



An evaluation of the Montana State College home management courses
by Patricia Johnson Robbins

A thesis submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE in Home Economics
Montana State University
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Abstract:

The purpose of this study was to evaluate the Montana State College home management courses. Questionnaires were mailed to 1957-61 Montana State College home economics graduates and personally administered to a group of 1961-62 student wives of the same institution. The total study involved 151 respondents of which one hundred were home economics graduates and fifty-one were wives of college students.

Questions were arbitrarily scored 1, 2, or 3 according to the answer of "seldom," "occasionally," or "frequently." Data were analyzed using chi-square, analysis of variance, "t" and F-tests. No direct relationship between income and managerial score was discovered. Most of the home management principles taught at the home management house had been accepted by the graduates. A significant difference at the .05 level between the means of the managerial scores of the graduates and the student wives was found. In all three tests which compared the managerial scores of the two groups, human resource management, material resource management, and work simplification, the mean of the graduates was higher than that of the student wives.

A curvilinear relationship resulted when the work simplification score means of the graduates who were married at the time the courses were taken and the means of those graduates who were not were graphed according to income groupings. The mean scores of the former resulted in a concave curve, while the reverse situation occurred in the latter. Although not proven statistically significant, this curvilinear relationship appeared to be a real phenomenon.

Forty-six per cent of the work simplification questions were found significant at the .05 level. Housecleaning practices and the application of work simplification practices to tasks outside the home were found significant. A greater per cent of home economics graduates indicated frequent application of these principles. None of the bed making procedures were frequently accepted by either group. A greater number of student wives indicated ironing a man's shirt in less than five minutes.

The study indicated that the home management courses had affected many of the practices of the home economics graduates. It appeared that the concepts were the valuable part of the home management training and that the performance of individual tasks was less important.

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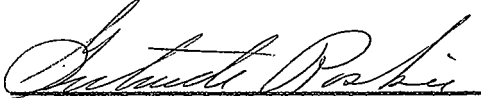
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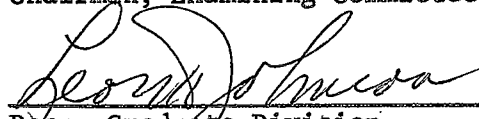
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ABSTRACT

The purpose of this study was to evaluate the Montana State College home management courses. Questionnaires were mailed to 1957-61 Montana State College home economics graduates and personally administered to a group of 1961-62 student wives of the same institution. The total study involved 151 respondents of which one hundred were home economics graduates and fifty-one were wives of college students.

Questions were arbitrarily scored 1, 2, or 3 according to the answer of "seldom," "occasionally," or "frequently." Data were analyzed using chi-square, analysis of variance, "t" and F-tests.

No direct relationship between income and managerial score was discovered. Most of the home management principles taught at the home management house had been accepted by the graduates. A significant difference at the .05 level between the means of the managerial scores of the graduates and the student wives was found. In all three tests which compared the managerial scores of the two groups, human resource management, material resource management, and work simplification, the mean of the graduates was higher than that of the student wives.

A curvilinear relationship resulted when the work simplification score means of the graduates who were married at the time the courses were taken and the means of those graduates who were not were graphed according to income groupings. The mean scores of the former resulted in a concave curve, while the reverse situation occurred in the latter. Although not proven statistically significant, this curvilinear relationship appeared to be a real phenomenon.

Forty-six per cent of the work simplification questions were found significant at the .05 level. Housecleaning practices and the application of work simplification practices to tasks outside the home were found significant. A greater per cent of home economics graduates indicated frequent application of these principles. None of the bed making procedures were frequently accepted by either group. A greater number of student wives indicated ironing a man's shirt in less than five minutes.

The study indicated that the home management courses had affected many of the practices of the home economics graduates. It appeared that the concepts were the valuable part of the home management training and that the performance of individual tasks was less important.

CHAPTER I

PROBLEM SITUATION

Over one-half of the nation's employed women are married. These married women represent over 15 per cent of the total American labor force. Women today also constitute the largest labor reserve. (1) It has been estimated that some 98 per cent of the nation's women will have worked in paid employment during some period of their lives within the next decade. (11) Two studies seem to indicate that this percentage applies to home economics graduates as well as women in general. Lehman reported that 92 per cent of the Ohio State University home economics alumnae studied in 1958 had been at sometime gainfully employed. (8) Hollandsworth reported that 468, or 86.7 per cent, of 540 Montana State College home economics graduates for the years 1935-55 had already been gainfully employed by 1958. (19) Renne stated that the nation's economy needs these employed women if the United States continues to be a major force in the world. (26)

Importance of Management. One factor contributing to the successful functioning of a family when the wife and mother is employed full-time outside the home is the managerial skill of the homemaker. (1) The homemaker of today has a position similar to that of a corporation's top executive. The proficiency with which she handles various domestic problems influences her family's net worth, just as the decisions made by top executives in corporations throughout the country influence the company's gain or loss during each fiscal period. A manager, with the ability to

handle various situations competently, will make definite progress toward the group's objectives.

Although the homes and the businesses of the nation are two separate entities, in today's advanced culture the realization of the interdependence of all aspects of life is eminent. Jennings stated that "business must begin to reach back into the home, school, and community to insure that young people emerge with the qualities business requires." He also feels that "businessmen can no longer ignore family life if business wants to maintain a healthy and prosperous system." (6) At the same time, homemakers can look toward business for its technical expertness in management. Swift and Swift suggest that "you can apply what business has discovered about management and human relations to make an efficient home and a happy family." (25) True enough, a home is not a commercial enterprise, but there is a definite carry-over of "sound practice" from one to the other. Researchers in industry and education have shown that reasonable order and organization, pleasant furnishings and color schemes improve efficiency while lifting spirits and heightening morale. (25)

Paget suggests that a prospective manager develop his executive skills by doing some long range planning. This involves "picking a target, plotting a course, measuring progress, correcting deviations from the plan, adjusting the target according to trends and revising plans correspondingly." (3) The home manager must develop similar skills so that she can "use family resources to achieve family goals." (2) Gross suggests three consecutive steps: "planning; controlling the various elements of the plan while carrying it through, whether it be executed by oneself or by

others; and evaluating results preparatory to future planning." (2)

Managerial qualities for the manager of the home, the fundamental unit of our society, are as valuable as they are for the managers of our nation's large corporations. Gaines has made a list of five qualities of a good manager: (1) intelligent effectiveness, (2) emotional maturity, (3) understanding of human relationships, (4) insight, and (5) ability to organize and delegate. (18) A similar list was made by Fox: (1) creative ability, (2) judgment, (3) administrative skill, (4) positive attitude, (5) courage, and (6) character--high integrity. (4)

Management Training. "Leaders do not come forth automatically simply because a need exists." (7) Today many United States companies use a management training device known as "business games." The notion of business games was borrowed from the war games developed by the United States Naval War College. The typical business game consists of a designated number of players who are assigned to a mythical company. Data on assets, production, prices, advertising and market conditions are given to the players who compete with other teams in decision-making. One such game is sponsored by the American Manufacturing Association. The four-week course is offered at a price of \$850 per player. (5)

High school students have become acquainted with similar management training devices. An organization, Junior Achievement, Inc., is "aimed at giving students a chance to learn about business by doing." (15) In the spring of 1962, 650 members of Junior Achievement, Inc. met for an annual convention in Atlantic City to "gain a better understanding of the

American system of free enterprise." (15) One of the highlights of the convention was a competitive business game.

On the college level, the concept of management is incorporated into a variety of fields. Wildlife Management, Traffic Management, Hospital Management, and Newspaper Editorial Management are titles of some management courses offered in universities in the United States. (9)

Management training materials are available to the public by writing to the Superintendent of Documents in Washington, D. C. These materials were contributed by the Department of Defense and compiled by the Department of Labor. Pamphlets are available on work simplification, human behavior and leadership, how management judges its supervisors, and problems in management for top executives. (16)

Home Management Training. On the domestic level, managerial training can aid in the development of a happy, organized family. Home management training for all young women appears desirable in order that they may carry their dual responsibility of homemaking and employment outside the home with greater ease and without sacrificing essential values of home living. (11) High school home economics laboratories are centers for teaching efficient management of time, energy, space and materials. The classes have an opportunity to experiment with motion studies, time schedules, and labor-saving devices. One such class played a competitive game where they planned work areas and equipment arrangements for making biscuits. The arrangement which necessitated the fewest motions, required the least amount of time, equipment, and space and still produced a good

product was chosen the best. (14)

Since World War I, home management has been taught on the college level through a resident course. Typically, six seniors live for six weeks in a college-owned house. Such courses are required in about two-thirds of the degree-granting, home economics institutions in the United States. The students have varying degrees of freedom to organize their own money and practice genuine choice-making. (2)

At Montana State College, each home economics senior is required to enroll in two home management courses concurrently. Home Economics 407, Home Management Theory, three credits, is offered each one-half quarter for four one-hour lectures and two two-hour laboratory periods each week. Home Economics 408, Home Management Practicum, four credits, involves sixteen hours of laboratory work each week. (10)

The objectives of the theory course where the process of management is studied are:

1. To become aware of the activities of the process of management, and their contribution to personal and family achievement of goals.
2. To learn and use a satisfactory procedure for making satisfactory decisions.
3. To understand that goals of the individual and of the family may be strong enough to motivate better use of family resources.
4. To recognize, use, and increase the supply of resources available.
5. To realize the need for evaluating results in terms of the goals of the individual, group, or family. (21)

Actual experience in application of management techniques is the major emphasis of Home Economics 408, Home Management Practicum. (10)

Students plan and carry on, in rotation, the various household duties. The objectives of this course are:

1. To create a situation in which progress on personal and group goals may be achieved.
2. To provide a laboratory in which the theories learned in home economics and in other disciplines may be applied to problems encountered in running a house.
3. To give opportunity for creativity and self realization in carrying out the various tasks connected with a household, including the care of a baby. (20)

Home Management Defined. Paolucci has defined management as a "mental process, a concentration of desires, a will power." She further stated that "management functions when one is: (1) observing and conceiving ideas, (2) analyzing with further observations, (3) making decisions on the basis of analysis, (4) taking action and (5) accepting responsibilities." (13)

Gross and Crandall state:

Home management, reduced to its simplest terms, is using what you have to get what you want. . . . Its importance lies in the fact that it is the major means of achieving "what you want"--the family goals. It challenges people to use their resources for possibilities they consider important. "What you have" consists of the resources of the family members. These include not only time, energy, money and material goods but also knowledge, interests, abilities, skills, attitudes of family members and community facilities. The second group of resources is less frequently recognized than the first, due to its less tangible nature, but it is equally important.

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Figure 1 shows that there is a rough chronological order to the steps of management, although there may be some overlapping. The arrows indicated that planning, controlling, and evaluating are all concerned in the use of resources and that decisions in each step of the process are made in light of goals selected by the individual family.

