

USES OF MODERN SEWING MACHINES

by

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USES OF MODERN SEWING MACHINES

CHAPTER I

INTRODUCTION

A marked revival of skill and interest in home sewing was observed during World War II because of difficulty in securing readymade clothing of good quality in suitable sizes and styles and at reasonable prices. It was during the post-war days that sewing machines, which for many years disclosed no basic change in design or performance, became noticeably different, and in some instances, entirely new in function. These machines were readily accepted by the homemakers, and, since that time, have been constantly improved and changed to meet the needs of home sewers.

Statement of the Problem

It was the purpose of this study to investigate the present uses of modern sewing machines by homemakers. Toward this end, specific objectives were set up to learn (1) the types of sewing machines homemakers use; (2) the extent of training that homemakers have had in sewing techniques and in the care and use of sewing machines; (3) the extent and nature of the use of sewing machines and their attachments; and (4) the opinions of homemakers concerning the use of straight-stitch and automatic sewing

machines.

The revolutionary changes made in home sewing machines in recent years have attracted the attention of the home sewer. Just as the invention of the first sewing machine in the nineteenth century brought about changes in the sewing methods and practices of the homemaker, the new automatic features of modern sewing machines, although perhaps not as drastic, present a new challenge to the homemaker. Many of the time-consuming hand techniques such as overcasting, sewing on buttons, hemming, and embroidering may be accomplished with less effort and in a much shorter time through use of automatic sewing machines or automatic attachments. It should be pointed out that improvements have also been made in the straight-stitch machine. With these changes being made, it seemed important to learn the types of sewing machines the homemakers were using or preferred to use.

It was believed that the extent of training that homemakers had in sewing techniques might be related to the use of attachments and the making of fashion and decorative stitches. If the homemakers are doing extensive sewing it would be most helpful to learn the kind of sewing they are doing and how extensively they are using their sewing machines to accomplish their sewing. The findings should

indicate whether the homemakers are using the sewing machine attachments, and, if not, whether there is a need to know how to use the various attachments.

A good sewing machine is a worthwhile investment for the homemaker who sews, yet it may be an expensive one, depending upon how much sewing is done and the type of sewing machine purchased. The opinions of homemakers who sew regularly should reveal how important the various features of the modern sewing machine are to the average homemaker.

It is not yet possible to know just what influence the modern automatic sewing machines will have on the types of sewing machines used in the classroom. Neither is it possible for one to state just what changes will be made in teaching the basic principles of clothing construction as a result of using these new sewing machines. Many new machine sewing techniques have been made possible by modern sewing machines, especially the automatic zigzag machine. It is interesting to note that the first edition of the Unit Method of Sewing included a machine sewing technique which taught blind stitching with a straight-stitch sewing machine.

The findings of this study may indicate some of the special needs and trends in home sewing. An analysis of the homemakers' use of modern sewing machines should help to determine how much instruction in the use and care of modern sewing machines and their attachments should be

included in clothing construction courses.

Importance of the Study

In order to experience the greatest benefit from the ultimate potential of the sewing machine, one must understand the principles involved in the care and repair of the sewing machine and in the use of its attachments. A study by Ledbetter (5, p.69) on "Home Sewing Practices of Married Graduates, School of Home Economics, Oregon State College," reported that over 90 percent expressed a need for instruction in the use of sewing machine attachments. Frazier (3, p.34), in a similar study of University of Utah graduates, revealed much the same findings pertaining to the need for instruction in the use of the sewing machine and its attachments. Furthermore, Frazier pointed out that 71 percent desired additional training in care and repair of the sewing machine. Ledbetter also stated that it would seem feasible to incorporate instruction on the use of sewing machine attachments in clothing construction classes. In this study, an attempt was made to determine the most practical uses of straight-stitch and zigzag machines with the specific objective in mind to incorporate the basic principles of the general use and care of these machines considered most important to the homemakers in construction classes.

Definition of Terms Used

Modern Sewing Machines. All of the sewing machines in this study, excluding two, were purchased within the past twenty years; therefore, they could be classified as relatively modern. These machines were primarily the lock-stitch type, in which the upper or needle thread passes around the lower or bobbin thread, and the threads are tightened (locked) together in the material being stitched.

Straight-stitch Machines. The term "straight stitch" describes the types which, without the aid of an attachment, will sew only a straight seam, forward and reverse. By employing attachments, it is possible to make buttonholes, embroidery, and zigzag stitches.

Zigzag Machines. Basically, the stitch formed by a zigzag machine is the same lock stitch as is produced in straight sewing; however, in addition, the needle bar and needle swing alternately to the right and to the left of the normal position; thus each stitch moves sideways as well as forward. The two basic machines of this type are commonly referred to as semiautomatic zigzag and automatic zigzag. The former requires manual control, which demands much practice in order to operate the desired changes of the needle position successfully, and is being rapidly replaced by the latter, which produces the stitch automatically.

Cams, Discs, Wheels. Cams, discs, and wheels are devices used on the automatic zigzag machines to regulate the movement of the needle automatically. Depending upon the make of the machine, the cams or discs may be built in with the mechanism of the machine or added as desired. Additional cams and discs may be purchased, and several thousand stitch combinations are possible.

CHAPTER II

REVIEW OF LITERATURE

The invention of the sewing machine replaced the drudgery of the needle, that, before that time, was no myth to the homemakers. As much of a contrast as was then observed in sewing, through changing from a hand needle to the new invention, may be noted by the modern home sewer when comparing the early sewing machines to the latest models. The former were capable of making only 200 stitches per minute, while in the same length of time the latter would sew 1,500 stitches. (14, p.627) The homemaker is on the threshold of a new era in sewing, which is believed by some to be largely a result of two factors: changes made in the performance of home machines and, equally responsible, the new trends in sewing techniques. The relationship of these factors to the study will be presented following a brief background in the history of the development of the sewing machine.

Brief History of the Development of the Sewing Machine

Historical literature informs us that as early as 1750 men attempted to devise a machine that would sew. It was not until almost 100 years later, however, that the first practical sewing machine to come into general use

was patented by Elias Howe. Although Howe has been credited with having invented the sewing machine, it should be pointed out that many had made worthwhile contributions to this marvelous machine. Some of these machines developed earlier were definite forerunners to the first successful sewing device later patented by Howe.

The earliest recorded effort of an invention to take the place of the hand needle dates back to June 24, 1750. (2, p.11) A patent for an embroidering machine was granted to Charles F. Weisenthal, a London mechanic of German origin. Many of the features of Weisenthal's machine were distinctly specified in a patent later secured by Thomas Saint, also of England, on July 17, 1790. Saint's machine, apparently intended principally for leather work, is said to have embodied many of the features of the modern sewing machine.

In 1830 a French tailor named Barthelemy Thimmonier devised a very successful chain-stitch machine, the first so designed for the sole purpose of making garments. (2, p.10) By the end of the following year Thimmonier had eighty of his wooden machines operating to make uniforms for the French army. His machines and models were twice destroyed by angry mobs of tailors who considered this sewing device to be a threat to their livelihood. Disregarding these discouragements, Thimmonier continued

his toilsome efforts to improve his time- and labor-saving invention. Although he was given credit for having introduced the first presser foot, Thimmonier gained little recognition for the contribution he made toward the development of the sewing machine.

