scant ¼" and the upper seam allowance to ½".

   b. Open the garment on the table, and lay the seam flat.

   c. Turn under the edge of the wider (upper) seam allowance 1/8", folding it over the narrow (lower) seam allowance, and crease fold.

   d. Pin, placing pins perpendicular to the folded edge with heads out for easy removal when stitching.

   e. Stitch very close to the folded edge (1/16" from fold) or closer.

IDEAL STANDARDS FOR A FLAT-FELLED SEAM

1. The two lines of stitching on the right side should be evenly spaced, approximately 3/8" apart.

2. The seam should be free of wrinkles on the underside.

3. The edge stitching should be close to the fold (1/16" or closer).

4. The lap should be in the correct direction, the lower allowance trimmed to ¼", and the upper allowance trimmed to ½". For blouses, trousers, and sleeves, the back under seam allowance should be trimmed so the front laps over the back.

5. The FLAT-FELLED seam should also meet standards for ALL SEAMS included in the folder, "CHOICE OF SEAMS".

WELT SEAM

A welt seam is a plain seam with the addition of top stitching on one side of the seam line. Its purpose is to give strength and a tailored effect. It can be used on straight or curved edges but is easier on straight edges.

A DOUBLE WELT SEAM can be created with the addition of one line of stitching 1/16" from the fold giving the appearance of a flat-felled seam. It also adds additional strength to the seam.

The WELT SEAM is suitable for:

FABRIC: Medium to heavy weight fabric and fabrics that adapt to tailoring such as wool and leather.

GARMENTS: Those that need extra strength for longer wear.

GARMENT LOCATIONS:
1. Coats - French dart lines
2. Jackets - Armseye and yoke
3. Robes - Raglan sleeve
4. Men's coats - center back seam
5. Man or woman's shirts - armseye.

Steps in Making a WELT SEAM on STRAIGHT EDGES

PROCEDURES:

1 2 & 3

PROCEDURE FOR STRAIGHT EDGES:

1. Place right sides together and stitch a plain seam (5/8" seam).

2. Press the seam allowances open to avoid lips, then press both allowances in the same direction as follows:

Shoulder and side seam - to back	Raglan sleeve seam - toward sleeve
French dart line seams - to side	Center back seam - to left
Armseye seam - to bodice	

3. Trim seam allowance next to the fabric to the desired width of the top stitching.

4. Top stitch the desired width from the seam line through the lower seam allowance.

Steps in Making a WELT Seam on CURVED EDGES

PROCEDURES:

1 & 2 3 & 4 5 & 6 7

PROCEDURES: FOR CURVED EDGES OR INTRICATELY SHAPED EDGES OR WHEN WORKING WITH PLAIDS.

1. Staystitch the curved edge 1/8" from seam line.
2. Turn this seam allowance under on the seam line and press.
3. Place fold of curved edge onto the seam line and to the right side of its joining piece, pin fold line in place. Ease curved piece onto straight piece if necessary.
4. Slip-baste the two seam lines together (see Hemming Stitches Packet and slip stitch folder for identifying the slip stitch).
5. Turn to the wrong side and stitch as a plain seam.
6. Trim the seam allowance of the curved piece to ¼". Remove the basting.
7. Top stitch ¼" from the seam line.

IDEAL STANDARDS FOR THE WELT SEAM

1. The top stitching should not be stitched through the side of the seam allowance which has been trimmed.
2. The seam allowance next to the fabric should be trimmed to ¼".
3. The top stitching should catch the 5/8" seam allowance at least 1/8" from the raw edge.
4. The lap should be in the correct direction.
5. The Welt Seam should also meet standards for ALL SEAMS included in folder, "CHOICE OF SEAMS".

