A COMPARISON OF TRADITIONAL AND MECHANICAL AID TRAINING METHODS IN AN EXTENSION HOME ECONOMICS SITUATION

> Thesis for the Degree of M.S. MICHIGAN STATE UNIVERSITY Lillian M. Schwartz

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LILLIAN M. SOHWARTZ

### A THESIS

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Submitted to the College of Agriculture of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Institute for Extension Personnel Development

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# A COMPARISON OF TRADITIONAL AND MECHANICAL AID TRAINING METHODS IN AN EXTENSION HOME ECONOMICS SITUATION

By LILLIAN M. SCHWARTZ

### AN ABSTRACT

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Jack C. Ferrer Approved

Lillian M. Schwartz

### ABSTRACT

The purpose of this study was to test the relative change of knowledge of Home Demonstration Olub leaders and members resulting from the use of two methods of subject matter presentation:

- 1. Traditional Method using lectures and discussion, and
- 2. mechanical Learning Aid method using an automatic slide projector and tape player.

In order to carry out this study in a normal extension situation the cooperation of a specialist and a county home agent of the Cooperative Extension Service, Michigan State University, was secured. The specialist was scheduled to hold a training meeting for leaders of Home Demonstration Clubs in the home agent's county on the topic "Building for Family Security," and permission was obtained to use this situation for the experiment.

The clubs were divided into two groups.

Group I leaders were trained by use of the Traditional Method by the specialist at a three-hour training meeting. These leaders in turn used the same method in presenting the lesson to their respective club members.

Group II leaders were trained by the home agent. Subject matter was presented by the use of the Mechanical Learning Aid Method. The tape and slides were planned by the specialist and the writer, and prepared by the Audio-Visual

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Center of Michigan State University. The three-hour training meeting also included a short instruction period on the use of the projector and tape player. These leaders also used the mechanical learning aid device in presenting the lesson to their respective club groups.

All leaders and members of both Group I and Group II were required to fill out a questionnaire prepared by the writer to test their knowledge of the subject matter before and after receiving the presentation of the subject matter. The same questionnaire was used for the pre-test and post-test.

Leaders in Group II were also asked to fill out a third questionnaire regarding their reaction to the use of the Mechanical Learning Aid Method in their groups.

The subject matter questionnaires for both leaders and members, when scored, showed the mean differences between the pre-test and post-test was slightly higher when the Mechanical Learning Aid Method was used. However, this difference was not found to be significant at the .05 level.

The questionnaire completed by leaders who used the Mechanical Learning Aid Method in their clubs revealed that:

- 1. Leaders experienced very few mechanical difficulties.
- 2. The method required less preparation on the part of the leaders than the traditional method.
- Most of the club members enjoyed this method of presentation.

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- 4. Leaders would enjoy using this method occasionally.
- 5. Most adverse criticisms of the method were of a type that might be overcome through a better knowledge of programming methods and principles on the part of the programmer.

After the first three questionnaires had been returned, a letter of thanks was sent to each leader which included a selfaddressed post card asking two further questions: (1) The amount of time spent in presenting the lesson at the club meeting and (2) amount of help the leader felt had been derived by the members from the lesson presentation. This follow-up questionnaire revealed that although the average leader spent 46 to 60 minutes presenting the lesson subject matter, only a moderate amount of help was secured by members from the lesson. There was a slight indication that more help was secured by members when the presentation time was 46 to 60 minutes in length in contrast to 75 minutes or over.

As the use of the Mechanical Learning Aid Method proved as effective in teaching as Traditional Method and the response of the leaders and members in most cases was favorable, it seems logical that this method could have increased possibilities in extension work.

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### CHAPTER I

### INTRODUCTION

### Purpose

The purpose of this study is to test the relative change of knowledge of the Home Demonstration Club leaders and members resulting from the use of the following teaching methods:

- <u>Traditional Method</u>. Club leaders are trained by the specialist through the use of lectures and discussion and, in turn, present the lesson to the members of their clubs in a similar manner.
- 2. <u>Mechanical Learning Aid Method</u>. The specialist programmes subject matter to be presented with the mechanical learning aid, an automatic slide projector and tape player. The home agent trains the leaders using this material and the leaders use the same method in their local groups.