Henry Lye is listed in the records as the first American to be given a patent for a sewing machine. (2, p.11) Little is known about this first American sewing machine as all of the particulars about his invention were destroyed by fire in 1830. Prior to that time, in 1818, a machine capable of making a back stitch was invented by Rev. John Adams, Dodge, Vermont, but his machine was neither patented nor manufactured. (14, p.627) Sometime between 1832 and 1834 Walter Hunt of New York made the first sewing machine with a lock stitch and also developed a needle with the eye near the point, both of which are essential features found on present-day models. Apparently Hunt did not anticipate the need of making this invention legally his; he made no effort to secure a patent for his ideas until after the success of other machines based on these two essential devices was established. It was not until 1853, seven years following Howe, that Hunt applied for a patent. He was denied this distinction on the grounds of abandonment.

Possibly unaware of Hunt's invention, Elias Howe

began attempts to build a machine in 1843. Two years later he gave a public demonstration to show the superiority of his invention over the method of hand sewing. As a further test to prove the worthwhileness of his machine, Howe extended a challenge that he could do as much sewing in a given length of time as five expert seamstresses working together could accomplish by hand. (2, p.12) He successfully completed the garments and in much less time than it took the five women seamstresses. On September 10, 1846, Howe was given a patent for a machine which since has been considered the first successful lock-stitch machine, yet it is evident that his invention embodied the two essential features noted on the machine that Hunt had developed several years before. Howe's first machine was hand operated, and, furthermore, could stitch only a few inches of seam in one operation, this distance being determined by the length of the mechanical device used for the feed, known as the "baster-plate."

During the years immediately following Howe's invention, several other inventors were working individually and almost simultaneously to perfect a device suitable for sewing. (14, p.628) Allen B. Wilson began experiments to develop a machine in 1847, and by 1850 he patented a machine, the first to incorporate an automatic

feed movement. This feed, which in four years' time was greatly improved and then patented as a "four-motion feed," solved the problem of a practical device for moving the material as it was stitched. The principle of the four-motion feed is the same feed motion employed on all makes of machines today.

On August 12, 1851, Isaac Merritt Singer patented a sewing machine with a feed movement which would carry the cloth forward between stitches and without injury to the fabric. His feed movement also permitted the cloth to be turned in any direction while sewing, a feature previously unknown on the other machines. The presser foot could adjust itself automatically to any thickness of cloth, thus making it possible to stitch over seams, an important feature possessed by no other sewing machine up to that time. Other outstanding contributions made by Singer toward the improvement of sewing machines include the following: 14 patents covering improvements on the lock-stitch type of machine, a patent for a chain machine, one for an oscillating shuttle type, a tension device, an embroiderer, a binder, a ruffler, and a tucker. (2, p.42) The binder, ruffler, and tucker are considered standard equipment for all Singer machines today.

In the same year, 1851, William D. Grover and Baker patented a two-thread chain-stitch machine eliminating

both shuttle and bobbin, thus making it possible for the under thread, as well as the upper, to be taken from commercial spools.

The first machines were designed primarily for factory use, and, as a result, it is in this field that these machines made their greatest impact and reached a high level of technological development.

Home sewing machines have been improved steadily since the early beginnings, and each new development has contributed greatly to the reduction of time and energy expended in home sewing. The treadle machine of 1890, which replaced the original hand-operated type, was soon superseded by the electrically powered machine. The first electric machine for home use was placed on the market in 1899; however, it was not until 1920 that this machine came into widespread use. (14, p.627) Through the years the sewing machine has proved its worth as an invaluable time and labor saver, and it is found in nearly every home.

Modern Sewing Machines

The modern home sewing machines, classified as straight-stitch and zigzag, are designed to meet the homemaker's needs in sewing. The straight-stitch sewing machine is preferred by the woman whose chief interest

is fine dressmaking and tailoring and functional sewing. The more versatile automatic zigzag type, capable of producing machine-made decorative stitches automatically, is of special interest to the home sewer who enjoys specialty sewing as decorative stitching and embroidery, the making of home furnishings, place mats, and napkins.

The straight-stitch machine, although primarily utilitarian in its function, is satisfactory for the many homemakers who use their machines only for occasional plain sewing, for patching, mending, or darning, or for the making of garments. This type of machine is simple to operate and requires very few adjustments for the different fabrics. It should be pointed out that the straight-stitch machine is not limited entirely to plain sewing, for most of these machines may be fitted with attachments which make it possible to make a certain amount of embroidery, decorative stitches, and a variety of fancy articles for the home. The straight-stitch machine, which continues to lead in sales, is constantly being improved so that it is easily and conveniently operated.

Zigzag machines were first marketed in this country in 1947 by a European manufacturer. (9, p.5) The introduction of these foreign-made sewing machines to the American market has helped to create a new interest in home sewing. With the zigzag sewing machine, a lock

stitch is formed by the spool and bobbin thread, just as in the straight-stitch machine. As the needle sews alternately from side to side, each stitch moves to the right and left of the normal position in addition to moving forward. This feature makes it possible to make buttonholes and to do blind hemming, overcasting, applique, decorative stitching, darning, patching, embroidery, monogramming and much more without the aid of special attachments.

The width of the zigzag can be varied by regulating a control lever. The needle position may be adjusted in as many as three positions: right, center, and left. In addition, twin needles make it possible to stitch parallel rows of straight and zigzag stitches, thus achieving a decorative effect. Another special feature embodied in some of these machines is an open arm over which sleeves or socks may be slipped and thus sewed as easily as flat material.

When zigzag machines were first introduced in this country, the mechanical production of embroidery was a novelty. The first machines which were sold required a good deal of practice and skill. It was not a simple task to zig and zag to keep a uniform repetition of stitch patterns. Special attachments were necessary on the early models to manipulate the control of the needle in regular rhythm. With the recent addition of automatic

controls, through the use of cams, discs, or wheels to insure uniform repetition of the chosen design, this feature of machine embroidery has been given additional appeal.

The selection of a zigzag or straight-stitch machine should be guided by the needs it will be expected to fulfill. If functional sewing is most important, then the straight-stitch machine will be adequate. However, if decorative stitching, speed, and automatism are the major requirements, then the zigzag will be the best choice.

Relation of New Construction Methods to Use of Sewing Machines

In furthering the interest in the use of sewing machines, the new construction techniques emphasized extensive use of the machine to replace time-consuming handwork. Several forces have been behind the movement to improve methods in home sewing. Homemakers were looking for techniques to replace the countless hours often spent in doing handwork. Gilbert, in her study, "Improving Methods for Teaching Clothing to Eighth Grade Girls," pointed out that professional people became concerned about the new trend in clothing construction techniques and began working together to find better ways of meeting this challenge. (4, p.7) At the June, 1948, meeting of the American Home Economics Association, leading home economists emphasized the need for women and girls to

employ faster methods when sewing. Mrs. Edna Bryte Bishop has conducted workshops presenting simplified methods of construction. Her techniques emphasize the maximum use of the sewing machine and a minimum of hand-work. The Bishop method of sewing has been printed in pamphlet form.