Steps in Making a LAPPED SEAM

PROCEDURES:

1-3 4 5 & 6

PROCEDURES:

1. Staystitch the upper layer 1/8" from the seam line in order to reinforce curves and corners which require clipping.
2. Turn the seam allowance under on the seam line and pin at both ends.
3. Press the folded edge. On curved edges, clip to the stayline. On gathered pieces, cut out wedges to make the seam allowance lie flat. Trim to ¼".
4. Mark the seam line on the lower layer with machine basting.
5. Place the fold of the upper layer along the line of machine basting on the lower layer. Ease upper layer onto lower layer; pin.
6. Stitch as close to the folded edge as possible (1/16") to keep the stitching inconspicuous, or stitch further from the edge (near but not beyond ¼") for a decorative effect.

IDEAL STANDARDS FOR A LAPPED SEAM

1. The upper seam should lap over the gathered, tucked, darted or eased seam.
2. The top stitching should be inconspicuous unless a decorative effect is wanted.
3. The gathered, tucked, darted or eased seam should be trimmed to ¼" and/or notched.
4. Staystitching or machine basting should not be visible on the right side.
5. The Lapped Seam should also meet standards for ALL SEAMS which are included in the folder, "Choice of Seams".

LAPPED SEAM

The lapped seam is a variation of a top stitched seam (found in the folder "Less Commonly Used Seams"). The main purpose of a lapped seam is to give a decorative effect to garments. It has one edge pressed under and is attached to the joining piece with top stitching. The distance of the top stitching from the fold (see Procedure #6) distinguishes the lapped seam from a tucked seam (in folder, "Less Commonly Used Seams"). If stitching is approximately 1/16" to 1/8" from the fold the seam is considered a lapped seam. If top stitching is ¼" to ½" from the fold a tucked seam is created.

DISADVANTAGE

The lapped seam is not as strong as the top stitched seam because it has only one row of stitching.

The LAPPED SEAM is suitable for:

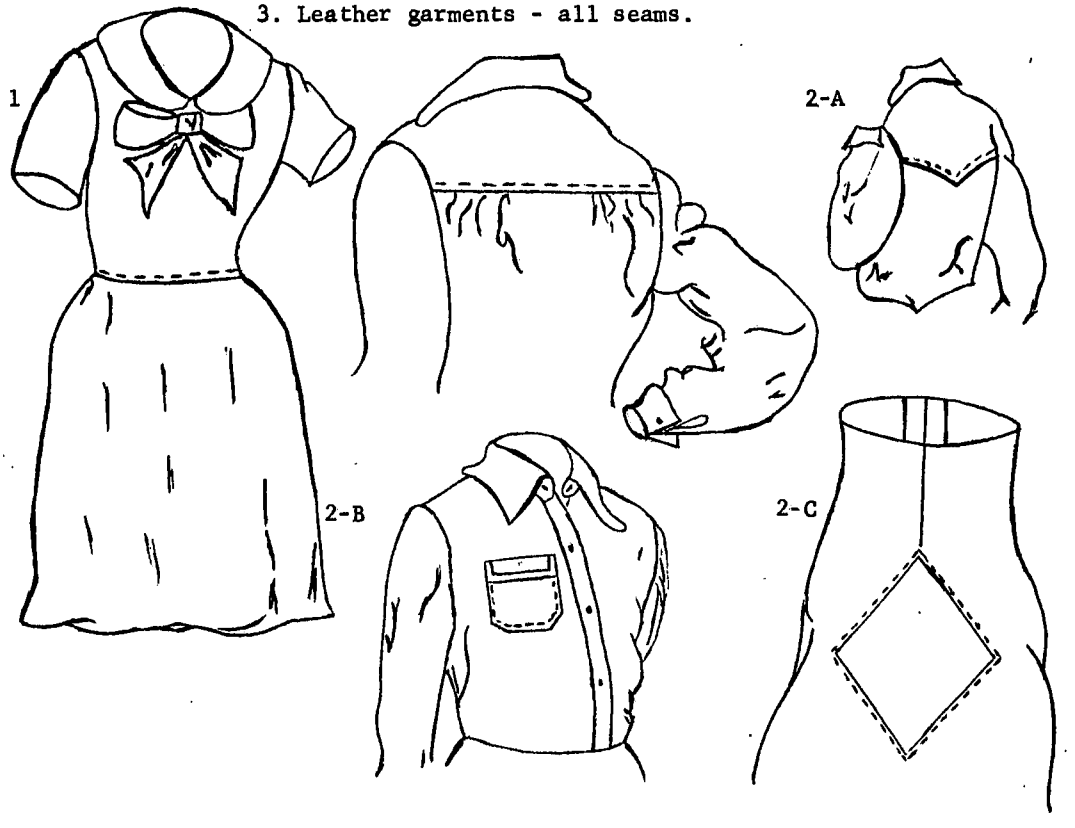
FABRIC: Medium to light weight fabrics and leather.