### Problem

In the early years of Home Economics teaching in the Cooperative Extension Service, county home agents and subject matter specialists usually worked directly with individual homemakers or groups of homemakers who were organized into Home Demonstration Clubs. Assistance given usually involved development of skills. As the demand for this work increased, the use of local leaders was found to be the most effective means of reaching more homes without too great an increase of home agents and specialists. Under this system it proved satisfactory for agents or specialists to train local leaders from each club who in turn would teach their respective club groups. These leaders through the work with their groups often gained self-confidence and became competent community leaders in other areas of activity.

However, in recent years Home Economics Programs have become more complex. Members have expressed a desire for knowledge of greater depth and wider scope. Extension programs geared to the development of manual skills only are not felt to be adequate in the solution of problems confronting the modern homemaker in her changing environment. Although club leaders have proved to be very capable, there has been some question as to their ability to carry successfully to their clubs these lessons involving more technical and theoretical knowledge.

Also, Home Economics Departments of the Gooperative Extension Service have, for a number of years, recognized a need to reach not only the rural homemakers, as in the beginning, but all homemakers in their respective areas.

To further complicate this situation, finances have not been increased to make possible a proportionate increase in personnel. To meet this challenge it is necessary to evaluate present methods and investigate the possibility of new techniques.

Formal educational institutions following a pattern set by industry and the armed services are introducing the use of new mechanical learning aids as a means of meeting a similar problem in their fields.

It seems logical that this method, if tested, may prove to be applicable to extension teaching.

### Statement of Hypothesis

The relative change of knowledge of

- 1. Home Demonstration Club leaders and
- 2. Home Demonstration Club members

will be greater when:

- a. the Mechanical Learning Aid Method of training is used, rather than
- b. the Traditional Method of training.

### CHAPTER II

### REVIEW OF LITERATURE

### Introduction

World wide demand for education is at an all time high. Educational institutions are under great strain in trying to meet this demand and to maintain quality in their teaching. To further complicate the situation, even the quality of present teaching is under question. "Why," ask the critics, "has the quality of teaching not advanced in proportion to the quantity of knowledge available for teaching?"

As a means of meeting this educational crisis, educators are turning to the use of learning aids commonly called teaching machines. These aids have been developed in an attempt to improve the efficiency of the teachinglearning process by mechanizing those aspects of learning and teaching that can be systematized. They are an attempt to free the teacher's time from certain routines, so that he can make more adequate use of his professional training.

There has been considerable discussion as to an appropriate name for these new devices. The terms "teaching machines" and "mechanical tutors" have been rejected by some educators in that these terms are not accurate or sufficiently neutral. Robert Silverman points out that in some cases this medium does not necessarily require actual machines as it sometimes utilizes programmed text books and paper and pencil

devices. He also brings to our attention the fact that Lumsdaine and Klass at the American Institute for Research indicated,

> that the term machine elicits antagonistic reactions associated with ideas of dehumanization and thought control. They suggested that the term 'auto-instructional' would be more serviceable since it has fewer negative connotations and is more descriptive.1

The Encyclopedia of Educational Research uses the term 2 "training devices."

The writer would prefer to use the term "Learning aids" in this discussion, in that the real purpose of these devices is to facilitate the learning process. Even if the device is a machine it cannot actually teach. It aids the learner in the learning process. Glazer calls his reader's attention to this quotation from Skinner,

> The machine itself, of course, does not teach. It simply brings the student into contact with the person who composed the material it presents.<sup>3</sup>

Educators point out that these new devices, which we shall call "learning aids," are concerned with the entire learning cycle: (1) presentation of material, (2) provision for learner activity, and (3) correction of errors and shaping of responses.

2. Chester W. Harris (ed.), <u>Encyclopedia of Educa-</u> <u>tional Research - 1960</u> (New York: Macmillan Company), p. 1529.

3. A. A. Lumsdaine and Robert Glazer (Editors), <u>Teaching Machines and Programmed Learning</u> (Department of Audio-Visual Instruction, National Education Association of the United States, 1960), p. 25.

<sup>1.</sup> Robert E. Silverman, "Auto-instructional Devices," Journal of Higher Education (December 1960), p. 481.

In contrast to this, teaching aids commonly used in the past, including text books, audio-visual materials, television, tape recordings, and the like are concerned only with the presentation phase of the teaching process unless there is substantial teacher involvement both before and after presentation.