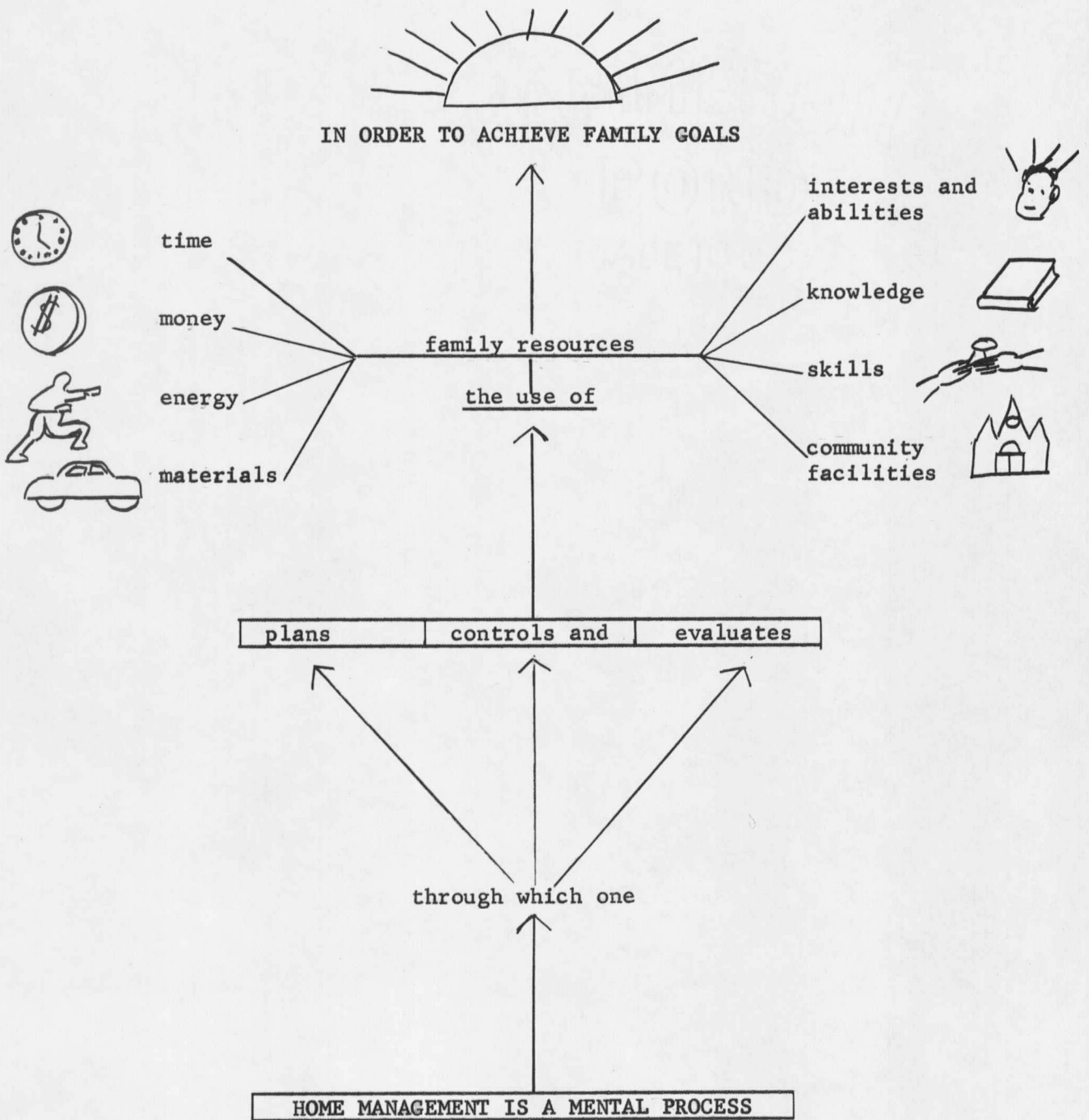


Figure 1: What Home Management Is (2)

A number of misconceptions about home management exist; there is value in pointing out what home management is not.

Home management is not mere performance of work. . . . An activity itself is managerial only insofar as it requires fresh decisions.

Management is not limited to the leader of a group. . . . While it is true that there is usually a leader, all family members who are old enough to make decisions can and should participate in home management. . . . The role in household activities slips from one member of a family to another as the situation demands.

Good managers are trained not "born". . . . At the turn of the century, it was questioned whether or not industrial management could be taught. Today it is an accepted branch of study.

Management is not an end in itself. . . . It is a means to achieving family goals--the fundamental purpose of management.

Family goals are not dictated by management. . . . "Goals to be achieved (through management) may be good or bad as judged by society. Society does not condone bank robbing, but it does accept raising funds for the purchase of a rug for the church. However, management is essential to the accomplishment of both projects." (2)

Home Management Application. In order to make time for loving family care, Moore made the following suggestions to homemakers which illustrate the importance of the application of home management principles: Prepare food in double quantities so that one-half of the product can be frozen to be used at a later date; Plan meals in advance to save extra trips to the grocery store and to avoid the need for last minute decision-making; If routine breakfast duties are done in the evening, more time can be spent with a demanding family in the morning; Convenience foods and wash-and-wear fabrics save much preparation time. (12)

At universities throughout the United States various studies have been made to discover specific problems connected with home management. The results have contributed to further understanding of the application

of home management principles. King studied a group of home economics graduates and another group of graduates in the fields of business administration, education, and liberal arts. The study showed no significant difference in the amount of time used by the two groups, indicating that the home economics graduates spent as much time performing managerial tasks as those without formal home economics college training. However, it is interesting to note that even though both groups spent the same amount of time in managerial activities, the home economics group spent one hour more per week in the physical care of the family members and they also did more planning and preparation. The non-home economics group tended to eliminate steps in procedure or to reduce the frequency of doing tasks. Consequently, the difference in results of time used by the two groups was not significant. (22)

Neal made a study to determine to what extent the home management courses of one institution helped home economics graduates manage their own homes. The managerial concepts which were found to be helpful were: (1) the importance of family goals, (2) meal management and food purchasing, (3) work simplification methods, (4) decision-making, (5) completion of one job before beginning another, and (6) preparation of budget meals. (24)

Concepts of the desirable, which are distinctive and which influence one's behavior, are known as values. An instrument to determine values of homemakers was devised by Kohlman. The instrument was tested by 146 respondents from one town and two rural areas. The values, health and family life, received the top mean scores. Other values considered were: concern for others, economy, education, friendship, status, and work efficiency.

Mean scores indicated there were some differences in the importance given to the various values when the respondents were grouped according to age and amount of formal education. Analyses of variance indicated, however, that the values considered important were not necessarily influenced by the age of the homemaker or where she lived. (23)

Gage related that among rural farm New York homemakers, with no formal education above high school, the highest value of work output was for meal preparation. For the same group the value at the bottom was for physical care of the family members. The values of work output were higher among those homemakers who reported they enjoyed homemaking. (17)

Summary. Home management training should enable women of today, with their dual role of homemaker and employee, to operate their homes efficiently. The interdependence of today's culture makes it possible to develop home managers through training similar to that which is required for business managers. A description of Montana State College home management courses and recent literature regarding home management application show sound theoretical management concepts. The application of defined home management principles should facilitate progress toward goals. However, it was the feeling of the investigator that some of the management principles which are taught in college home management courses are not applied by today's homemaker.

CHAPTER II

RESEARCH PROBLEM

The purpose of this research effort was to evaluate the home management courses at Montana State College. The findings will be used as a guide in the revision of the present home management courses, as well as a means of obtaining vital information for the family finance and household equipment courses.

Objectives.

1. To discover what management principles were being applied by 1957-61 Montana State College home economics graduates.
2. To obtain suggestions from home economics graduates to aid in the revision of Home Economics courses 407 and 408.
3. To discover the type of equipment used in the home economics graduates' homes and which pieces were valued most in the operation of their homes.
4. To discover the buying habits of the graduates.
5. To discover whether the family income was related to the managerial skills of the family.
6. To compare management practices of home economics graduates who were married at the time of the home management courses with those who were not.
7. To compare management practices of the 1957-61 Montana State College home economics graduates with those of the 1961-62 Montana State College students' wives.

Limitations and Boundaries.

1. The sample included Montana State College home economics graduates from 1957 through 1961 and wives of 1961-62 college students of the same institution.

2. There was no way to determine definitely that the home management courses were the sources from which the home economics graduates learned the techniques they were applying at the time of the study. No attempt was made to control the home-training variable.

3. No attempt was made to pair the home economics graduates with the college wives; however, it seemed reasonable to assume that the two groups would differ in: a. mean income, since the families of the home economics graduates were all receiving at least one full-time wage; b. educational level, since the home economics group were all college graduates; c. age, since there is a possibility that the average age of the college wives was lower than that of the home economics graduates;

4. The respondent may have answered what she felt she should, rather than what she actually practiced.

Hypothesis I.

Montana State College home economics graduates from 1957-61 do not differ significantly from the wives of 1961-62 Montana State College students in the application of the following home management principles:

- A. Human Resource Management
- B. Material Resource Management
 - 1. Buying Practices
 - 2. Sewing Practices
- C. Work Simplification
 - 1. Housecleaning
 - 2. Dishwashing
 - 3. Food Preparation
 - 4. Ironing
 - 5. Bed Making
 - 6. Storage
 - 7. Tasks Outside the Home

Hypothesis II.

There is no significant difference between the home economics graduates, grouped according to present income, who were married at the time the home management courses were taken and those who were not when the following practices are compared:

- A. Human and Material Resource Management
- B. Work Simplification

CHAPTER III

RESEARCH DESIGN

Instrument. A questionnaire was devised, using as guides the bulletin, "Measuring Home Management" from Michigan State College, as well as textbooks by Gross and Crandall, Management for Modern Families and by Nickell and Dorsey, Management in Family Living. The questionnaire was divided into seven parts: (1) General Personal Information, (2) Management of Human Resources, (3) Management of Material Resources, (4) How Most Buying is Done, (5) Selection of Equipment, (6) Work Simplification Practices, and (7) Special Comments. The questionnaire was pre-tested by administering it to eight Montana State College instructors and graduate students. Their suggested revisions were incorporated into the final draft. The questionnaire was coded to facilitate punching the results on electronic computer cards.

Sample. The questionnaire (see Appendix) was mailed to one hundred twenty home economics graduates of Montana State College. A follow-up postcard was sent to non-respondents of the home economics group three weeks after the initial mailing. The same questionnaire was administered to fifty-one 1961-62 Montana State College students' wives. No follow-up was made of this group.

Analysis. If a question was not answered, or if it was checked in more than one column, it became void. A void answer was indicated by a solid column on the electronic punched card. A mechanical sorter was used to tabulate the responses of each question from the individual ques-

tionnaires. Each questionnaire was also given managerial scores for human and material resource management and for work simplification. The scores were computed by giving an arbitrary score of three for each answer checked "frequently," two for each answer checked "occasionally," and one for each checked "seldom." The student wives were unable to answer three questions regarding work simplification since the questions were devised for home economics graduates only (see Appendix, questionnaire, page 4, 4a, 4b, and 5e). Consequently, the work simplification scores of the home economics graduates were adjusted accordingly by giving no points for these three questions.

A "t" test comparison of the human resource management scores was made between the home economics graduates and the student wives. In this comparison, only the scores of the respondents with children were used. A further attempt to somewhat equate the groups was accomplished by eliminating from the test all the scores representing home economics graduates with more than one wage earner in the family.

A "t" test was also used to compare the material resource management scores of the home economics graduates and the student wives, the home economics graduates who had children with those who did not, and another test compared the scores of the student wives who had children with those who did not.

An analysis of variance tested the combined human and material resource management scores of the married graduates who had at least one child and only one wage earner in the family in relation to their present income. The combined human and material resources in relation to present

income of the single graduates were also tested by an analysis of variance.

Present income of the graduates and their marital status at the time the home management courses were taken were criteria for classification in an analysis of variance of the combined human and material resource management scores for a two-way classification with disproportionate subclass numbers. Only the scores of those graduates who had children were used.

In order to determine whether there were any significant differences between the home economics graduates and the student wives with respect to how frequently certain work simplification methods were practiced, 2 x 3 contingency tables were made for each question. Chi-square values were used to test for significance.

So that the work simplification area of the questionnaire could be treated in the same manner as the human and material resource management area, work simplification scores of the graduates who were married at the time the home management courses were taken were compared with those who were not, again in relation to their present income. Two analyses of variance for a two-way classification with disproportionate subclass numbers were made, one using the original work simplification scores and a second one using the adjusted work simplification scores. In addition, a second degree polynomial was fitted for the group of graduates who were not married at the time the courses were taken. A separate analysis of variance was made for the student wives.

The adjusted work simplification scores of the graduates who were married at the time the courses were taken and the student wives' scores which were in the same income classification were compared by F-tests.

The adjusted work simplification scores of the graduates who were not married at the time the courses were taken were compared with the student wives' scores in the same manner.

To further validate the data, F-tests were performed which tested the difference between the overall means of the work simplification scores of the graduates who were married at the time the courses were taken and those who were not and the overall mean of the student wives, ignoring income groups. Confidence limits were obtained for the difference between the means used in these F-tests which had many degrees of freedom.

The income variable was tested in relation to the type of buying practiced by the home economics graduates and the student wives. Contingency tests were made. Chi-square values with two degrees of freedom were obtained to test for significance.