The Iowa State Home Economics Association, inspired by the challenge voiced during the 1948 meeting of the national association, immediately began a research study of sewing methods. The concern of this group was to modernize construction by developing new techniques and procedures. Unit Method of Sewing, first printed in 1950 and revised in 1955, was the cooperative effort of the Iowa Association. (15)

CHAPTER III

PROCEDURE

Participants Included in the Study

This study includes (1) mothers of homemaking students in Nampa High School, West Junior High, Central Junior High, and College High School, all of which are located in Nampa, Idaho; (2) homemakers of Nampa not having students in homemaking classes; and (3) home economics graduates of Northwest Nazarene College, Nampa, Idaho. The mothers of homemaking students were selected because it was believed that they would be representative of home sewers with varied experience in the use of the sewing machine. To assure a broader sampling, other Nampa homemakers owning sewing machines were requested to cooperate in this study. Furthermore, in order to obtain views of some home sewers who have received college instruction in sewing, home economics graduates of Northwest Nazarene College were included in the group of cooperators.

The names, addresses, and telephone numbers of 200 homemakers were obtained through the students in the home economics classes in the Nampa schools. Questionnaires, accompanied by a letter explaining the purpose of the study, were mailed to these homemakers. Questionnaires were given to 30 homemakers who did not have students in

the homemaking classes of these schools. Thirty-six questionnaires were mailed to home economics graduates of Northwest Nazarene College.

The questionnaire included general information questions concerning the types of sewing machines the homemakers use, the training the homemakers had in the use of the sewing machines, the extent and nature of the use of the sewing machines and their attachments, and the homemakers' opinions of different features of modern sewing machines. The Appendix contains a sample of the questionnaire used in this study.

Questionnaires Returned

A period of six weeks elapsed between the time of the first mailing of the questionnaires and the date when the last questionnaire was returned. Many personal telephone calls were made to the homemakers who lived in the Nampa area in an effort to follow through with as many of the questionnaires as possible. It was revealed through the telephone calls that several homemakers did not receive the questionnaire, or else the questionnaire had been misplaced. Three weeks following the first mailing date it was necessary to mail a second questionnaire to these homemakers who were willing to cooperate in the study.

Of the 200 questionnaires mailed to the mothers of

homemaking students 75 (37.4 percent) were returned. Because these homemakers lived in the area of Nampa, it was possible to follow up these particular questionnaires by telephone. It was learned that several homemakers did not receive the questionnaire, many felt that they did not sew enough to answer the questionnaires adequately, and others frankly admitted that they were not interested in cooperating in the study. In a few instances the mother of the homemaking student was deceased, and, in other cases, the girl was living with her father. One questionnaire not included in the total number returned had been filled in by a seventeen-year-old homemaking student.

The second group of homemakers returned 26 (86.6 percent) of the questionnaires given out. Nine of this number were discarded because insufficient information was given.

In the third group, of the 36 mailed to the home economics graduates, 15 (41.4 percent) were returned.

The total number of questionnaires sent out was 266; of this number 117 (43.9 percent) were returned. Ten were discarded, leaving a total of 107 questionnaires to be used in this study.

Although a greater return would have been desirable, it is believed that the data indicate needed instruction in clothing construction in the locality studied.

CHAPTER IV

FINDINGS

There are numerous manufacturers of sewing machines, and each manufacturing company makes more than one model, yet all the lock-stitch home sewing machines produced by these companies are similar in construction and operation. The multiplicity of brands and models available makes it possible for the home sewer to choose the particular style best suited to her needs.

Sewing Machines Owned by Homemakers

One specific objective of this study was to ascertain the types of sewing machines the homemakers were using and/or preferred to use. The term "type of sewing machines used" here refers to the straight-stitch and zigzag sewing machines, not machines of particular manufacturing companies. While it would not be possible in this study to draw any accurate conclusions of a trend toward preference for one type of machine above the other, the data given in Table I reveal that 9 percent of the homemakers have purchased zigzag machines since 1950. In discussing points to consider when selecting a sewing machine, Florence Stassen remarked that "with increasing popularity, zigzag sewing machines might in time outmode

the straight-stitch models." (13, p.47) The opinions of the participants concerning the straight-stitch and zigzag machines will be presented at the close of this chapter.

The homemakers were asked to give the following information pertaining to the sewing machines: the make, whether portable or standard head, whether a straight-stitch or zigzag machine. Eighteen different sewing machine companies were represented in this study. One prominent sewing machine manufacturing company was represented by 51 percent of the total number of machines. The next four leading companies combined composed an additional 25 percent of the total number.

Straight-stitch machines were owned by 90 percent of the participants. Of these straight-stitch machines, 19 (17.7 percent) had portable heads. Although the zigzag sewing machines did not appear on the market until 1947, 10 percent of the homemakers owned this type of machine.

When Sewing Machines Were Purchased

Some owners expect sewing machines to last a lifetime. Mrs. William M. Allison, in a letter dated 1911, stated that her machine "had stitched many a hundred miles of seam, and is still in good working order." The earliest model of this type of machine appeared on the market in 1859. (11, p.70)

TABLE I

YEARS IN WHICH 107 SEWING MACHINES WERE PURCHASED

Year of Purchase	Straight-Stitch Machines			Zigzag Machines		
	<u>Number</u>	<u>Percent</u>		<u>Number</u>	<u>Percent</u>	
		of All Machines	of Straight- Stitch Machines		of All Machines	of Straight- Stitch Machines
1926-30	1	0.9	1.0	---	---	---
1931-35	1	0.9	1.0	---	---	---
1936-40	18	16.8	18.6	---	---	---
1941-45	8	7.5	8.2	---	---	---
1946-50	25	23.4	25.8	1	0.9	10.0
1951-56	34	31.8	35.1	9	8.4	90.0
No date given	10	9.3	10.3	---	---	---
TOTAL	97	90.6	100.0	10	9.3	100.0

The sewing machines owned by the cooperators in this study were relatively modern, as the earliest date given for the purchasing of a sewing machine was 1926. Approximately 18 percent of the machines were purchased prior to the World War II years. During the five-year period following this war, there was a definite increase in the number of machines purchased. In fact, 60 percent of the machines owned by the cooperators were bought since 1945. Further observation reveals that 40 percent of the 107 sewing machines were less than six years old. Of this 40 percent of the machines, nearly one-fourth were the zigzag type.

It is interesting to note that 31 of the homemakers indicated plans for purchasing a new sewing machine in the future. Of these 31 homemakers, 16 specifically desired a new machine with automatic features. The higher cost of the zigzag machine was given as a reason for not owning this type of machine by several participants. Generally, comments were made for and against the purchase of a zigzag machine. One homemaker perhaps expressed the feelings of many when she stated, "For my use I do not feel the extra cost is justified in the purchase of a zigzag machine."

On the contrary, another homemaker stated, "I consider my zigzag sewing machine one of the three most appreciated helps in homemaking -- the other two being

the automatic washer and Electrolux."