GARMENTS: Dresses and blouses. Garments not given hard wear.

GARMENT LOCATIONS: 1. Dresses - waistlines, patch pockets.

2. Blouses - A. yoke B. patch pockets C. gussets

3. Leather garments - all seams.

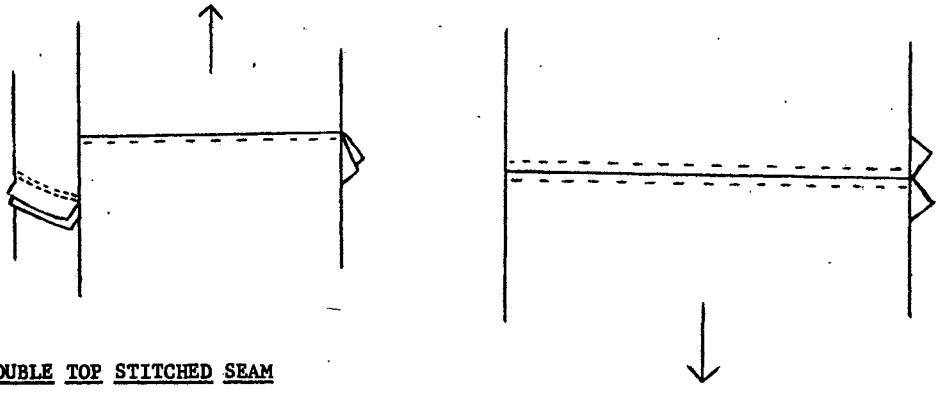


LESS COMMONLY USED SEAMS

This folder includes only the procedures for making the seams that are less commonly used. For further information consult your instructor.

TOP STITCHED SEAM

1. Press a plain stitched seam downward, upward or to one side as indicated on the pattern.
2. Top stitch the desired distance from the seam on the right side through all thicknesses with the desired length of stitch.

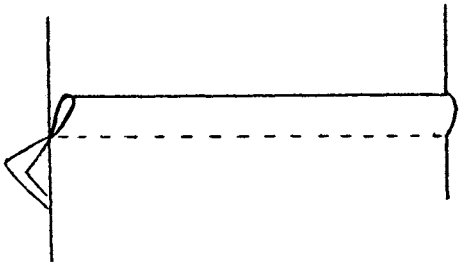


DOUBLE TOP STITCHED SEAM

1. Press a plain stitched seam open.
2. Top stitch the desired distance from each side of the seam on the right side through all thicknesses.

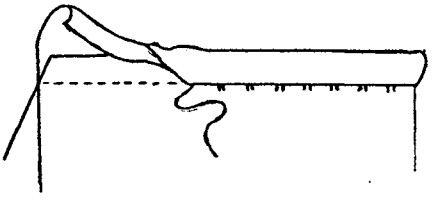
TUCKED SEAM

1. Fold under one edge of the fabric along the seamline and baste.
2. Lap the folded edge over the remaining edge keeping the cut edges even on the inside.
3. Top stitch ¼" to ½" between the folded edge on the outside and the cut edges on the inside, depending on the depth of the tuck desired.



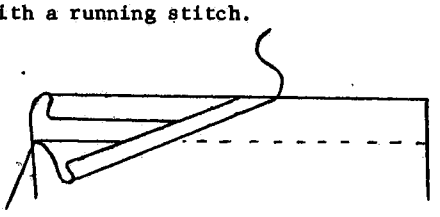
SELF-BOUND SEAM

1. Trim one edge of a plain stitched seam to ¼".
2. Turn under ¼" on the remaining edge and slip-stitch over seam with loose stitches.