The importance of various pieces of equipment was tested by ranking each piece according to the time it was obtained. In tabulating, the first piece obtained was given a rank of one, the second a rank of two, continuing through five ranks. If two or more items were obtained in the same year, each received the same rank. Only the questionnaires of the graduates who indicated owning all five of the ranked items, vacuum cleaner, automatic washer, dryer, freezer, and television, were used. (see Appendix, questionnaire, page 3, 4 and 5, 7, 8, 12, and 16). Sewing machines were not considered in the ranking because of the assumption that many of the graduates owned these before graduation.

Responses from the special comment section were tabulated by

grouping the suggestions according to management of human resources, management of material resources, work simplification, and general suggestions.

CHAPTER IV

DATA ANALYSIS

Population. The total study involved 151 questionnaires which were completed by 1957-61 Montana State College home economics graduates and wives of 1961-62 Montana State College students. One hundred twenty questionnaires were mailed to the home economics graduates. After the first mailing, eighty-three of the 120 questionnaires, or 69 per cent, were returned. A follow-up postcard to non-respondents increased the total response to exactly one hundred questionnaires, or 83 per cent. Wives of the college students completed the other fifty-one questionnaires.

The average number of children per family in the home economics group was 1.51. The student wives ranked a little higher, with an average of 1.67 children per family.

In the married home economics group, as well as the college wives group, 40 per cent were full-time homemakers. The other 60 per cent of each group assisted in earning part of the family income.

The mean income of the student wives was in the category below \$3000, while the means of the single and married home economics graduates were in the \$3000-5000 and \$5000-7000 category, respectively.

Hypothesis I

A restatement of hypothesis I and related data follow.

Montana State College home economics graduates from 1957-61 do not differ significantly from the wives of 1961-62 Montana State College students in the application of the following home management principles:

- A. Human Resource Management
- B. Material Resource Management
 - 1. Buying Practices
 - 2. Sewing Practices
- C. Work Simplification
 - 1. Housecleaning
 - 2. Dishwashing
 - 3. Food Preparation
 - 4. Ironing
 - 5. Bed Making
 - 6. Storage
 - 7. Tasks Outside the Home

Management of Human Resources. In the analysis of human resource management scores (see Appendix, questionnaire, pages 1 and 2, 1-22), question eighteen was eliminated from the scoring since a response checked "frequently" would indicate a negative value in relation to the other questions. Therefore, the highest possible score for the human resource management section was sixty-three. Only those married respondents who had children were considered, because the single respondents and those without children checked the "does not apply" column for questions sixteen through twenty-one.

The difference between the means of the human resource management scores of the home economics graduates with children and the student wives with children is shown in Figure 2. The mean score of the home economics

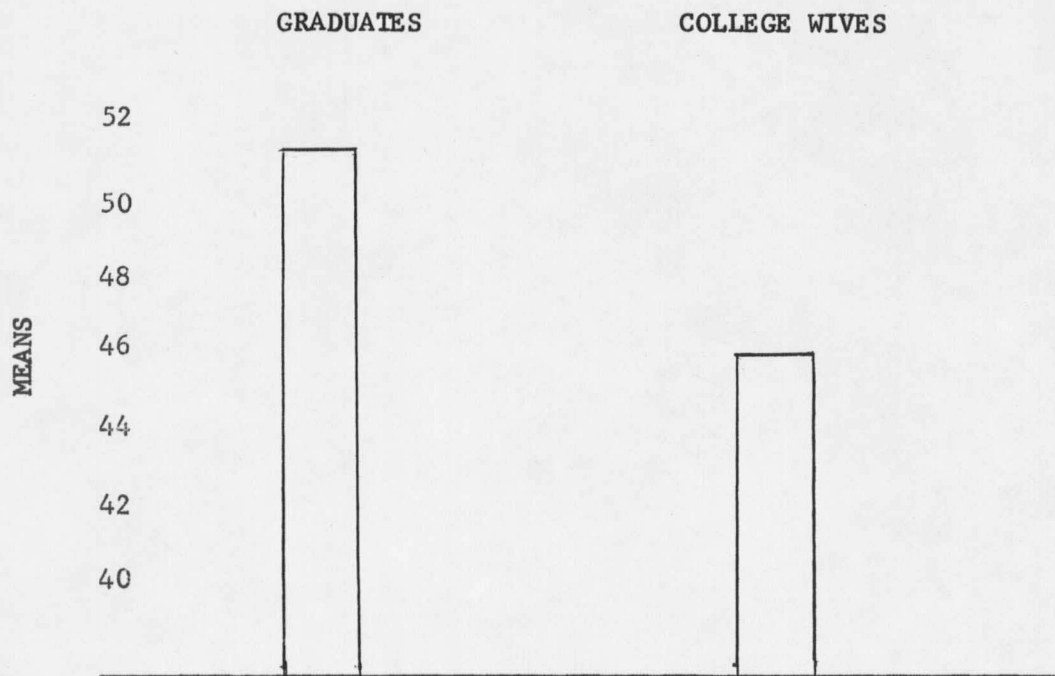


Figure 2. Means of Human Resource Management Scores of 1957-61 Montana State College home economics graduates and 1961-62 Montana State college student wives who had children

graduates was 51.54 compared to 46.15 for the student wives. The scores ranged from thirty-seven to sixty and from twenty-nine to fifty-seven, for the home economics graduates and the student wives, respectively. The null hypothesis that the human resource management score means of the home economics graduates and the student wives were equal was rejected at the .05 level following a "t" test for significance. Apparently, the home management training of the home economics graduates affected the difference between the human resource management practices of the two groups since both the range and mean of the human resource management scores of the home economics graduates were greater than those of the student wives.

Management of Material Resources. When the material resource management scores were computed (see Appendix, questionnaire, page 2, 1-12), questions seven and eight were eliminated. The use of commercial laundries was not considered a factor in computing the material resource management score. The highest possible score was thirty.

The means of the material resource management scores of the home economics graduates with children and the student wives with children were 26.41 and 22.84, respectively. The range of the home economics graduates was from twenty to thirty, compared to a range of fifteen to thirty for the student wives. The mean of the material resource management scores of the two groups was tested using a "t" test for significance. The null hypothesis that the mean of the home economics graduates was equal to that of the student wives was rejected at the .05 level. The higher mean score of the home economics graduates and the significant difference between the

scores of the two groups appeared to indicate that the home management training of the home economics graduates had also affected the material resource management practices.

Figure 3 shows the means of the material resource management scores of the home economics graduates with children, 26.41, and those without children, 26.12. In the college wives group, those with children had a lower material resource management score mean, 22.84, while those without children had a score mean of 24.29. Although "t" tests showed no significant difference between either the means of the material resource management scores of the graduates with and without children or between the student wives with and without children, it is interesting to note that the home economics graduates with children had a slightly greater mean score than those without children, as compared to the reverse situation for the student wives.

Management of Combined Human and Material Resources. The human and material resource management scores of each home economics graduate who had at least one child were combined to facilitate the use of only one mean during the analysis in relation to present income. Again, because the single graduates had checked the "does not apply" column for six questions regarding human resource management, their scores were considered separately. The scores of the single graduates were lower because no points were given for these questions.

The combined human and material resource management scores of the unmarried and married home economics graduates were classified according

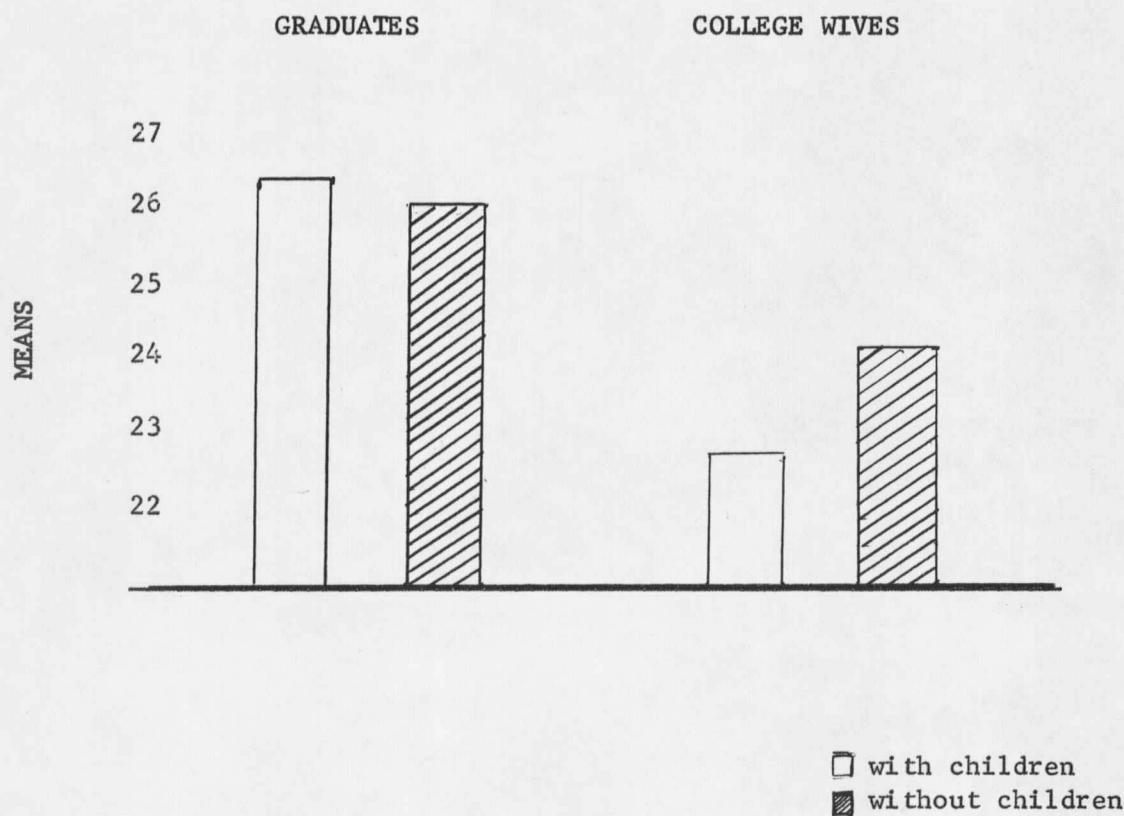


Figure 3. Means of Material Resource Management Scores of 1957-61 Montana State College home economics graduates and 1961-62 Montana State College student wives.

to five income levels, spaced at \$2000 intervals from below \$3000 through over \$9000. The combined human and material resource management score mean was computed for each group of graduates in each income level.

Figure 4 shows the relationship of the combined human and material resource management score means of the unmarried and married home economics graduates in relation to their present income.

There appeared to be an interesting contrast between the means of the combined human and material resource management scores of the unmarried and married graduates. As the income increased, the mean of the combined human and material resource management scores of the unmarried graduates appeared to increase, whereas the mean scores of the married graduates appeared to decrease. However, an analysis of variance showed no significant difference between the means of the combined human and material resource management scores of the two groups in relation to income.

When the means of the combined human and material resource management scores were computed, the number of respondents in each income level varied. Twenty of the unmarried graduates were concentrated at the \$3000-5000 level, compared to only four and three at the below \$3000 and \$5000-7000 levels, respectively. The married graduates were more evenly distributed at each income level with seven, eight, nine and four at the \$3000-5000, \$5000-7000, \$7000-9000, and over \$9000 levels, respectively. This distribution variance may be the reason for no statistical difference in the combined human and material resource management score means of the unmarried and married graduates in relation to their income.