Sources of Instruction

The participants indicated the amount of sewing instruction each had received by checking one or more of the eight sources of instruction listed on the questionnaire. While one participant indicated that she had received instruction from all eight sources, 17 (15.9 percent) had not received any instruction in sewing.

(Table II) One homemaker had obtained instruction in sewing techniques through a correspondence course. The Agricultural Extension Service was added as another source of instruction by one of the homemakers.

A large portion of the participants (43 percent) learned at least a part or all of their sewing skill in the home. Some had received help from their mothers, while a few secured sewing instruction from friends. Others were left to learn through the trial-and-error method.

It was surprising to learn that only 13 (12.1 percent) obtained training through 4-H Clubs. An interesting comment given pertaining to the value of 4-H instruction was the following: "I learned quite a little from my girl's 4-H classes."

The source of formal school instruction listed on the questionnaires were junior high school, senior high

TABLE II

SOURCES OF INSTRUCTION FOR 107 HOMEMAKERS

Source of Instruction	Number*	Percent
None	17	15.9
Home	46	43.0
4-H	13	12.1
Junior High	21	19.6
Senior High	53	49.5
College	22	20.6
Adult Class	15	14.0
Dealer's Lessons	21	19.6
Correspondence Course	1	0.9

*There is an overlapping of responses, as many checked one or more sources of instruction.

school, and college. The percentages of participants receiving training from each of these sources were 19.6, 49.5, and 20.6 percent respectively.

Adult classes are valuable for refresher courses as well as for giving basic principles in sewing techniques. The low number of homemakers taking adult classes in sewing may indicate that more of these courses should be made available to homemakers in the area around Nampa. One homemaker suggested, "Most people could get more use from their machines if they had a refresher course occasionally."

Lessons offered by the various sewing machine companies in the use and care of sewing machines are invaluable in acquainting the purchasers with the maximum possibilities of the machine. The writer was pleased to learn that 21 of the homemakers had taken these lessons offered by the dealers. It was interesting to note that almost 100 percent of the owners of the zigzag sewing machines had taken these lessons. Since the zigzag sewing machines are considered more complicated to operate, it is possible that the owners of these machines found it necessary to take this special training.

Frequency of Use of Sewing Machines

The writer was surprised to learn the high

frequency of use of sewing machines by the homemakers. As no special effort was made to engage cooperators who had a special interest in sewing, the reports reveal that the homemakers in this study used the sewing machine frequently. An insignificant number used the machines only once a month, while 28 percent used the machine less than once a month. (Table III) Thirty-two homemakers reported the use of the machine as often as once a day. The remaining number of homemakers, who comprised 39.3 percent, used the machine at least once a week.

Types of Clothes Constructed by Homemakers

In this study the participants were not asked to give reasons for sewing but to check the various types of garments they had made. In a general tabulation of sewing done for the different members of the family, it was found that the greatest amount of sewing was done for girls. (Table IV) Nearly 100 percent (104 of 107) of the homemakers indicated they had made clothing for girls. The second highest amount of sewing was in the category of women's clothing. The frequency order of the remaining groups is as follows: infants, 78 (72.9 percent); boys, 67 (62.6 percent); men, 36 (33.6 percent). The analysis of these figures discloses that twice as many

homemakers sewed for girls and women than for boys and men.

TABLE III
FREQUENCY OF USE OF SEWING MACHINES

Frequency of Use	Number of Women	Percent
Once a day	32	29.9
Once a week	42	39.3
Once a month	3	2.8
Occasionally	30	28.0
Total	107	100.0

TABLE IV
PEOPLE FOR WHOM 107 HOMEMAKERS CONSTRUCTED CLOTHING

People for Whom Constructed	Range of Ages of Subjects	Homemakers Making Garments	
		Number	Percent
Infants	-	78	72.9
Girls	1 - 20	104	97.2
Boys	1 - 20	67	62.6
Women	21 - 58	92	85.9
Men	-	36	33.6

In determining how extensively the homemakers were using their sewing machines, an attempt was made to know the number of homemakers constructing the various garments for the family. Shirts were the type of garment most frequently made for the boys and men. (Table V) This particular study reveals that, excluding the shirt, a very limited number of homemakers constructed clothing for men. Only 13 of the homemakers had constructed a man's jacket, and a much smaller number had made a man's coat. Only one homemaker had made slacks for men, while none had attempted to make men's suits.

It appears that the participants found it more worthwhile to construct boys' garments than men's. Thirty-six of the homemakers had made jackets for boys, and 35 had made slacks. Coats and suits were made by 26 and 18 of the participants, respectively.

In most instances there was a close relationship between the number of homemakers constructing garments for girls and those constructing the same type of garment for women. Dresses were most frequently made in each group. Dresses for girls were made by 103 (96.3 percent) compared to 91 (85.0 percent) made for women. Skirts and blouses followed closely in the total number; 95 participants made skirts and blouses for girls, and 80 participants made these same types of garments for women.

TABLE V
GARMENTS CONSTRUCTED BY 107 HOMEMAKERS

Garments	Girls'		Women's		Boys'		Men's	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Shirts	--	--	--	--	62	57.9	32	29.9
Slacks	--	--	--	--	35	32.7	1	0.9
Suits	48	44.9	50	46.7	18	16.8	--	--
Coats	50	46.7	37	34.6	26	24.3	4	3.7
Jackets	49	45.8	44	41.1	36	33.6	13	12.1
Blouses	95	88.8	78	72.9	--	--	--	--
Skirts	94	87.9	80	74.8	--	--	--	--
Dresses	103	96.3	91	85.0	--	--	--	--
Slips	79	73.8	47	43.9	--	--	--	--

The largest difference in the number of participants making the same type of garment for girls and women was noted in the number making slips. Seventy-nine women made slips for girls, while 47 homemakers made slips for women. Only suits were made by greater numbers for women than for girls. Jackets for girls were made by 49 co-operators, and a slightly lower number, 45, were made for women. Coats for girls were made by 50 of the participants, and 37 made coats for women.

General Sewing Methods Practiced by Homemakers

Many homemakers use their machines only for occasional plain sewing, for patching, mending, or darning. Whether the homemaker makes clothes or not, a sewing machine conveniently nearby is most important for mending rips and tears. By replacing broken stitches, reinforcing places that have worn thin, filling in holes, and joining tears, one may aid in prolonging the life of worn, but still valuable articles. Mary Brooks Picken states, "Mending will not only save time and money, but will protect good merchandise -- rightfully a responsibility of every homemaker everywhere." (7, p.244)

It is apparent in this study that the sewing machines are readily used for patching and making alterations, as 79.4 percent employed machines for these

purposes. (Table VI) Sixty-seven of the participants finished seams by machines.

It is not surprising that a smaller number of the participants used the sewing machines for overcasting, sewing on hooks, eyes, and buttons. These sewing techniques require a zigzag machine or a special attachment. As there were ten owners of the zigzag machines and five who owned the special zigzag attachment, approximately 75 percent of this number practiced these techniques.