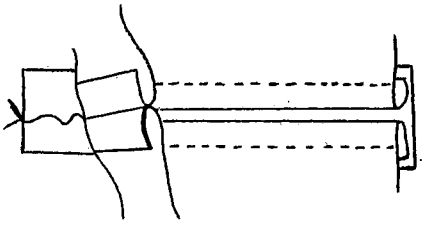
MOCK FRENCH OR SIMULATED FRENCH SEAM

1. Turn edges of a plain stitched seam to inside as shown and sew together with a running stitch.



SLOT SEAM

1. Baste a plain seam, press open.
2. Cut a strip of fabric the length of the seam and the width of the seam allowances.
3. On the inside, pin the right side of the strip over the basted seam keeping cut edges even.
4. On outside, baste to each side of center as indicated on the pattern.
5. Top stitch along the side bastings.
6. Remove all bastings.

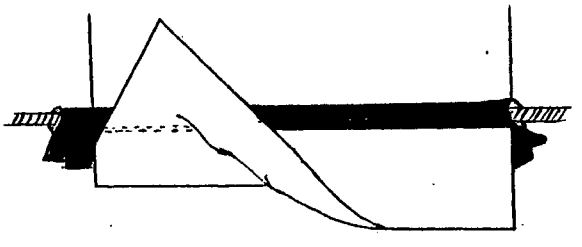


CORDED SEAM

1. PREPARE CORDING AS FOLLOWS:

   A. Cut a strip of bias 1¼" to 2" side depending upon the thickness of cord.
   B. Lay the cord lengthwise on the wrong side of the bias.
   C. Fold the bias over the cord and pin-baste bias edges together.
   D. Stitch close to the cording using the machine cording or zipper foot.

2. Lay the cording with raw edges of bias extending to raw edge of seam allowance, matching stitching on cording to seam line.
3. Stitch close to cord.
4. Pin facing (or the adjoining seam) to covered cord by matching seam lines.
5. Stitch on side where the original stitching line can be seen and followed.
6. Press stitching only. Do not press cord, for it should remain curved.



APPENDIX B

TABLE OF SPECIFICATIONS - PACKET 1

Objectives \ Content	French Seam	Flat-felled Seam	Welt Seam	Lapped Seam	Other Seams	Total Number of Items
1. List specific criteria for determining a properly constructed seam.	1	1	2	1		5
2. Identify the purpose of each seam.	1	1	1			3
3. Identify steps in making each seam.	1			1		2
4. Distinguish between each type of seam.					2	2
5. Identify appropriate fabrics for each seam.	1		1			2
6. Give an example of types of garments for which each seam is appropriate.		1		1		2
7. Give an example of the location of seam within the garment.		1	1			2
8. Identify reasons for the disadvantages of each seam.				1		1
TOTAL NUMBER OF ITEMS	4	4	5	4	2	19

TABLE OF SPECIFICATIONS - PACKET 2

Objectives \ Content	Zigzagged	Pinked & Stitched	Turned & Stitched	Hand Overcast	Hong Kong	Bound	Facing Edge Finish	Total Number of Items
1. List standards which make a finish acceptable.		1						1
2. Recognize appropriate seam finishes in relation to garment use.	1	1		1				3
3. List appropriate seam finishes for a variety of fabrics.	1		1					2
4. List disadvantages of each seam finish.		1		1	1			3
5. Distinguish between seams that require and those that do not require a seam finish.							1	1
6. Distinguish between correctly and incorrectly applied seam finishes.	1	1	1	1	1	1		6
7. Recognize appropriate facing edge finishes for garment function	1		1		1			3
TOTAL NUMBER OF ITEMS	4	4	3	3	3	1	1	19