The first five questions listed below regarding human and material

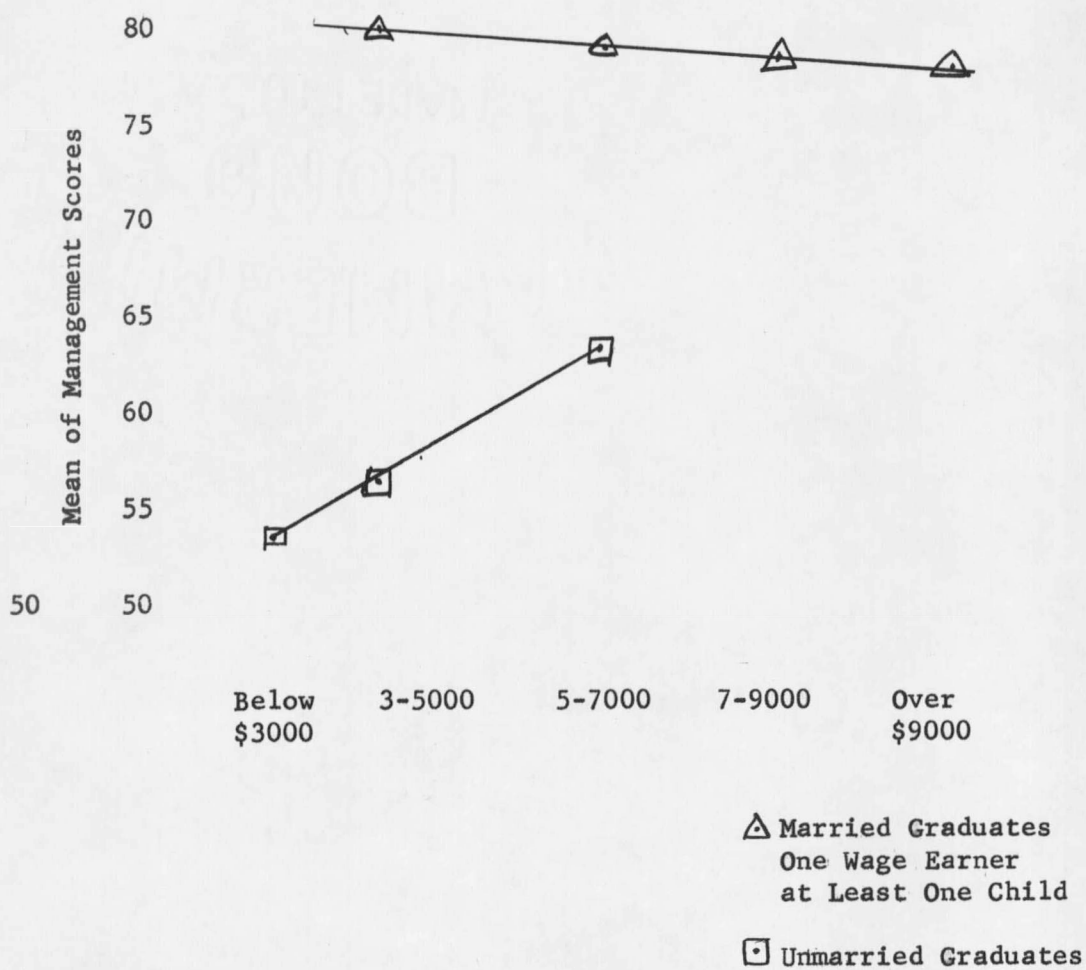


Figure 4. Means of Combined Human and Material Resource Management Scores of Married and Unmarried 1957-61 Montana State College Home Economics Graduates.

resource management were checked "frequently" most often. The second list was checked "seldom" most often. At the end of each question, the number of replies checked "frequently" or "seldom," the total number of replies, and the per cent of the total tabulated replies are indicated. The total number of tabulated replies for each question varied because certain electronic cards were rejected from the mechanical sorter.

Checked "frequently":

1. Are you well satisfied with your purchases?
(97 out of 99, or 98 per cent)
2. Is meat stored near the cooling coils in the refrigerator?
(88 out of 94, or 93.6 per cent)
3. Is food removed from paper sacks and cartons, where possible before storing in the refrigerator?
(88 out of 94, or 93.6 per cent)
4. Do you accomplish the tasks that must be done?
(87 out of 99, or 88 per cent)
5. Are you free from boredom fatigue?
(81 out of 99, or 81.9 per cent)

Checked "seldom":

1. Do you make a written time plan?
(44 out of 98, or 44.9 per cent)
2. Have you arranged working areas of the correct height for proper operation of body mechanics?
(27 out of 98, or 25.3 per cent)
3. Do you have periodic rest periods during the day?
(24 out of 96, or 21.8 per cent)
4. Do you make household furnishings?
(21 out of 96, or 21.8 per cent)
5. Do you make gifts?
(18 out of 98, or 20.05 per cent)

The computed replies of the preceding questions would seem to indicate that the home economics graduates "frequently" apply the human and material resource management concepts represented by the first five questions. To some extent the management principles represented by the second five questions appeared not to have been accepted. Revision or deletion of these areas should be considered after their real value has been determined.

Sewing Practices. Contingency tests compared the number of home economics graduates and student wives who had checked the "frequently," "occasionally," and "seldom" columns for the three questions regarding sewing practices (see Appendix, questionnaire, page 2, 10-12). Chi-square values obtained from the contingency tests showed a significant difference at the .05 level. The question, "Do you make clothing for yourself and family?" yielded significance at the .01 level. Although these questions were among the list of questions checked "seldom" most frequently by the home economics graduates, 36 per cent of the home economics graduates checked "frequently" making household furnishings as compared with 26 per cent of the student wives; 34 per cent of the home economics graduates indicated "frequently" making gifts as compared to 24 per cent of the student wives; and 80 per cent of the home economics graduates indicated making clothes for themselves and family as compared to 40 per cent of the student wives.

Buying Practices. Most of the purchasing done by the home economics graduates as well as the student wives was done on a cash basis. However,

as the financial value of household materials increased, e.g. furniture and large equipment, the cash purchases became less frequent. The size of the sample was too small for complete validity of a contingency test to discover whether the income of the home economics graduates and the student wives influenced the type of buying, but there appeared to be no significant difference.

Equipment. To determine the importance of various pieces of equipment to the homemaker, each piece was ranked according to the order it was obtained. It was assumed that the piece which was obtained first would be considered the most important to the homemaker and to her family. The following five were found to be preferred in the order in which they are listed by the home economics graduates who had all five pieces of equipment:

1. vacuum cleaner (either upright or tank)
2. television
3. automatic washer
4. dryer
5. freezer

Of these five, television was the only piece of equipment owned by the unmarried graduates. The procurement of a vacuum cleaner first in the ranked list of equipment may be partly attributed to the home management courses, since vacuum cleaners are used consistently at the home management house.

Work Simplification. Contingency tests compared the number of home economics graduates and the student wives who had checked "frequently," "occasionally," and "seldom" for each question regarding work simplification. Chi-square values showed a significant difference at the .05 level in twelve of the twenty-six, or 46 per cent, of the questions regarding work simplification practices (see Appendix, questionnaire, pages 3 and 4). A list of the questions which were significant follow. The single asterisk indicates significance at the .001 level. The quote mark indicates that the percentage of student wives who checked the "frequently" column was greater than that of the home economics graduates.

- Significant*
1. Housecleaning
 - a. Use both hands when washing woodwork?
 - b. Dust with a vacuum cleaner?
 - c. Plan thorough cleaning throughout year to prevent a big task in the spring and fall or both?
 2. Food preparation
 - .001* * a. Use a French knife when dicing vegetables?
 - b. Sit down to work?
 3. Ironing
 - a. Sit down?
 - b. Use unironed sheets?
 - * c. Damp dry clothes to avoid sprinkling?
 - " d. Take five minutes or less to iron a man's shirt?
 4. Storage
 - * a. Store food and equipment in place of first use?
 5. Application of work simplification principles to tasks outside the home? (Job, committees, etc.)
 - * a. Use written plan for tasks?
 - * b. Avoid unnecessary steps in procedure?
 - c. Plan next meal before leaving home?

The following list of work simplification questions were not significant at the .05 level when chi-square values were obtained. Again, the

quote mark indicates that the percentage of student wives who checked the "frequently" column was greater than that of the home economics graduates.

Not Significant
1. Dishwashing

- a. If right handed, use a right to left sequence; or if left handed, use a left to right sequence?
- " b. Let dishes drain dry?
- " c. Use a double sink or an improvised similar method?

2. Food Preparation

- a. Do grocery shopping only once per week?

3. Ironing

- a. Use a wide ironing board?

4. Bed Making

- a. Arrange bedding in sequence?
- b. Start at foot, making only one trip around?
- " c. Start at side, making only one trip around?
- d. Start at foot, retracing steps on one side of the bed?
- " e. Take 2 1/2 minutes or less?

5. Storage

- a. Use step or half shelves?
- b. Store like articles together?
- c. Rotate commonly used articles?

Apparently, the home management courses affected the practices of the home economics graduates in 46 per cent of the work simplification questions since all but one of the questions which were found significant had a higher percentage of home economics graduates who checked the "frequently" column. Seemingly, the home economics graduates had accepted these work simplification practices and were applying them in their homes. In the other 54 per cent of the work simplification questions, the student wives with no formal home management training must have been applying the same work simplification practices as the home economics graduates. The largest percentage who checked either the "frequently" or "seldom" column should give some indication as to whether or not a practice was accepted

or rejected (see Appendix, Table III, page 60).

Housecleaning. All three questions regarding work simplification principles in relation to housecleaning practices showed significance at the .05 level. Thirty-four of the eighty-nine home economics graduates, or 32.8 per cent, indicated "frequently" using both hands when washing woodwork as compared to seven of the fifty-one student wives, or 13.72 per cent. The question concerning dusting with a vacuum cleaner was checked "frequently" by fifty-three of the eighty-two home economics graduates, or 62.35 per cent, compared to thirteen of the forty-five student wives, or 28.88 per cent. A higher per cent of both groups replied "frequently" to the question regarding planning thorough cleaning throughout the year in order to prevent a big task in the spring or the fall or both. Sixty-five of the eighty-six home economics graduates, or 75.58 per cent, and twenty-two of the forty-nine student wives, or 44.89 per cent, replied "frequently" to this question. Apparently, the home management courses affected the practices of the home economics graduates since the percentage of the home economics graduates checking the "frequently" column was greater for all three questions.

Dishwashing. None of the practices of the home economics graduates and the student wives regarding the three dishwashing questions showed significance. However, the percentage of those who checked the "frequently" column was high in both groups, which would seem to indicate the application of these work simplification practices. Seventy-eight per cent of the home economics graduates and 67 per cent of the student wives

checked the "frequently" column indicating a right to left dishwashing sequence for a right-handed person or the reverse sequence for a left-handed person.

A larger per cent of student wives checked the "frequently" columns regarding both the practice of letting dishes drain dry and the use of a double sink or an improvised similar method. Almost 61 per cent of the student wives, as compared to 55 per cent of the home economics graduates let dishes drain dry. Ninety-two per cent of the student wives and 87 per cent of the home economics graduates indicated "frequently" using a double sink or an improvised similar method. The college housing facilities have double sinks and most of the wives live in college housing which undoubtedly influenced the replies to the questions regarding the type of sink used in relation to the dishwashing procedure practiced. The fact remains that no significant difference was found in the dishwashing practices of the two groups.

Food Preparation. Seemingly, the home management courses affected the practices of the home economics graduates in two of the three questions regarding food preparation. Thirty-nine of the eighty-five home economics graduates, or 45.84 per cent, indicated using a French knife "frequently" as compared to five of the thirty-nine student wives, or 12.82 per cent.

The significant difference regarding the work simplification practice of sitting down to work while preparing food again showed a larger per cent of home economics graduates checking the "frequently" column, 19.79 per cent, or nineteen of the ninety-six home economics graduates,

as compared to 16.32 per cent, or eight of the forty-nine student wives. These percentages are quite low; the interesting point which probably contributed definitely to the significant difference was that thirty-eight of the ninety-six home economics graduates, or 39.58 per cent, checked the "seldom" column, compared to thirty-one of the forty-nine student wives, or 63.26 per cent.

The only food preparation question which was not significant was that of grocery shopping only once a week. Sixty-nine per cent of the home economics graduates, and 66.66 per cent of the student wives checked "frequently" shopping for groceries only once a week. Because the mean income of the student wives was below \$3000, or less than that of the home economics graduates, which was between \$5000-7000, it is quite possible that the student wives needed to plan their expenditures wisely. This factor, plus some money management training of the home economics graduates, may have contributed to the finding of no significant difference between the two groups.