Blind stitching may be accomplished on both types of sewing machines. The low number of homemakers using their machines for blind stitching possibly indicates that there was insufficient knowledge as to how to do blind stitching by machine. Frazier stated, "Other graduates felt a need for more training in mending and repair. They pointed out that much of a homemaker's time is spent on these activities and if they knew proper procedures the time spent would be less." (3, p.23) Although 48.6 percent of the homemakers in this study used the machine for darning, it is believed by the writer that the number should be nearer 100 percent.

Household Articles Made by the Homemakers

One purpose of the study was to determine the extent to which homemakers were using sewing machines to

TABLE VI

GENERAL SEWING METHODS PRACTICED BY 107 HOMEMAKERS

<u>Method</u>	<u>Number</u>	<u>Percent</u>
Patching	85	79.4
Alterations	85	79.4
Seam Finishing	67	62.6
Darning	52	48.6
Blind Stitching	20	18.7
Overcasting	11	10.3
Sewing on Hooks and Eyes	11	10.3
Sewing on Buttons	8	7.5

construct various household articles. Curtains, draperies, and quilts were the household articles most frequently made for the home. (Table VII) Less than 25 percent of the homemakers made bedspreads or rugs or did upholstering.

Sewing Machine Attachments

Evelyn A. Mansfield, in her book Clothing Construction (6, p.26), wrote, "Homemakers who are especially interested in household sewing and in making attractive play clothes and clothes for their children will find that the use of machine attachments opens up all sorts of possibilities for achieving professional effects without spending a great amount of time or effort." In part, the full possibilities of the sewing machine are not realized because too few understand how to use the attachments. The comment of one of the homemakers pertaining to sewing machine attachments was probably representative of the feelings of many. In her response she stated: "To this question I can only answer I have a small box of attachments which were with the machine when I purchased it, but I have never understood what they were nor how to use them."

Ledbetter, in her study on "Home Sewing Practices of Married Students, School of Home Economics, Oregon

State College," stated that it would seem feasible to incorporate instruction on the use of sewing machine attachments in clothing construction classes. (5, p.69)

The findings of the study concerning the ownership, use and desired instruction in the use of sewing machine attachments disclose that the standard attachments, which include the ruffler, gatherer, binder, foot hemmer, tucker, and edge stitcher, were owned by less than 60 percent of the homemakers. (Table VIII) Generally, these attachments were listed as the ones most frequently used. A greater percentage of homemakers desired instruction in the use of these standard attachments than other types of attachments.

The writer was surprised to learn that fewer than one-half (42) of the homemakers owned a buttonhole attachment, while only 36 used the attachment. One homemaker suggested, "The buttonhole attachment is a most practical feature and should be included in machine accessories." The same number of homemakers owned and used the zipper attachments as owned and used the buttonholer.

The additional attachments for the straight-stitch machines were owned and used less frequently than the standard attachments. In view of the fact that the walking pressure foot is a newly developed sewing aid, it was of particular interest to learn that it was owned by 11 and used by nine of the homemakers. The automatic

TABLE VII

HOUSEHOLD ARTICLES CONSTRUCTED BY 107 HOMEMAKERS

Household Article	<u>Homemakers</u>	
	Number*	Percent
Curtains	83	77.6
Draperies	59	55.1
Quilts	46	43.0
Bedspreads	25	23.4
Upholstered Pieces	25	23.4
Rugs	14	13.1

*There is an overlapping of responses, as many checked one or more household articles.

TABLE VIII

OWNERSHIP, USE, AND DESIRED INSTRUCTION
IN THE USE OF SEWING MACHINE ATTACHMENTS
(STRAIGHT-STITCH MACHINES)*

Attachment	Owns Attachment		Uses Attachment		Desires Instruction	
	Num-ber	Per-cent	Num-ber	Per-cent	Num-ber	Per-cent
Ruffler	70	72.2	32	33.0	16	16.4
Gatherer	62	63.9	38	39.1	14	14.4
Binder	59	60.8	16	16.4	20	20.6
Foot Hemmer	60	61.9	25	25.8	17	17.5
Zipper Foot	43	44.3	36	38.1	8	8.2
Edge Stitcher	32	33.0	10	10.3	12	12.3
Seam Gauge	30	30.9	19	19.6	6	6.2
Corder Foot	21	21.6	12	12.3	15	15.5
Embroidery Foot	7	7.2	4	4.1	9	9.3
Buttonholer	42	43.3	36	38.1	14	14.4
Adjustable Hemmer	40	41.3	15	15.5	11	11.4
Tucker	36	37.1	15	15.5	10	10.3
Quilter	24	24.7	7	7.2	10	10.3
Feed Cover Plate	21	21.6	15	15.5	3	3.1
Blind Stitcher	17	17.5	7	7.2	11	11.4
Braiding Presser Foot	14	14.4	8	8.2	5	5.2
Walking Presser Foot	11	11.4	9	9.3	4	4.1
Blind Stitch Braider	9	9.3	1	1.1	8	8.2
Shirring Plate	10	10.3	5	5.2	6	6.2
Darning Foot	6	6.2	4	4.1	7	7.2
Flange Hemmer	6	6.2	2	2.1	4	4.1
Automatic Zigzagger	5	5.2	4	4.2	12	12.3
Underbraider	2	2.1	1	1.1	2	2.1
Button Foot	--	--	--	--	--	--
Satin Stitch Foot	--	--	--	--	--	--
Blind Stitch Foot	--	--	--	--	--	--

*Total straight-stitch machines, 97.

TABLE VIII
(Part 2)

OWNERSHIP, USE, AND DESIRED INSTRUCTION
IN THE USE OF SEWING MACHINE ATTACHMENTS
(ZIGZAG MACHINES)*

Attachment	Owns Attachment		Uses Attachment	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Ruffler	7	70.0	7	70.0
Gatherer	6	60.0	5	50.0
Binder	5	50.0	5	50.0
Foot Hemmer	7	70.0	7	70.0
Zipper Foot	8	80.0	8	80.0
Edge Stitcher	3	30.0	3	30.0
Seam Gauge	3	30.0	3	30.0
Corder Foot	5	50.0	5	50.0
Embroidery Foot	4	40.0	4	40.0
Button Foot	6	60.0	5	50.0
Satin Stitch Foot	5	50.0	5	50.0
Blind Stitch Foot	3	30.0	3	30.0

*Total zigzag machines, 10.

zigzagger, the most recently developed attachment listed in the questionnaire, was owned by five of the homemakers.

In comparing the use of the attachments by the owners of zigzag machines to the use of the attachments by the owners of straight-stitch machines, it was found that a much higher percentage of attachments was used by the former than by the latter. The owners of zigzag sewing machines may have been more familiar with what their sewing machines could do, for, as previously pointed out, 70 percent of the homemakers owning zigzag machines had taken the lessons offered by the dealer from whom they had purchased the machine. Another most interesting observation was that, excluding the zipper foot attachment, the standard attachments were used by 70 percent, the same percentage of homemakers who had taken the dealers' lessons.

The comparison of the use of sewing machine attachments between the owners of the two types of machines would lead one to conclude that there is a definite advantage in understanding the use of the sewing machine and its attachments. It is realized, however, that the newness of the zigzag types of machines may have influenced more frequent use of these sewing machines. It is possible that these owners of zigzag sewing machines may have a greater interest in sewing.