TABLE OF SPECIFICATIONS - PACKET 3

Objectives \ Content	Hem Preparation	Choice of Hem Edge Finish	Hem in a Lining	Hem in a Pleat	Hem with Fullness	Hem with Seam Binding	Total Number of Items
1. To be able to select the proper hem edge finish in relation to garment function.		1					1
2. To be able to select the proper hem edge finish in relation to garment location.		1					1
3. To be able to select the hem edge finish in relation to fabric.		2					2
4. To be able to recognize properly applied seam binding.						1	1
5. To be able to specify the correct hem width in relation to fabric weight and type of hem.	4						4
6. To be able to recognize properly prepared hems.	1						1
7. To be able to list criteria to be considered when purchasing seam binding.						3	3
8. To be able to recognize sturdy and less sturdy seam finishes		1					1
TOTAL NUMBER OF ITEMS	5	5				4	14

TABLE OF SPECIFICATIONS - PACKET 4

Objectives \ Content	Choice of Hemming Stitches	Catch Stitch	Vertical Stitch	Tailor's Stitch	Slip Stitch	Total Number of Items
1. Distinguish between hem edge finishes which are appropriate and inappropriate for each hemming stitch.		1	1	1	1	4
2. Explain why a hemming stitch is or is not proper for a given hem edge finish.		1	1	1	1	4
3. Recognize standards for specific hemming stitches.		1	1	1	1	4
4. Recognize general standards for hemming stitches.	1					1
5. List fabrics which should have a particular hemming stitch used.			1			2
6. Explain why the stitch is appropriate or inappropriate.					1	1
7. Recognize locations in garments other than where each stitch is appropriate.		1	1	1	1	4
TOTAL NUMBER OF ITEMS	1	4	5	4	5	19

APPENDIX C

QUESTIONNAIRE

1. In your opinion were the packets _____helpful? ___of no use?

   The packets included:
   1. Samples made in fabric
   2. Procedures for making each sample
   3. Standards for each sample
   4. General information concerning each sample

2. In your opinion the fabric samples were: _____Helpful
   _____Hard to understand
   _____Not needed

3. In your opinion the explanation of procedures was:

   _____Helpful in clarifying samples if used when viewing the samples
   _____Clear without looking at the samples
   _____Confusing even when viewing the samples
   _____UNNECESSARY if the samples are available

4. In your opinion the standards were:

   _____Helpful in describing how samples should look when finished
   _____NOT helpful
   _____UNNECESSARY

5. In your opinion the general information was:

   _____Of no help in distinguishing between samples
   _____Interesting but not helpful in understanding how to make each sample
   _____UNNECESSARY

6. In your opinion the packets: _____ could be shortened
   _____ did not include enough information
   _____ were brief and complete

7. In your opinion would the packets be more helpful if a sewing machine were available so that you could make samples as you used the packets?

   _____ Yes _____ No

8. Would you rather: _____have packets available to use when making each sample
   _____ see a demonstration, then make each sample
   _____ make the samples without the packets.