It appeared that the work simplification practices regarding food preparation had been accepted by the home economics graduates. Although almost 40 per cent of the home economics graduates replied "seldom" to the question regarding sitting down to work, when compared to the replies of the student wives, where 63 per cent had replied "seldom," the question yielded significance. Since the respondents were comparatively young, they may have felt no need for sitting while preparing food.

Ironing. Forty of the eighty-two home economics graduates, or 48.78 per cent, indicated "frequently," twelve, or 14.62 per cent, indicated "occasionally," and thirty, or 36.58 per cent, indicated "seldom" following the procedure taught at the home management house for ironing a man's shirt. Forty-two of the ninety-six home economics graduates, or 43.75 per cent, indicated "frequently," twenty-six, or 27.08 per cent, indicated "occasionally," and twenty-eight, or 29.17 per cent, indicated "seldom" adapting the shirt method to other garments.

In one instance where there was a significant difference, the percentage of student wives who checked the "frequently" column was greater than that of the home economics graduates. Twenty-six of the forty-nine student wives, or 53 per cent, indicated "frequently" ironing a man's shirt in less than five minutes, compared to twenty-three of the sixty home economics graduates, or 34 per cent. A man's white dress shirt will usually take more time to iron than a printed sport shirt, which leads the investigator to believe that the question may not have been interpreted in the same manner by all respondents. Since the home economics graduates were required to iron a man's dress shirt for a practical examination during the time of the home management courses, it is quite possible that most of the graduates answered the question accordingly. At the same time, it is also possible that the student wives answered the question with a sport shirt in mind, since most of their husbands do not wear dress shirts to classes. The fact remains that the graduates do not frequently iron a man's shirt in five minutes.

There was a significant difference at the .05 level between the practices of the home economics graduates and the student wives in relation to sitting down to iron. Thirty-eight of the ninety-five home economics graduates, or 40 per cent, and eleven of the forty-eight student wives, or 22.92 per cent, indicated "frequently" sitting down to iron. Apparently, the home management courses had affected the practices, since the percentage of home economics graduates who sit down to iron "frequently" is greater than that of the student wives.

Twenty per cent of the home economics graduates and 9 per cent of the student wives reported "frequently" using a large ironing board. There was no significant difference between the practices of the two groups regarding the application of this work simplification practice. Since the percentages of the home economics graduates and the student wives "frequently" applying the use of a wide ironing board were low, and there was no significant difference between the practices of the two groups, it appeared that the home economics graduates had not applied the principle of using a large ironing board.

There was a significant difference at the .05 level regarding the practice of using unironed sheets. Seventy-six of the ninety home economics graduates, or 84.44 per cent, and thirty-one of the forty-six student wives, or 67.39 per cent, checked "frequently" using unironed sheets. Although the practice seemed to be applied in a high percentage of both groups, the home management courses could be a factor influencing the significant difference.

The practice of damp drying clothes to avoid sprinkling was found

significant at the .001 level. Forty-five of the ninety-three home economics graduates, or 48.38 per cent, checked the "frequently" column, compared to eight of the forty-seven student wives, or 17.02 per cent. Thirty-one of the forty-seven student wives, or 65.96 per cent, checked the "seldom" column. In view of these percentages, it would appear that the home management courses contributed to the significant difference between the two groups.

Bed Making. There were no significant differences between the home economics graduates and the student wives in relation to their bed making practices. Of the home economics graduates, 61.70 per cent and of the student wives, 48.94 per cent indicated "frequently" arranging bedding in a sequence. Although there was no significant difference between the practices of the home economics graduates and those of the student wives regarding arranging bedding in a sequence, the high percentage of both groups checking the "frequently" column would seem to indicate application of this work simplification practice.

The tabulated responses regarding the bed making procedures indicated that three questions (see Appendix, questionnaire, page 4, 5b, 5c and 5d) had been self-eliminating. Less than 50 per cent of both groups indicated frequent application of any of the three methods. Thirty-one per cent of the home economics graduates and 23 per cent of the student wives reported "frequently" making a bed by starting at the foot and making only one trip around. Fifty-seven per cent and 52 per cent of the home economics graduates and the student wives, respectively, reported

"seldom" applying this method. Thirty-eight per cent and 49 per cent of the home economics graduates and the student wives, respectively, reported "frequently" making a bed by starting at the side and making only one trip around. Forty-four per cent and 39 per cent of the home economics graduates and the student wives, respectively, reported "seldom" making a bed by starting at the side and making only one trip around. Thirty-one per cent and 20 per cent of the home economics graduates and the student wives, respectively, reported "frequently" making a bed by starting at the foot and retracing steps on one side of the bed. Fifty-two per cent of the home economics graduates and 58 per cent of the student wives, reported "seldom" applying this method. If it is possible to say that any of these methods were accepted on the basis of the percentages mentioned above, the method of starting at the side and making only one trip around would seem to be preferred.

Sixty per cent of the home economics graduates indicated "seldom" folding sheets according to the method used at the home management house. Only a little more than one-fourth, 26.74 per cent, of the home economics graduates indicated "frequently" folding sheets according to the method used at the home management house.

Less than 50 per cent of each group indicated "frequently" making a bed in less than two and one-half minutes, 38.46 per cent of the home economics graduates and 39.13 per cent of the student wives. The data seemed to indicate that the method used and the amount of time taken to make a bed were not of great concern to the respondents.

Storage. Only one question was found significant regarding storage practices of the home economics graduates and the student wives. Eighty-two of the ninety-four home economics graduates, or 87.23 per cent, and twenty-nine of the fifty student wives, or 58.00 per cent, checked "frequently" storing food and equipment in the place of first use. The question yielded significance at the .001 level. Although a high percentage of both groups indicated "frequently" storing food and equipment in place of first use, the higher per cent of home economics graduates who indicated "frequently" applying this method would seem to indicate that the home management courses were a factor which affected the significant difference.

No significance was found between the practices of the use of step shelves, the storage of like articles, and the rotation of commonly used articles. It is not surprising that 94.56 per cent of the home economics graduates and 86.27 per cent of the student wives reported "frequently" storing like articles together since such practices as storing food and equipment are rarely done. The question should have read, do you store like sized articles together, such as measuring cups of the same size, to avoid the need for stacking.

In reply to the question of rotating commonly used articles, the answer checked by 61.11 per cent of the home economics graduates and 42.00 per cent of the student wives was "frequently". Forty-eight per cent of both groups checked "seldom" using step or half shelves. These answers represented the largest percentage of the three possible replies of both the home economics graduates and the student wives.

Application of Work Simplification Principles to Tasks Outside the Home. The practices of using written plans for tasks and avoiding unnecessary steps in procedure were significant at the .001 level. Forty-two of the ninety-five home economics graduates, or 44.21 per cent, and nine of the forty-seven student wives, or 19.15 per cent, indicated "frequently" using written plans for tasks outside the home. Fifty-two of the ninety-six home economics graduates, or 54.17 per cent, and fourteen of the forty-nine student wives, or 28.57 per cent, indicated "frequently" avoiding unnecessary steps in procedure.

At least 50 per cent of both groups indicated "frequently" planning the next meal before leaving home. Sixty-five of the ninety-one home economics graduates, or 71.43 per cent, and twenty-four of the forty-eight student wives, or 50.00 per cent, checked the "frequently" column. Although planning the next meal before leaving home appeared to be applied "frequently" by both groups, significant difference was found at the .05 level.

All three questions regarding the application of work simplification principles to tasks outside the home were significant. The .05 significance level for the practice of planning the next meal before leaving home was less significant than that of the other two questions. Apparently, the home management training influenced the practices of the home economics graduates greatly regarding the use of written plans for tasks and avoiding unnecessary steps in procedure, since a significant difference was found at the .001 level.

Hypothesis II

The following data were related to factors concerning hypothesis II. For clarification, hypothesis II is restated.

There is no significant difference between the home economics graduates, grouped according to present income, who were married at the time the home management courses were taken and those who were not when the following practices are compared:

- A. Human and Material Resource Management
- B. Work Simplification

Human and Material Resource Management. No significant interaction was found when the combined human and material resource management scores of the home economics graduates who were married at the time the home management courses were taken were compared with those scores of the graduates who were not in relation to their present income. The two factors, marital status and income, did not combine to produce an added effect not due to one of them alone.

Work Simplification. When the original work simplification scores of the home economics graduates who were married at the time the home management courses were taken were compared with those scores of the graduates who were not, there was no significant interaction. However, when the adjusted work simplification scores, (see page 15), of the two groups were compared, interaction was significant at the .05 level. This significant interaction indicated that the effect of income groups upon the

adjusted work simplification scores was dependent upon marital status at the time the courses were taken. The possibility of the existence of such interaction was indicated by the pattern of means for the income groups. See Figure 5. For the group not married at the time of the courses, the pattern was that of a convex curve, as the means went from 54.88 at \$3000-5000, to 58.94 at \$5000-7000, and then lowering again to 56.50 at \$7000-9000, and to 54.4 at over \$9000. For the group that was married at the time the courses were taken, the pattern was that of a concave curve, as the means went from 61.00 at below \$3000, to 56.00 at \$3000-5000, to a low of 52.66 at \$5000-7000, and then began to rise again to 56.33 at \$7000-9000, and to 63.00 at over \$9000.

Separate analyses of variance were performed for the married and not married home economics graduates since significant interaction was found. In neither case was a significant difference found, at least at the .05 level. A fitted polynomial, for the not married group, did not contribute significantly at the .05 level to reduction in error sum of squares, but was significant at the .10 level. Although the curvilinear relationship (Figure 5) of the work simplification scores of the graduates who were married at the time the courses were taken and the scores of those who were not, in relation to income groups, was not significant, it may possibly be a real phenomenon and may merit further investigation.

F-tests compared the mean of the student wives' work simplification scores for each of the income groups with the mean of the adjusted work simplification scores of (a) the home economics graduates who were not married at the time the home management courses were taken, and (b) the home

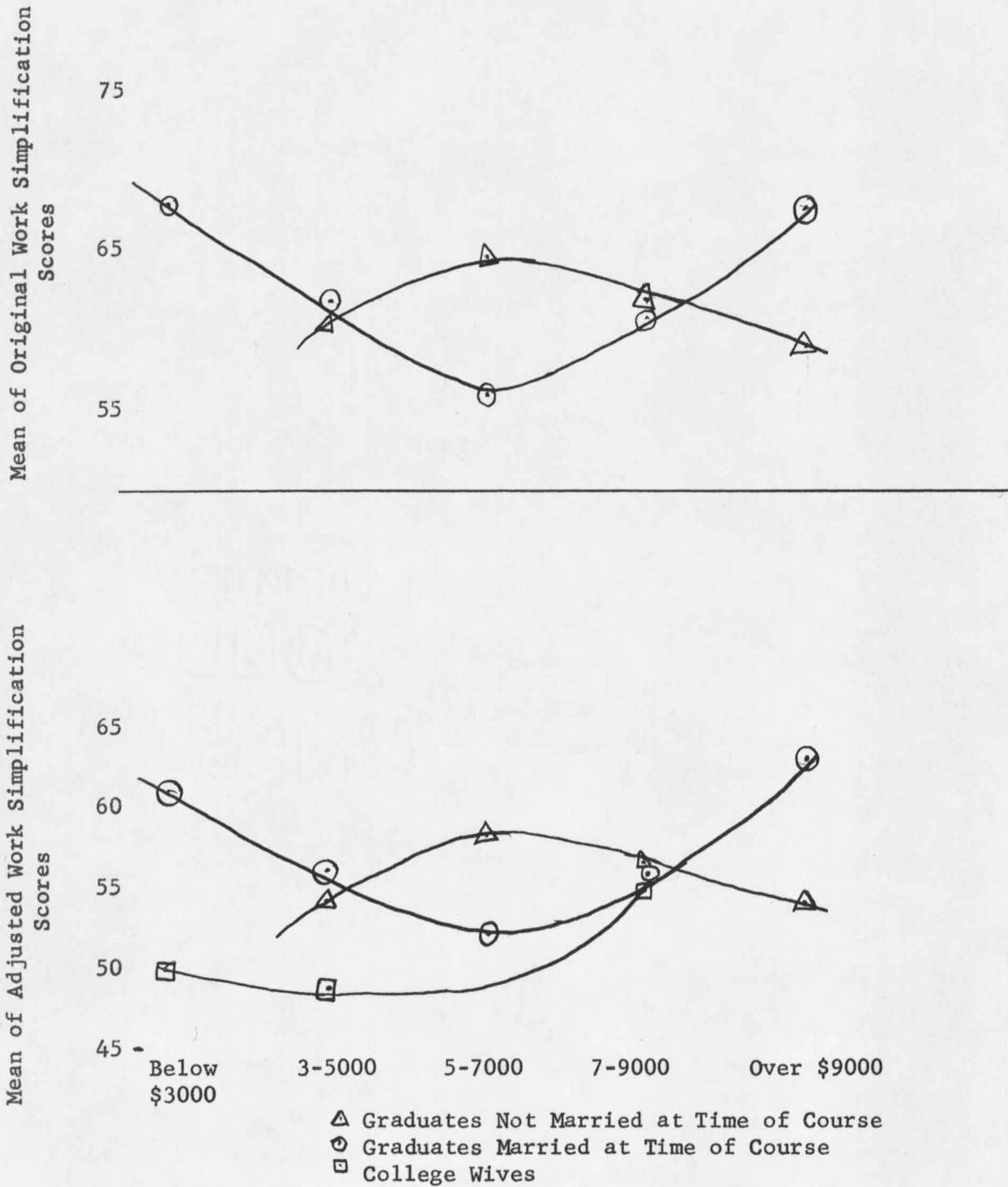


Figure 5. Interaction of Work Simplification Scores, Present Income in Relation to Status at Time of Courses