Fashion and Decorative Stitches

With the coming of the zigzag sewing machine a new enthusiasm has developed among home sewers in the area of machine embroidery. The improved developments in the zigzag machines now make it possible to execute a variety of simple and ornate stitches automatically.

Attention should be called to the fact that many have overlooked the possibilities of the use of the ordinary straight-stitch machine for creating beautiful fashion and decorative stitches. It is believed that embroidery on the ordinary sewing machine was first carried out during the latter part of the nineteenth century, and in some places, particularly in the Latin countries, it has been developed to a very high degree. Unfortunately there has been considerable prejudice against machine embroidery because of the poor quality of work often produced. The home sewer must keep in mind that good ideas are more important than new attachments and the most important asset toward producing acceptable work is the imagination of the owner.

In her book, Your Machine Embroidery, Dorothy Benson presents the following interesting discussion concerning the use of the straight-stitch machine for embroidery and decorative stitches:

The word "machine" suggests something entirely mechanical, heavy, and unsympathetic, but

this is misleading. Even the most mechanical of machines can be used to produce dainty work in the hands of a competent craftsman, working from a well-planned design.

The machine can produce finer and more delicate work than can be done by hand owing to the fineness of the machine stitch. This does not always apply to trade machines, but, as already mentioned, we are dealing entirely with the ordinary machine.

Machine embroidery does not compete with hand embroidery, nor does it encroach on it in any way. Each has its own important part to play and often the two go hand in hand. Each is lovely in its own way and each type of worker should be able to appreciate the art of the other. The great tradition and beauty of hand embroidery can never be surpassed. It has its roots deep in history and it will always endure.

The age in which we live is one of progress, and as people are looking for new ways to express their ideas, the extra speed and flowing movement of the machine is being sought more and more.

There have been occasions when the slower, more laborious method of hand embroidery has not been successful in interpreting the freedom of the modern design, and here the machine has found its true place in contemporary work. In other cases the bolder stitches of hand embroidery have proved more satisfactory, so that each has its own role and the two should not conflict in any way.

To the uninitiated, this craft may appear to be tedious, but those who have tried it will know that this is not true. It is a delightful hobby, a means of self-expression and relaxation, especially when carried out in one's own home. Much enjoyment can be found in using the machine for an entirely new and exciting purpose. (1, pp.6-8)

The data with regard to the homemakers who would like to know how to make fashion or decorative stitches

are presented in Table IX. There is a noticeable tendency for a higher percentage of the owners of zigzag machines to make these types of stitches than for the owners of straight-stitch machines. However, consideration should be given to the fact that, although a small number of owners of the straight-stitch machines have actually made the stitches, approximately one-third desired instruction in how to make these various stitches. Of the different types of fashion and decorative stitches listed for both types of machines, the homemakers most frequently desired instruction for making monograms and appliques.

Fashion and decorative stitches were made by 50 percent of the owners of the zigzag machines. It was not surprising to learn that the complicated twin needles were used by only one homemaker.

The writer was particularly interested to know the attitude of the participants who had college training toward the use of the attachments and fashion and decorative stitches. The data shown in Table X reveal that, with the exception of the use of the binder and foot hemmer, the percentage of ownership and use of the standard attachments was higher among those having college training than among those without such instruction. Without exception, there was also a higher percentage of the homemakers having college training who desired instruction in the use of sewing machine attachments than of

TABLE IX

HOMEMAKERS WHO MAKE OR WOULD LIKE TO KNOW HOW TO MAKE
FASHION OR DECORATIVE STITCHES

Type of Stitch	Owners of Straight-Stitch Machines*				Owners of Zigzag Machines*			
	Have Made Stitch		Would Like to Know How		Have Made Stitch		Would Like to Know How	
	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent
Monogram	6	6.2	34	35.1	5	50.0	1	10.0
Applique	6	6.2	34	35.1	8	80.0	1	10.0
Embroidery	3	3.1	29	29.9	5	50.0	-	--
Satin Stitch	1	1.1	24	24.7	4	40.0	2	20.0
Patterns in Plain Machine Stitching	13	13.4	30	30.9	-	--	-	--
Whip Stitch	2	2.1	25	25.8	-	--	-	--
Cut Work	3	3.1	27	27.8	-	--	-	--
Free Cable Stitch	2	2.1	22	22.7	-	--	-	--
Twin Needles	-	--	-	--	1	10.0	-	--
Borders	-	--	-	--	4	40.0	2	20.0
Special Designs	-	--	-	--	3	30.0	-	--

*Ninety-seven women owned straight-stitch machines, and ten women owned zigzag machines.

TABLE X

A COMPARISON OF THE OWNERSHIP, USE, AND INSTRUCTION DESIRED IN THE USE OF SEWING MACHINE ATTACHMENTS BY HOMEMAKERS RECEIVING COLLEGE INSTRUCTION AS COMPARED WITH HOMEMAKERS WHO HAD NOT HAD COLLEGE INSTRUCTION*

Attachment	Owns Attachment				Uses Attachment				Desires Instruction			
	College		Non-college		College		Non-college		College		Non-college	
	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent
Ruffler	17	77.3	53	70.7	8	36.4	23	30.7	5	22.7	11	14.7
Gatherer	17	77.3	45	60.0	9	40.9	28	37.3	4	18.2	10	13.3
Foot Hemmer	15	68.2	45	60.0	4	18.2	21	28.0	6	27.3	11	14.7
Binder	10	45.4	45	60.0	6	27.3	10	13.3	6	27.3	14	18.7
Edge Stitcher	10	45.5	24	32.0	5	22.7	6	8.0	4	18.2	8	10.7
Adjustable Hemmer	10	45.5	32	42.7	6	27.3	9	12.0	3	13.6	9	12.0

*Total number of homemakers who received college instruction, 22.

Total number of homemakers who did not receive college instruction, 75

homemakers without such instruction. The data given in Table XI reveal that there is also a greater desire to know how to make fashion and decorative stitches among college-trained women than among women without college training. This would indicate that, because of the number of homemakers having college instruction who desired to know how to make fashion and decorative stitches, there is a need on the college level for incorporating in the clothing construction classes instruction in how to use the attachments and how to make these stitches.

Homemakers' Opinions Concerning the Sewing Machine

General questions were included in the questionnaire for the purpose of studying the homemakers' opinions concerning the sewing machines they were presently using and, in addition, to learn the types they would prefer to own. Few homemakers were dissatisfied with their sewing machines and what they would do. The majority of homemakers reported the most helpful features on their sewing machines to be the backstitcher, buttonholer and foot hemmer. A complete list of the homemakers' opinions concerning the most helpful features is given in Table XII.