9. What part of the packets did you like most?

10. What part of the packets did you like least?

11. What would you do to improve the packets?

APPENDIX D

STUDENT PRE- AND POST-TEST SCORES ON WRITTEN TEST

Student	Packet 1			Packet 2			Packet 3			Packet 4		
	Pre %	Post %	D*	Pre %	Post %	D*	Pre %	Post %	D*	Pre %	Post %	D*
1	53	74	21	42	63	21	65	59	-6	25	45	20
2	37	79	42	47	74	27	35	94	59	25	65	40
3	47	90	43	42	79	37	71	82	11	25	35	10
4	47	90	43	32	68	36	35	88	53	30	85	55
5	37	90	53	37	79	42	29	59	30	20	75	55
6	53	84	31	32	79	47	35	47	12	35	35	0
7	37	100	63	47	74	27	47	47	0	30	95	65
8	58	74	16	37	53	16	47	71	24	45	60	15
9	16	79	63	32	63	31	29	82	53	5	75	70
10	37	95	58	53	68	15	47	77	30	54	90	36
11	42	95	53	47	79	42	77	82	5	35	80	45
12	47	79	32	37	68	31	59	77	18	45	65	20
13	37	90	53	26	53	27	41	71	30	15	30	15
14	37	90	53	37	74	37	47	71	24	25	80	55
15	37	100	63	53	68	15	59	88	29	20	50	30
16	37	90	53	37	37	0	24	35	11	45	45	0
17	42	63	21	47	42	-5	65	71	6	25	10	-15
18	32	95	63	26	58	32	59	59	0	40	75	32
19	32	100	68	32	63	31	47	65	18	25	55	30
20	47	84	37	42	84	42	35	88	53	50	95	45
21	21	68	47	37	68	31	29	77	48	25	35	10
22	37	79	42	21	74	53	53	53	0	25	60	32
23	39	84	45	37	68	31	53	77	24	25	65	40
24	21	79	58	37	53	16	59	77	18	30	50	20
25	32	95	63	63	79	16	24	71	47	25	80	55
26	47	84	37	47	68	21	29	35	6	25	60	35
27	37	84	47	26	74	48	59	82	23	20	95	75
28	80	79	-1	37	53	16	47	82	35	50	70	20
29	47	90	43	21	68	47	71	77	6	30	30	0
30	26	42	16	42	74	32	59	71	12	35	65	30
31	16	52	36	47	42	-5	47	47	0	25	40	15
32	42	94	52	47	79	32	53	88	35	35	95	60
33	32	79	47	42	79	37	35	94	55	30	70	40
34	63	100	37	31	74	43	35	82	47	30	75	45
35	26	74	48	47	26	-21	29	47	18	35	25	-10
36	68	94	26	57	78	21	88	82	-6	25	60	35
37	47	74	27	31	74	43	41	65	24	45	95	50
38	68	95	27	42	74	32	71	71	0	50	90	40
39	37	84	47	47	68	21	53	88	35	40	80	40
40	32	79	47	37	68	31	71	71	0	25	65	40
41	74	90	16	47	68	21	53	65	12	45	80	35
42	68	95	27	37	79	42	53	77	24	45	85	40
43	42	95	53	26	74	48	53	77	24	35	80	48
44	32	79	47	47	58	11	29	88	59	15	80	65
45	68	74	6	47	68	21	59	82	23	35	45	10
46	42	95	53	47	79	32	71	82	11	35	70	35
47	53	63	10	53	74	21	71	94	23	10	60	50
48	32	90	58	42	58	16	47	71	24	25	60	35
49	63	90	27	47	84	37	65	94	29	45	80	35
50	42	37	-5	42	37	-5	24	29	5	20	25	5

*D = Difference

APPENDIX E

RATINGS OF FIFTY STUDENTS ON SAMPLES ILLUSTRATING SPECIFIC CONSTRUCTION TECHNIQUES

Construction Technique	Constructed correctly, accurately, and neatly		Constructed correctly but needs improvement		Constructed incorrectly		Not attempted	
	Pre %	Post %	Pre %	Post %	Pre %	Post %	Pre %	Post %
SEAMS								
French	0	42	10	58	0	0	90	0
Flat-Felled	2	56	10	44	0	0	88	0
Welt	0	58	0	42	6	0	94	0
Lapped	0	36	0	62	2	0	98	2
SEAM FINISHES								
Zigzagged	0	24	16	76	0	0	84	0
Pinked and Stitched	0	34	16	66	2	0	82	0
Turned and Stitched	0	36	14	64	2	0	84	0
Hand Overcast	0	48	10	52	2	0	88	0
Hong Kong	0	34	0	46	0	20	100	0
Bound	0	16	0	64	2	20	98	0
HEMS								
Finished with Seam Binding	0	40	8	54	48	6	44	0
In a Pleat	0	46	12	36	56	16	34	2
With Fullness	0	12	10	66	66	20	24	2
In a Lining	4	42	18	38	72	16	8	4
HEMMING STITCHES								
Catch	0	52	4	46	6	2	90	0
Vertical	0	40	4	60	8	0	88	0
Tailor's	0	38	2	48	0	22	98	0
Slip	0	40	4	50	6	10	98	0

VITA

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