economics graduates who were married at the time the courses were taken. There was a significant difference, at the .01 level, between the means of both graduate groups when compared with that of the student wives in the \$3000-5000 category. There was no significant difference when the mean scores of the student wives in the \$5000-7000 and \$7000-9000 income categories were compared with both means of the two graduate groups in the respective income categories. Significance at the .01 level was found for the below \$3000 income group when the adjusted work simplification score mean of the home economics graduates who were married at the time the courses were taken was compared with the student wives' work simplification mean score.

No significant difference among income groups was found when the work simplification scores of (a) the student wives, (b) the home economics graduates who were married at the time the courses were taken, and (c) the home economics graduates who were not married at the time of the courses were tested by analyses of variance. Because no significant differences were found among income groups, F-tests were computed for the difference between the overall means. Significance at the .01 level was found when the overall means of the adjusted work simplification scores were computed between (a) the student wives, mean 50.20, and the home economics graduates, mean 57.22, who were married at the time the home management courses were taken, (b) the student wives, mean 50.20, and the home economics graduates, mean 56.64, who were not married at the time of the courses, and (c) the student wives, mean 50.20, and all of the home economics graduates, mean 56.81. Confidence limits, at the .05 level, for

the difference between the means of these three tests with sixty, eighty-six, and 104 degrees of freedom, respectively, were found. The confidence limits for each of the respective tests were (a) 7.02 ± 3.03 , (b) 6.44 ± 2.21 , and (c) 6.61 ± 2.09 .

Tabulated Suggestions from Special Comment Section

Management of Human Resources

Be flexible.

Organize the week's work at the beginning of the week.

Don't plan too much.

Always have an outside interest.

Rest and physical activity are very important to vary a day's routine.

Let the children help--make a game of helping.

Adopt the rule--the last one up in the morning makes the bed.

Use a kneeling pad on ball bearing wheels, when working on your knees.

Management of Material Resources

FOOD

Place aluminum foil over pizza so cheese doesn't toughen.

Add wheat germ to breads, cereals and pancakes for additional nutrition.

Substitute for economy--for whipped cream, use dry milk.

For economy, omit extras such as nuts, coconut, marshmallows, etc.

Plan menu around specials on meats particularly and other items also.

HOUSING

For extra storage, take out a piece of wall board, make a frame, spray area with paint and use masonite doors to close cupboard which is of just the right depth for canned goods.

Wash outside windows with synthetic detergent to make them shine.

Neighborhood you choose, should be a primary factor in selecting a home.

CLOTHING

When sewing, choose simple patterns and easy iron fabrics, cut children's shirts in one piece--no side seams to sew or iron.

Use wash and wear fabrics.

Put iron-on tape on knees of trousers when new.

Avoid ruffles for everyday.

Work Simplification

FOOD

Plan meals in advance.

When cooking for two, take a 4-6# chuck roast, cut 2 steaks and a small roast.

Freeze ice cubes in baby food cans--one cube goes a long way.
In a senior high school class, one hundred recipes were developed from four mixes.

Just grease spot where cookie is going to be on the sheet.

Cream peas by using just one pan to make white sauce and then adding peas.

Use a blender for making baby food and mixing powdered milk.

Make casseroles so that when baked in small dishes some can be frozen.

When using whipped cream, freeze in individual servings on cookie sheet for an hour then wrap.

HOUSING

Do a little cleaning each day so that no big task is left for the weekend.

A floor-polisher is better than scrubbing by hand and waxing.

Use sponge mop for washing walls.

When re-upholstering a channel back chair, the cotton pads which form the channels can be easily slipped into the covering if placed in an old stocking and just pulled through.

CLOTHING

Sewing more than one thing using same pattern.

Use of spray starch.

When using double diaper, hang them double on the line.

CHILD CARE

Cold cream is a good paint remover, particularly for children's skin.

Other Suggestions

GENERAL

No time for leisure enjoyment during home management course.

Life too routinish if too much consideration is given to time and energy management.

Lecture combined with the practice--very valuable.

Too much expected in too little time.

Atmosphere should be relaxed and pleasant.

The more practical the idea, action, or work, the more useful the lesson.

Time saved in ironing shirt the scientific method is lost in folding and sprinkling time.

Continue the home management requirement for all home economics majors.

THEORY COURSE

More emphasis on time and energy saving methods, especially in food preparation.
Demonstrations are good.
Stress enjoying doing and accomplishing more to create a real family situation.
Start a book of household hints.
Emphasize storage of leftovers.
Stain removal knowledge very helpful.
Give out pamphlets on work simplification, filed information important as reference material later.
Nice to learn linen buying.
Study disaster recovery.
Study mixes and quick meals.
Work out system whereby married students can practice management in their own homes.
Avoid places where the individual has little say over changes that can be made.

PRACTICUM COURSE

Encourage entertainments which include some town people as well as people with children.
More realistic if all the home tasks were done by one girl.
Special assignments, such as studying family insurance, judging, evaluating, curtain and drapery construction, could be done while one girl had charge of the entire house.
Changing storm windows should not be required.
Projects which involve twelve to fourteen hours per day, such as painting, are too big.
To create more of a home situation, have other children than just a baby to care for.
Let the cook do the menu planning to avoid friction between the girls; the manager could still do the grocery shopping.
Try some unexpected guest meals for those who cannot be there at regular times.
Try more ready to heat and eat foods.
Use a more varied food budget rather than having each girl's budget the same.

CHAPTER V

CONCLUSIONS

The purpose of this study was to evaluate the Montana State College home management courses. One hundred Montana State College home economics graduates for the years 1957 through 1961 and fifty-one wives of 1961-62 Montana State College students participated in the study. Eighty-three per cent of the 120 mailed questionnaires were returned by the home economics graduates. The questionnaire was administered personally to the group of student wives.

Of the married home economics graduates, 40 per cent were full-time homemakers; the mean income was between \$5000 and \$7000; and the average number of children per family was 1.51. Eighty-six per cent of the single graduates were employed full-time and their mean income was between \$3000 and \$5000. The student wives had an average of 1.67 children per family; 40 per cent were full-time homemakers; and the mean income was below \$3000.

Hypothesis I

Management of Human and Material Resources. This study revealed that many of the management principles which are being taught in the Montana State College home management courses were being applied by home economics graduates of that institution. Questions receiving the largest number of responses checked "frequently" indicated that the graduates were applying human and material resource management principles. Questions most often checked "frequently" were:

1. Are you well satisfied with your purchases?
2. Is meat stored near the cooling coils in the refrigerator?
3. Is food removed from paper sacks and cartons, where possible, before storing in the refrigerator?
4. Do you accomplish tasks that must be done?
5. Are you free from boredom fatigue?

It was discovered that the home economics graduates had applied some human and material resource management principles much less frequently. Questions most often checked "seldom" were:

1. Do you make a written time plan?
2. Have you arranged working areas of the correct height for proper operation of body mechanics?
3. Do you have periodic rest periods during the day?
4. Do you make household furnishings?
5. Do you make gifts?

In testing the managerial scores of the home economics graduates with those of the college wives, the mean score for the management of human and material resources was found significant at the .05 level. The mean of the graduates was higher than that of the student wives which would seem to indicate that the home management courses had affected the management practices of the home economics graduates.

Television was a common piece of equipment found in homes of married as well as unmarried graduates. In the married group, a vacuum cleaner ranked higher in value than television, with an automatic washer, dryer, and freezer falling into ranks three, four, and five, respectively.

In general, the buying of the graduates was done on a cash basis.

This was also characteristic of the student wives. As might be expected, cash purchases became less frequent as the financial value of the household materials increased.

The sewing practices of the home economics graduates and the student wives were found to be significantly different at the .05 level. The percentage of home economics graduates checking the "frequently" column was greater than that of the student wives. Apparently, general home economics training had affected the sewing practices of the graduates.

Work Simplification. There was a significant difference at the .05 level in the practices of the 1957-61 Montana State College home economics graduates and the wives of the 1961-62 Montana State College students in 46 per cent, or twelve of the twenty-six questions regarding work simplification practices. The inference can be made, that for those questions which were not significant, the student wives with no formal management training were applying the same techniques as the home economics graduates. All questions concerning housecleaning and application of work simplification practices to tasks outside the home, such as a job or committees, were found significant. None of the questions regarding dishwashing and bed making procedures were found significant. Most of the questions concerning food preparation and ironing were found significant and no significance was found for most of the questions concerning storage.

Hypothesis II

Human and Material Resource Management. No significant difference was found when the human and material resource management scores of the home economics graduates and the student wives were compared in relation to their present income. There is no evidence to substantiate a direct relationship of income to managerial score.

Work Simplification. Significance at the .01 level was found when the work simplification score mean of the graduates were compared with that of the student wives in the low income categories, below \$3000 and between \$3000 and \$5000. No significance was found when the means of the graduates and the student wives in the upper income categories were computed, between \$5000 and \$7000, and between \$7000 and \$9000.

An interesting relationship was found when the adjusted work simplification mean scores of the graduates who were married at the time the courses were taken were compared with those scores of the graduates who were not in relation to present income. Significant interaction was found at the .05 level. The curvilinear relationship, indicated by the convex curve created by the mean scores of the graduates who were not married at the time the courses were taken and the concave curve of those who were, in relation to present income levels, may be a real phenomenon. The investigator wonders if the place in the life cycle of the two groups may have affected this interaction.

Tabulated Suggestions

The written suggestions of the home economics graduates were tabulated. Although no more than five made the same suggestion, certain ideas seemed to deserve emphasis. The respondents stated that the courses were very valuable and that they should be required of all home economics majors. To receive the most value from the home management resident course, it was suggested that the atmosphere should be relaxed and pleasant and that there should be time for leisure enjoyment away from the house.

Suggestions for the theory course seemed to indicate a need for assignments which could be filed as reference material, such as time and energy methods, especially in food preparation, household hints, storage of leftovers, and stain removal techniques.

In applying the theoretical management knowledge in the practical course, the suggestion was made to have one girl manage the entire house to make the experience more realistic. More ready-to-heat-and-eat foods could be included to meet the needs of today's homemaker. Another suggestion was if a more varied food budget was used, the girls would have a clearer concept of types of meals to prepare at different income levels.

Implications

In light of the present study, the following suggestions seemed worthy of consideration:

1. Continued stress on care and selection of material goods, particularly regarding food storage techniques and consumer purchasing.

2. Evaluation of the importance of written plans with subsequent change in presentation or deletion of subject matter.

3. Continued emphasis on and re-evaluation of the organizational and management practices which enable graduates to complete necessary tasks.

4. It may be advisable to place more importance on the development and maintenance of good body mechanics since remodeling may be required to change working heights.