The data with regard to the additional features desired by the homemakers for their present machines are presented in Table XIII. There appears to be a general

TABLE XI

HOMEMAKERS WITH AND WITHOUT COLLEGE INSTRUCTION WHO MADE OR WOULD LIKE TO KNOW HOW TO MAKE FASHION AND DECORATIVE STITCHES*

Type of Stitch	Have Made Stitch				Would Like to Know How			
	College		Non-college		College		Non-college	
	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent
Monogram	3	13.6	8	10.7	14	63.6	20	26.7
Applique	3	13.6	11	14.7	14	63.6	20	26.7
Patterns in Plain Machine Stitching	1	4.5	12	16.0	13	59.1	17	22.7
Embroidery	4	18.2	7	9.3	12	54.5	17	22.7
Satin	1	4.5	4	5.3	12	54.5	13	17.3
Whip Stitch	1	4.5	1	1.3	11	50.0	15	20.0
Cut Work	1	4.5	2	2.7	11	50.0	17	22.7
Free Cable	2	9.1	0	---	11	50.0	12	16.0

*Total number of homemakers who received college instruction, 22.
Total number of homemakers who did not receive college instruction, 75.

TABLE XII

OPINIONS OF 95 HOMEMAKERS CONCERNING THE MOST
HELPFUL FEATURES OF SEWING MACHINES

Most Helpful Feature	Number*	Percent
Backstitching Mechanism	22	23.2
Buttonholer	20	21.1
Hemmer	10	10.5
Gatherer	9	9.5
Zigzag Stitcher	8	8.4
Zipper Foot	8	8.4
Ruffler	5	5.3
Electric Machine	4	4.2
Straight Stitch	3	3.2
Tucker	3	3.2
Attachments	2	2.1
Blindstitch Attachment	2	2.1
Cabinet and Portable Combination	2	2.1
Ease of Stitching	2	2.1
Seam Widths Marked on Throat Plate	2	2.1
Sewing Machine Light	2	2.1
Basting Stitch	1	1.1
Cording Foot	1	1.1
Ease of Adjustment	1	1.1
Feed Dogs Which Will Lower	1	1.1
Quilter	1	1.1
Walking Presser Foot	1	1.1
Zigzag Attachment	1	1.1
Seam Gauge	1	1.1

*There is an overlapping of responses, as some indicated more than one helpful feature.

TABLE XIII

PREFERENCES OF 93 HOMEMAKERS FOR ADDITIONAL
FEATURES ON THEIR PRESENT SEWING MACHINES

Additional Features Desired	Number	Percent
Automatic Zigzag Stitching	23	24.7
Buttonholer	20	21.5
All or More Attachments	13	14.0
Zigzag Attachment	10	10.8
Decorative and Fashion Stitches	8	8.6
Zipper Foot	8	8.6
Button Foot	4	4.3
Darner	4	4.3
Blindstitcher	3	3.2
Arm Feature Like Elna	2	2.2
Later Model	2	2.2
More Usable Attachments	2	2.2
Any Time-saving Feature	1	1.1
Backstitching	1	1.1
Dependable Tension	1	1.1
Heavier Machine	1	1.1
Hemstitcher	1	1.1
Light Weight	1	1.1
Possible to Sew on Hooks and Eyes	1	1.1
Seam Gauge	1	1.1
Walking Presser Foot	1	1.1

trend toward automatic zigzag features, either by means of an automatic attachment or a device built into the mechanism of the machine. It was not surprising to learn that 20 homemakers expressed a desire for a buttonhole attachment, as only 42 homemakers actually owned the attachment. One homemaker commented, "It is my idea that the buttonhole attachment is a most practical feature and should be included in the machine accessories."

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The specific objectives of this study were (1) to determine the types of sewing machines that the homemakers used; (2) to ascertain the extent of training the homemakers had in sewing techniques and in the care and use of the sewing machine; (3) to learn the extent and nature of the use of the sewing machines and their attachments; and (4) to learn the opinions of the homemakers concerning the use of the modern sewing machine.

A questionnaire covering the general uses of modern sewing machines was compiled and mailed to (1) mothers of homemaking students in the junior and senior high schools of Nampa, Idaho, (2) homemakers of Nampa not having students in the homemaking classes of these schools, and (3) graduates of Northwest Nazarene College, Nampa, Idaho. The findings included in this study are based on the writer's analysis of the information supplied by the 107 returned questionnaires.

The sewing machines owned by the participants were relatively modern, as only 2 percent were purchased prior to 1936, and 70 percent were less than 11 years old. Of the two types of sewing machines, the straight-stitch

machines were owned by 90 percent of the participants, and zigzag machines were owned by the remaining 10 percent.

In addition to the eight sources of instruction listed on the questionnaire, one homemaker had received instruction by correspondence and another from the home extension service. The sources from which instruction was obtained by the greatest number of homemakers were: senior high school, 53; the home, 46; college, 22; junior high school, 21; and dealers' lessons, 21. Seventeen of the cooperators indicated that they had not received any instruction but had learned by experience and through the trial and error method. Adult classes and 4-H training were taken by 15 and 13, respectively.

The homemakers indicated a high frequency of use of the sewing machine. It was reported that nearly 70 percent used their machines once a week or more, while the remaining 30 percent used the machines once a month or less.

Almost twice as much sewing was done for girls and women as for the boys and men. The garments most frequently made for each group were dresses and shirts.

The homemakers frequently used their machines for general sewing such as patching and alterations. The low number of homemakers using their machines for blind-stitching indicates that there was insufficient knowledge

of how to do this sewing technique by machine.

Curtains, draperies, quilts, bedspreads, and rugs were household articles made in the home by the participants. Curtains were made by 83 homemakers, while rugs were made by 14.

—A higher percentage of the owners of the zigzag machines used the attachments than did the owners of the straight-stitch machines. The ruffler, binder, gatherer, foot hemmer, edge stitcher, all standard attachments for both types of machines, were owned by less than 75 percent of the homemakers. Approximately one-fifth of the homemakers desired instruction in the use of the sewing machine attachments.

The homemakers revealed more interest in knowing how to make fashion and decorative stitches than in how to use the attachments. A higher percentage of the owners of zigzag machines made the fashion and decorative stitches than did the owners of straight-stitch machines. Approximately one-third of the owners of straight-stitch machines, however, desired instruction in how to make these various stitches. The percentage of ownership, use, and desired instruction in the use of sewing machine attachments was higher among the participants having college instruction. Also, the same was true regarding the fashion and decorative stitches, but on a much higher percentage.

Only seven homemakers were dissatisfied with what their sewing machines could do; however, 46.9 percent desire automatic zigzag features. The features considered to be the most helpful to the sewers were the backstitcher, buttonholer, and foot hemmer. Of the 13 homemakers planning to purchase a new sewing machine, 16 specifically desired one with automatic zigzag features.

Conclusions

In conclusion, it would seem feasible that, in order to acquaint the students in homemaking classes with the maximum possibilities of modern sewing machines, consideration should be given to provide (1) an opportunity to use both the zigzag and straight-stitch sewing machines with adequate instruction in the use and care of each type of machine, (2) instruction in the use of sewing machine attachments, (3) instruction in machine sewing techniques, (4) some instruction in sewing techniques for making boys' and men's shirts and jackets, and (5) an opportunity to learn how to make fashion and decorative stitches.

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APPENDIX

LETTER TO HOMEMAKERS

May 1, 1956

Dear Homemaker:

I am asking you to cooperate with me in a study concerning the present uses of the modern sewing machines. Sewing for the family has been practiced by many homemakers down through the years for two main reasons: economy and pleasure. Sewing is even more popular now with an endless array of beautiful materials, improved methods in sewing, and unbelievable developments of the modern sewing machines. All of these present a real challenge to you, a homemaker who sews.