5. Re-evaluation of the importance of work simplification practices in the home in respect to the individual homemaker. If one is too concerned about how something has to be done, the end product may be less satisfactory and may end in frustration for the homemaker. If the homemaker is in good health, the exercise derived from housework may help her retain it. If the least possible energy is exerted for each task, the homemaker may find it necessary to seek more expensive and less enjoyable avenues of exercise. Particular consideration should be given to the following work simplification practices:

- a. sitting down to prepare food
- b. ironing a man's shirt and the use of a wide ironing board
- c. bed making methods

6. Stress the importance of management in the creation of good human relationships.

7. Investigate the possibility of scheduling the married students in one group in order to utilize their own homes for the laboratory course.

Further Research

The student wives participating in the study represented only 7 per cent of the entire student wife population. The comparisons were made on the basis of an arbitrary score assigned to each questionnaire. In the event of further study, a larger comparative group could be selected and possibly another scoring method could be devised.

There may be variations in the managerial skills of graduates in the different options, such as child development, institution management,

and teaching. A larger population may be necessary to discover this. Managerial practices might be found to differ between full-time homemakers and employed homemakers.

The curvilinear relationship, indicated by the graduates who were married at the time the courses were taken and those who were not, was not statistically significant on the basis of this study. However, it may possibly be a real phenomenon and may merit further investigation.

APPENDIX

TABLE I

F-TESTS

Tests	<u>Computed F</u>	<u>Degrees of Freedom</u>	<u>F .95</u>	<u>Probability</u>
Human and Material Resource Management Scores of Graduates Married and Not Married At Time of Course and Present Income			N.S.	
Human and Material Resource Management Scores of Married Graduates With At Least One Child In Relation to Present Income			N.S.	
Human and Material Resource Management Scores of Single Graduates In Relation to Present Income			N.S.	
Work Simplification Score of Graduates, Married and Not Married at Time of Courses, and Present Income			N.S.	
Adjusted Work Simplification Scores of Graduates, Married and Not Married at Time of Course, and Present Income	3.18	(3,52)	2.78	0.01<P<0.05
Work Simplification Scores of Wives In Relation To Present Income			N.S.	

TABLE I
(Continued)

F-TESTS

Tests	<u>Computed F</u>	<u>Degrees of Freedom</u>	<u>F_{.95}</u>	<u>F_{.99}</u>	<u>Probability</u>
Adjusted Work Simplification Scores of Graduates Single at Time of Courses vs Wives					
\$3000-5000	7.6565	(1,80)	3.96	6.96	P < 0.01
\$5000-7000			N.S.		
\$7000-9000			N.S.		
Adjusted Work Simplification Scores of Graduates Married at Time of Courses vs Wives					
Below \$3000	8.894	(1,54)	4.02	7.12	P < 0.01
\$3000-5000	8.83	(1,54)	4.02	7.12	P < 0.01
\$5000-7000			N.S.		
\$7000-9000			N.S.		
Adjusted Work Simplification Scores of Graduates Not Married at Time of Courses vs Wives	33.54	(1,86)	3.96	6.96	P < 0.01
Adjusted Work Simplification Scores of Graduates Married at Time of Courses vs Wives	21.40	(1,60)	4.00	7.08	P < 0.01
Adjusted Work Simplification Scores of All Graduates vs All Wives	39.3	(1,104)	3.94	6.90	P < 0.01

TABLE II

"t" TESTS

Tests	<u>Computed "t"</u>	<u>t_{.95}</u>	<u>t_{.99}</u>	<u>Probability</u>
Human Resource Management Scores of Graduates with Children vs Wives with Children	$t_{(71)} = 3.399$	1.994	2.648	$0.001 < P < 0.01$
Material Resource Management Scores of Graduates with Children vs Wives with Children	$t_{(70)} = 4.636$	1.994	2.648	$P < 0.001$
Management of Material Resources, Wives with Children vs Wives without Children		N.S.		
Management of Material Resources, Graduates with Children vs Graduates without Children		N.S.		

TABLE III

CHI-SQUARE VALUES & PERCENTAGES

Work Simplification Practices of Graduates and Student Wives

1st row: Graduates

2nd row: Student Wives

	Per Cent Checking Each Column			Computed χ^2 2d.f.	Probability Level
	Freq.	Occas.	Seldom		
1. Housecleaning					
a. Use both hands when washing woodwork?	38.2 13.72	35.9 33.0	25.8 52.94	13.36	P < 0.005
b. Dust with a vacuum cleaner?	62.35 28.88	16.47 33.33	21.17 37.77	13.25	P < 0.005
c. Plan thorough cleaning through- out year to prevent a big task in spring or fall or both?	75.58 44.89	17.4 34.69	6.97 20.40	13.23	P < 0.005
2. Dishwashing					
a. If right handed, use a right to left sequence; or if left handed use a left to right sequence?	78.2 66.66	4.34 12.5	17.39 20.83	3.71	N.S.
b. Let dishes drain dry?	54.84 60.78	21.5 15.68	23.65 23.52	.78	N.S.
c. Use a double sink or an improvised similar method?	86.51 92.16	44.98 1.96	8.98 5.88	1.10	N.S.

TABLE III
(Continued)

Per Cent Checking Each Column			Computed χ^2 2d.f.	Probability Level
Freq.	Occas.	Seldom		
3. Food preparation				
a. Use a French knife when dicing vegetables?	45.84 12.82	17.65 15.38	36.47 71.79	15.33 $P < 0.001$
b. Sit down to work?	19.79 16.32	40.62 20.41	39.58 63.26	7.96 $0.01 < P < 0.02$
c. Do grocery shopping only once per week?	69.14 66.66	21.27 13.73	9.57 19.60	3.58 N.S.
4. Ironing				
c. Take 5 minutes or less to iron a man's shirt?	34.32 53.06	44.77 18.36	20.89 28.57	8.91 $0.01 < P < 0.02$
d. Sit down?	40.00 22.92	27.36 18.75	32.63 58.33	8.79 $0.01 < P < 0.02$
e. Use a wide ironing board?	20.00 8.57	5.00 5.71	75.00 85.71	2.31 N.S.
f. Use unironed sheets?	84.44 67.39	5.55 17.39	10.00 15.21	6.29 $0.025 < P < 0.05$
g. Damp dry clothes to avoid sprinkling?	48.38 17.02	23.65 17.02	27.96 65.96	9.83 $0.005 < P < 0.01$

TABLE III
(Continued)

	Per Cent Checking Each Column			Computed χ^2 2d.f.	Probability Level
	<u>Freq.</u>	<u>Occas.</u>	<u>Seldom</u>		
5. Bed Making					
a. Arrange bedding in sequence?	61.70 48.94	17.02 17.02	21.27 34.04	2.89	N.S.
b. Start at foot, making only one trip around?	30.76 22.72	13.15 20.45	56.57 52.27	1.12	N.S.
c. Start at side, making only on trip around?	38.23 48.78	17.64 12.20	44.12 39.02	1.32	N.S.
d. Start at foot, retracing steps on one side of the bed?	30.76 20.00	16.92 22.50	52.30 57.50	1.60	N.S.
f. Take $2\frac{1}{2}$ minutes or less?	38.46 39.13	37.36 41.30	24.17 19.57	.41	N.S.
6. Storage					
a. Store food and equipment in place of first use?	87.23 58.00	10.63 32.00	22.22 10.00	16.03	$P < 0.001$
b. Use step or half shelves?	39.29 26.19	13.09 26.19	47.62 47.62	4.13	N.S.
c. Store like articles together?	94.56 86.27	5.43 11.76	--- 1.96	3.76	N.S.
d. Rotate commonly used articles?	61.11 42.00	20.00 34.00	18.88 24.00	5.09	$0.025 < P < 0.05$

TABLE III
(Continued)

	Per Cent Checking Each Column			Computed χ^2 2d.f.	Probability Level
	<u>Freq.</u>	<u>Occas.</u>	<u>Seldom</u>		
7. Application of work simplification principles to tasks outside the home. (Job, committees, etc.)					
a. Use written plans for tasks?	44.21 19.15	32.63 27.65	23.16 53.19	14.32	$P < 0.001$
b. Avoid unnecessary steps in procedure?	54.17 28.57	44.79 48.97	1.04 22.45	22.76	$P < 0.001$
c. Plan next meal before leaving home?	71.43 50.00	20.87 31.25	7.69 18.75	6.97	$0.025 < P < 0.05$

Material Resource Management of Graduates and Student Wives

10. Do you make clothing for yourself and family?	75.00 42.00	21.88 18.00	3.12 40.00	34.24	$P < 0.001$
11. Do you make household furnishings?	36.45 26.00	41.66 26.00	21.88 48.00	10.60	$P < 0.005$
12. Do you make gifts?	34.7 24.5	46.9 28.6	18.4 46.9	13.35	$P < 0.005$

TABLE IV

CONFIDENCE LIMITS

Test	<u>Degrees of Freedom</u>	<u>Difference Between Means</u>
Adjusted Work Simplification Scores of Graduates Married at the Time of Courses vs Wives	60	7.02 $\pm$ 3.03 *
Adjusted Work Simplification Scores of Graduates Not Married at the Time of Courses vs Wives	86	6.44 $\pm$ 2.21 *
Adjusted Work Simplification Scores of All Graduates vs All Wives	104	6.61 $\pm$ 2.09 *

* .05 level

MONTANA STATE COLLEGE
BOZEMAN

SCHOOL OF HOME ECONOMICS
HERRICK HALL

August 29, 1961

Dear Home Economics Graduate:

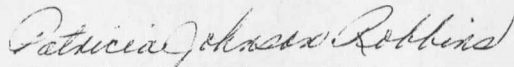
If you recall, the third step in the management process is evaluation. Miss Roskie, Mrs. McCormick and I are particularly interested in your feelings about the home management courses. The enclosed questionnaire is designed to evaluate what home management practices you are applying since your graduation.

We would appreciate your taking time to complete this questionnaire. By doing so, it will make it possible for the future graduates to benefit from your ideas. At the end of the questionnaire, there is space for you to write any further comments or suggestions that you feel would be valuable.

A reply envelope is enclosed for your convenience in returning the completed questionnaire. We would like to begin tabulation of the results on September 18, and would appreciate having the questionnaire returned by then.

Thank you for your help in this effort.

Sincerely,



(Mrs.) Patricia Johnson Robbins
Graduate Assistant
School of Home Economics

PR:jh

The Application of the Home Management Courses

General Personal Information

I. The following questions refer to personal information about yourself. Please disregard the numbers in parentheses. They are for coding purposes only. All information will be kept confidential. Please circle the correct information.

- (1) 1. Year of graduation: 1961 (1) 1960 (2) 1959 (3) 1958 (4) 1957 (5)
- (2) 2. Married at time Home Management course was taken: Yes (0) No (1)
- (3) 3. Status: Single (1) Married (2) Divorced (3) Widowed (4)
- (4) 4. Number of children in each age group: 1 mo. - 3 yr. 0 1 2 3
- (5) 3 yr. - 6 yr. 0 1 2 3
- (6) 6 yr. - 10 yr. 0 1 2 3
- (8) 5. Wage earner: Yes (0) No (1)
- (9) 6. If answer is yes in #5: Inside home (1) Outside home (2)
- (10) 7. Time involved in earning wage: Full-time (1) Part-time (2)
- (11) 8. Occupation: Homemaker (1) Teacher (2) Dietitian (3) Textiles (4)
- Extension (5) Business (6) Other (7)
- (12) 9. If you teach, at what level? Elementary (1) Junior High (2)
- Senior High (3) Adults (4)
- (13) 10. Family income: Below \$3000 (1) \$3000-5000 (2) \$5000-7000 (3)
- \$7000-9000 (4) Over \$9000 (5)
- (14) 11. Residence: House (1) Apartment (2) Trailer home (3)
- (15) 12. If you circled either house or trailer home in #11, what is the financial status? Debt free (1) Mortgaged (2) Rented (3)

Management of Human Resources

II. The following questions refer to your management practices concerning human resources such as time, energy, skills, and attitudes. Those questions which refer to "family", refer only to the husband and wife, or husband, wife and children, and not to a single person. Place a check for each item in the proper column.

	<u>Frequently</u> (1)	<u>Occasionally</u> (2)	<u>Seldom</u> (3)	<u>Does not Apply</u> (4)
(16) 1. Do you set goals for personal improvements?	_____	_____	_____	_____
(17) 2. Do you make a written time plan?	_____	_____	_____	_____
(18) 3. Do you have time to do the activities you enjoy?	_____	_____	_____	_____
(19) 4. Do you accomplish the big jobs first?	_____	_____	_____	_____
(20) 5. Do you accomplish the tasks that must be done?	_____	_____	_____	_____
(21) 6. Do you have periodic rest periods during the day?	_____	_____	_____	_____
(22) 7. Are you motion-conscious, when doing your work?	_____	_____	_____	_____
(23) 8. Are you free from boredom fatigue?	_____	_____	_____	_____
(24) 9. Are you free from frustration fatigue?	_____	_____	_____	_____
(25) 10. Are you free from physiological fatigue?	_____	_____	_____	_____
(26) 11. Do you enjoy entertaining?	_____	_____	_____	_____
(27) 12. Have you arranged working areas of the correct height for proper operation of body mechanics?	_____	_____	_____	_____

II. Continued

	<u>Frequently</u> (1)	<u>Occasionally</u> (2)	<u>Seldom</u> (3)	<u>Does not</u> <u>Apply</u> (4)
(28) 13. Do you arrange your work so that the most difficult jobs are done at the time you feel most alert?	_____	_____	_____	_____
(29) 14. Do you have confidence in meeting the needs of a baby?	_____	_____	_____	_____
(30) 15. Are your family relationships more important than your managerial skills?	_____	_____	_____	_____
(31) 16. Does your husband help with caring for the children?	_____	_____	_____	_____
(32) 17. Does your husband help with household duties?	_____	_____	_____	_____
(33) 18. Do you have trouble getting your children to accept new kinds of food?	_____	_____	_____	_____
(34) 19. Does your family set "long-time" goals?	_____	_____	_____	_____
(35) 20. Does your family work as a cooperative problem-solving group?	_____	_____	_____	_____
(36) 21. Do you feel you have ample leisure time to spend with your family?	_____	_____	_____	_____
(37) 22. Do you (and your family) evaluate progress?	_____	_____	_____	_____

Management of Material Resources

III. The following questions refer to your management of material resources, such as money or goods and services that money will buy. Place a check in the proper column for each item.

	<u>Frequently</u> (1)	<u>Occasionally</u> (2)	<u>Seldom</u> (3)
(38) 1. Are you well satisfied with your purchases that represent the large items?	_____	_____	_____
(39) 2. Do you budget expenditures?	_____	_____	_____
(40) 3. Do you make good use of food leftovers?	_____	_____	_____
(41) 4. Do you clean fruits and vegetables before storing them?	_____	_____	_____
(42) 5. Is meat stored near the cooling coils in the refrigerator?	_____	_____	_____
(43) 6. Is food removed from paper sacks and cartons, where possible, before storing in the refrigerator?	_____	_____	_____
(44) 7. Do you patronize a commercial self-help laundry?	_____	_____	_____
(45) 8. Do you patronize a commercial laundry?	_____	_____	_____
(46) 9. Do you try to simplify homemaking activities without lowering standards of the end product?	_____	_____	_____
(47) 10. Do you make clothing for yourself and family?	_____	_____	_____
(48) 11. Do you make household furnishings?	_____	_____	_____
(49) 12. Do you make gifts?	_____	_____	_____

How Most Buying Is Done

IV. The following four questions refer to how you do most of your household buying. Place a check in the proper column for each item. If one or more of these does not apply to your situation, leave it blank.

	<u>Cash</u>	<u>Charge</u>	<u>Lay-Away</u>	<u>Installments</u>	<u>Loan</u>
	(1)	(2)	(3)	(4)	(5)
(1) 1. Groceries	_____	_____	_____	_____	_____
(2) 2. Clothing	_____	_____	_____	_____	_____
(3) 3. Household Equipment	_____	_____	_____	_____	_____
(4) 4. Furniture and Furnishings	_____	_____	_____	_____	_____

Selection of Equipment

V. Below is a list of equipment. Check the column showing how the equipment you have or use was obtained. Disregard those which do not apply to your situation. In the last column, put the year that piece of equipment was received or purchased.

	<u>Purchased</u>	<u>Received</u>	<u>Rented</u>	<u>Borrowed</u>	<u>Year</u>
	(1)	<u>as Gift</u>	(3)	(4)	<u>Obtained</u>
	(1)	(2)	(3)	(4)	(5)
1. Adjustable ironing board (5)	_____	_____	_____	_____	(6- 7)
2. French knife (8)	_____	_____	_____	_____	(9-10)
3. Sewing machine (11)	_____	_____	_____	_____	(12-13)
4. Upright vacuum cleaner (14)	_____	_____	_____	_____	(15-16)
5. Tank vacuum cleaner (17)	_____	_____	_____	_____	(18-19)
6. Floor polisher (20)	_____	_____	_____	_____	(21-22)
7. Automatic washer (23)	_____	_____	_____	_____	(24-25)
8. Dryer (26)	_____	_____	_____	_____	(27-28)
9. Electric mixer (29)	_____	_____	_____	_____	(30-31)
10. Electric hand mixer (32)	_____	_____	_____	_____	(33-34)
11. Refrigerator (35)	_____	_____	_____	_____	(36-37)
12. Freezer (38)	_____	_____	_____	_____	(39-40)
13. Range (41)	_____	_____	_____	_____	(42-43)
14. Dishwasher (44)	_____	_____	_____	_____	(45-46)
15. Garbage disposer (47)	_____	_____	_____	_____	(48-49)
16. Television (50)	_____	_____	_____	_____	(51-52)

Work Simplification Practices

VI. This section refers to your application of the work simplification practices which were taught at the Home Management House. The last column is designed for those of you who have some of your tasks done by hired help. Do not check those items that do not involve your own work.

	<u>Frequently</u>	<u>Occasionally</u>	<u>Seldom</u>	<u>Done by</u>
	(1)	(2)	(3)	<u>Hired Help</u>
	(1)	(2)	(3)	(4)
1. Housecleaning				
a. Use both hands when washing				
(1) woodwork?	_____	_____	_____	_____
(2) b. Dust with a vacuum cleaner?	_____	_____	_____	_____
c. Plan thorough cleaning through-				
out year to prevent a big task				
(3) in spring or fall or both?	_____	_____	_____	_____

VI. Continued

	<u>Frequently</u> (1)	<u>Occasionally</u> (2)	<u>Seldom</u> (3)	<u>Done by</u> <u>Hired Help</u> (4)
2. Dishwashing				
a. If right handed, use a right to left sequence; or if left handed use a left to right sequence?				
(4) b. Let dishes drain dry?				
(5) c. Use a double sink or an improvised similar method?				
(6)				
3. Food preparation				
a. Use a French knife when dicing vegetables?				
(7)				
(8) b. Sit down to work?				
c. Do grocery shopping only once per week?				
(9)				
4. Ironing				
a. Follow procedure taught at Home Management House for man's shirt?				
(10)				
b. Adaptation of shirt method to other garments?				
(11)				
c. Take 5 minutes or less to iron man's shirt?				
(12)				
(13) d. Sit down?				
(14) e. Use a wide ironing board?				
(15) f. Use unironed sheets?				
(16) g. Damp dry clothes to avoid sprinkling?				
5. Bed Making				
(17) a. Arrange bedding in sequence?				
b. Start at foot, making only one trip around?				
(18)				
c. Start at side, making only one trip around?				
(19)				
d. Start at foot, retracing steps on one side of the bed?				
(20)				
e. Fold sheets according to method used at Home Management House?				
(21)				
(22) f. Take 2 1/2 minutes or less?				
6. Storage				
a. Store food and equipment in place of first use?				
(23)				
(24) b. Use step or half shelves?				
(25) c. Store like articles together?				
(26) d. Rotate commonly used articles?				
7. Application of work simplification principles to tasks outside the home. (Job, committees, etc.)				
(27) a. Use written plan for tasks?				
(28) b. Avoid unnecessary steps in procedure?				
(29) c. Plan next meal before leaving home?				

Special Comments

- VII. If you have simplified a task, that you feel would be helpful to the girls in the Home Management House, we would appreciate your explaining it below.

If you have any additional comments that you feel would be valuable to us at the Home Management House, please express them below.

Would you be interested in having a copy of the tabulated results of the questionnaire?

Yes _____ No _____

If yes, please write your address below.

Thank you for your time and cooperation.

(Mrs.) Patricia Robbins
Graduate Assistant
School of Home Economics

LITERATURE CITED

A. Books

1. Cavan, Ruth S. Marriage and Family in the Modern World. New York: Thomas Y. Crowell Company, 1961. pp. 330-4.
2. Gross, Irma and Elizabeth Crandall, Management for Modern Families. New York: Appleton-Century-Crafts, Inc., 1954. pp. 3-8, 488.

B. Periodicals

3. "Executive Skills You Will Need Most," Nations Business, 49:38-9, February, 1961.
4. Fox, John M. "What It Takes To Be A Manager," Advanced Management, 22: No. 6, pp. 18-23, June, 1957.
5. "Gamesmanship for Real," Time, 78:81-2, September 8, 1961.
6. Jennings, E. E. "How to Teach Young Men to Work," Nations Business, 49:40-1, February, 1961.
7. "Keys to Executive Success," Nations Business, 49:60-3, January, 1961.
8. Lehman, Ruth T. "The Employment Status of a Group of Home Economics Alumnae," Educational Research Bulletin, XXXII, October, 1953, p. 170.
9. Michigan State University Catalog, 1960-61, pp. A-91, 95, 96, 161.
10. Montana State College Catalogue, 1960-62, p. 277.
11. Moore, B. M. "Sociologist Looks at Homemaking Education," Practical Home Economics, 5:13, April, 1960.
12. Moore, M. L. "How to Make Time for t.l.c.," Parents Magazine, 37: 48-9, April, 1962.
13. Paolucci, Beatrice and Carol O'Brien, "What is Management?" Forecast for Home Economics, September, 1959, pp. 22-3.
14. Phelps, Effie. "How We Teach Time Management," Practical Home Economics, 4:13, April, 1959.
15. "Youth Has Its Fling at Business," Business Week, May, 1962, pp. 54-6.

C. Publications of the Government

16. Training Materials You Can Use. United States Department of Labor, Part I. 1957. pp. 35-50.

D. Unpublished Materials

17. Gage, Marie Geraldine. "The Work Load and Its Value for Fifty Homemakers in Tompkin County, New York." (Unpublished Ph. D. dissertation, Cornell University, 1960.), Dissertation Abstracts, XXI, No. 11, p. 3445.
18. Gaines, Grant, "Management" Speech given at a 1961 Montana State College Challenges Program.
19. Hollandsworth, Helen Lorena. "Factors Influencing Montana State College Home Economics Graduates for the Years 1935 through 1955, to Enter, to Leave, or to Remain in the Teaching Profession." (Unpublished Ed. D. dissertation, Michigan State University, 1959.) p. 84.
20. Home Management Practicum Outline, Montana State College Home Economics Department. (Mimeographed.)
21. Home Management Theory Outline, Montana State College Home Economics Department. (Mimeographed.)
22. King, Bertha G. "The Use of Time and Work Simplification Practices Followed by Fifty-seven Young Tennessee Homemakers," (Unpublished Master's thesis, University of Tennessee, 1959.)
23. Kohlman, E. L. "Development of an Instrument to Determine Values of Homemakers." (Unpublished Ph. D. dissertation, Iowa State University of Science and Technology, 1961.), Dissertation Abstracts, XXII, No. 3, p. 855.
24. Neal, Sue, "The Evaluation of the Effectiveness the Course in Home Management had in Helping Washington State University Home Economics Graduates Manage Their Own Homes." Special Problems Report, Washington State University, Home Economics Department, 1961. (Mimeographed.)

E. Newspapers

25. Barclay, Dorothy. "Business of Running a Home," New York Times Magazine, March 13, 1960, pp. 63.
26. Bozeman (Montana) Daily Chronicle, June 24, 1962.

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