The new interest created in sewing is largely a result of the versatile sewing machines now available on the market. The new sewing machines have been designed to make sewing much easier and more pleasant for the homemaker. Tasks that were previously tedious and time consuming may now be completed on these machines in a short time and with little effort. The uses of both the straight-stitch and the zigzag sewing machines are unlimited to the homemaker who understands just what her machine can do.

As an instructor in the field of clothing construction, I am vitally interested in the kind of sewing machines you homemakers prefer to use, how you are using them, and ways in which you would like to be using them.

Enclosed is a questionnaire covering the major uses of the modern sewing machines. I am using this questionnaire in connection with my thesis study which will apply toward completing my required work for a Master of Science degree from Oregon State College. The information compiled from the returned questionnaires will be used as a basis for developing a basic course in teaching the most important and practical uses of these modern sewing machines to our college students. If you are interested in receiving a summary of the results I will be pleased to mail it to you if you will so indicate by checking the space provided on the last page of the questionnaire. The summary should be ready for distribution around August 1, 1956.

LETTER TO HOMEMAKERS (continued)

It will be most helpful to me if you check the questionnaire carefully and return it to me within two weeks.

Sincerely yours,

(Signed)
Wanda Rhodes
Instructor in Clothing and
Textiles
Northwest Nazarene College

WR:dm

enclosure

QUESTIONNAIRE

USES OF MODERN SEWING MACHINES

Name _____ Age _____

Address _____

Number in Family:

Boys _____ Ages _____

Girls _____ Ages _____

I. General Information:

A. Make of sewing machine _____

1. Portable _____
2. Standard head _____
3. Straight-stitch _____
4. Zigzag _____

B. In what year did you buy your sewing machine?

C. How regularly do you use your machine? _____
(Check one.)

1. Once a day _____
2. Once a week _____
3. Once a month _____
4. Occasionally _____

D. How much instruction have you had in sewing and in the use of your sewing machine?

1. None _____
2. At home _____
3. 4-H _____
4. Junior High School _____
5. High School _____
6. College _____
7. Adult classes _____
8. Dealer's lessons _____
9. Others _____ (Please state.)

E. Check each of the following garments which you have made:

1. Infant clothes _____

2.	Boys' and Men's clothes	Boys'	Men's
	a. Shirts	_____	_____
	b. Slacks	_____	_____
	c. Suits	_____	_____
	d. Coats	_____	_____
	e. Jackets	_____	_____
	f. Others _____	_____	_____
<hr/>			
3.	Girls' and Women's clothes	Girls'	Women's
	a. Blouses	_____	_____
	b. Skirts	_____	_____
	c. Dresses	_____	_____
	d. Slips	_____	_____
	e. Suits	_____	_____
	f. Coats	_____	_____
	g. Jackets	_____	_____
	h. Others _____	_____	_____

F. Check each of the following ways in which you use your sewing machine:

1. Seam finishing _____
2. Overcasting _____
3. Blindstitching _____
4. Darning _____
5. Patching _____
6. Sewing on buttons _____
7. Sewing on hooks _____
and eyes _____
8. Alterations _____
9. Others _____

G. Check each of the following accessories which you make in the home:

1. Curtains _____
2. Draperies _____
3. Upholstering _____
4. Bedspreads _____
5. Rugs _____
6. Quilts _____
7. Others _____

NOTE: CHECK PART II. IF YOUR SEWING MACHINE IS A STRAIGHT-STITCH MACHINE.

II. Straight-Stitch Sewing Machines.

A. Sewing machine attachments.

Check column A if you have the attachment.
 Check column B if you use the attachment.
 Check column C if you would like to know how to
use the attachment.

	A	B	C
1. Binder	_____	_____	_____
2. Edge stitcher	_____	_____	_____
3. Gatherer	_____	_____	_____
4. Foot hemmer	_____	_____	_____
5. Adjustable hemmer	_____	_____	_____
6. Ruffler	_____	_____	_____
7. Blind stitcher	_____	_____	_____
8. Blind stitch braider	_____	_____	_____
9. Braiding presser foot	_____	_____	_____
10. Buttonholer	_____	_____	_____
11. Corder foot	_____	_____	_____
12. Darning foot	_____	_____	_____
13. Flange hemmer	_____	_____	_____
14. Seam gauge	_____	_____	_____
15. Quilter	_____	_____	_____
16. Tucker	_____	_____	_____
17. Zipper foot	_____	_____	_____
18. Embroiderer	_____	_____	_____
19. Feed cover plate	_____	_____	_____
20. Shirring plate	_____	_____	_____
21. Underbraider	_____	_____	_____
22. Automatic zigzagger	_____	_____	_____
23. Walking presser foot	_____	_____	_____

B. Decorative and fashion stitches.

Check column A if you have made the decorative or fashion stitch.

Check column B if you would like to know how to make the decorative or fashion stitch.

1. Patterns in plain machine stitching	_____	_____
2. Whip stitch	_____	_____
3. Chain stitch	_____	_____
4. Cut work	_____	_____
5. Free cable stitch	_____	_____

	A	B
6. Monogram	_____	_____
7. Applique	_____	_____
8. Embroidery	_____	_____
9. Others	_____	

NOTE: CHECK PART III IF YOUR SEWING MACHINE IS A ZIGZAG SEWING MACHINE.

III. Zigzag Sewing Machines.

A. Sewing machine attachments.

Check column A if you have the attachment.
 Check column B if you use the attachment.
 Check column C if you would like to know how to use the attachment.

	A	B	C
1. Rolled hemmer foot	_____	_____	_____
2. Satin stitch foot	_____	_____	_____
3. Button foot	_____	_____	_____
4. Corder	_____	_____	_____
5. Zipper foot	_____	_____	_____
6. Binder	_____	_____	_____
7. Edge stitcher	_____	_____	_____
8. Gatherer	_____	_____	_____
9. Gauge foot	_____	_____	_____
10. Embroidery foot	_____	_____	_____
11. Blind-stitch foot	_____	_____	_____
12. Ruffler	_____	_____	_____
13. Others	_____		

B. Fashion and decorative stitches.

Check column A if you have made the decorative or fashion stitch.
 Check column B if you would like to know how to make the decorative or fashion stitch.

1. Monogram	_____	_____
2. Applique	_____	_____
3. Embroidery	_____	_____
4. Double or twin needles	_____	_____

5. Borders _____
6. Satin stitch _____
7. Special designs of _____
any kind _____

IV. General Questions:

- A. Have you been satisfied with your sewing machine and with what it can do?
- B. What features on your sewing machine have been the most helpful to you?
- C. What additional features would you desire to have on your sewing machine?
- D. Do you plan to buy another sewing machine in the future? If so, what kind do you intend to buy?
- E. Will you please make any comment here that you think might be of help in this study.
- F. If you are interested in receiving a summary of the results of this study, check here _____.

THANK YOU KINDLY FOR YOUR
HELP AND COOPERATION