This line of demarcation seems somewhat vague, and it appears that any of these devices (those that have been known formerly as teaching aids as well as the newer devices commonly called machines) can be considered "learning aids." However, the effectiveness of any of them will always depend on whether or not they are used in such a manner as to include the complete learning cycle as previously pointed out.

### History and Development of the New Learning Aids

Certain children's toys developed before the turn of the present century are found to be the antecedents of these new devices. However, the actual development of machines for teaching or learning followed the objective testing movement in the educational field.

Dr. Sidney L. Pressley, the pioneer in this field, as early as 1916 believed he could conserve the benefits of comprehensive frequent testing by the development of mechanical devices that could do the routine work of presenting material, recording student responses, and informing the

student as to correctness of responses. Later with his students he developed about a dozen such devices.

One of his first machines was described in a paper presented at the meetings of the American Psychological Association in Washington in December, 1924, and was subsequently exhibited in an improved form at the 1925 meetings of the same organization. This machine, about the size of a typewriter, had at the front a window through which could be seen a question with four multiple choice answers. At one side were four keys. One of these keys would be pressed by the operator to indicate his selection of the correct answer. The pressing of the key would bring before the window the next question. The apparatus counted the correct responses on a counter at the back of the machine. If the operator so desired, by lifting a lever at the back, the machine would not present the next question until the key was pressed that would give the correct answer.

In an article appearing in the 1927 issue of "School and Society," Pressley described another machine which, with a little different mechanism, produced approximately the same results, except that the operator could not go on to the next question until the one before him had been 4 answered correctly.

4. Lumsdaine and Glazer, op. cit., p. 42.

Some of Pressley's devices were of a punch board type with colored carbons which would reveal to the student or teacher the number of correct responses at the close of the test.

Validated studies made of these machines in their use in the class room really proved to Pressley and his students that these devices could be used effectively to assist the student in the learning process and free the teacher of the responsibility of tiresome drill work. However, perhaps because it was during the depression period these devices did not seem to stimulate the interest of many educators. In 1932 Pressley himself indicated his discouragement in the following statement,

> The writer regards the entire field touched upon in these studies as almost wholly unexplored....Fanciful though some of these may seem, there is good evidence to suggest the possibility of each one of these things. The problems of invention are relatively simple; with a little money and engineering resource, a great deal could be done. The writer has found from bitter experience that one person alone can accomplish relatively little, and he is regretfully dropping further work on these problems. But he hopes that enough may have been done to stimulate other workers, that this fascinating field may be developed.<sup>5</sup>

Lumsdaine suggests that perhaps one reason these early devices did not prove popular was due to the fact that

5. Harris, <u>op. cit</u>., p. 1529.

they were conceived primarily as testing devices and secondarily as teaching devices.  $^{6}$ 

Little if any further work seems to have been done in this field until World War II. At this time, a shortage of instructors in the armed services brought about a wide use and rapid development in mechanization of instruction. This was chiefly in the field of perceptual-motor skills--such as flying air craft, operating a radar set, and firing at a moving target. Most of these training devices simulated actual equipment in display of information necessary for correct operation of controls.

The post-war period found the armed services also using training devices for the teaching of cognitive skills. It was not until about 1955 that industry and other civilian agencies started developing such devices for training of employees as equipment became more complex and qualified personnel less available. In the educational field progress was slower. <u>The Review of Educational Research</u> published in April, 1956, did not make one reference to a training device or teaching machine.<sup>7</sup>

In the last decade Skinner developed about five distinct types of training devices that duplicated features and functions of the earlier devices. His greatest contribution is in the field of programming material for machines

7. Harris, <u>op. cit</u>., p. 1536.

<sup>6.</sup> Lumsdaine and Glazer, op. cit., p. 42.

and he stresses the principle that more effective learning is obtained if the learner composes his own responses rather than go through the process of selecting his response from a set of alternatives.

In recent years machines ranging from comparatively simple devices costing twenty dollars and less to complex electronic, optical, or electro-mechanical devices which may be priced at a cost of hundreds of dollars have been developed. It is hoped that through experiment and research with electronic machines it may be possible to develop machines which will have a wider range of instructional capabilities with less extensive programmed materials. This would reduce the cost and make the machines more practical. It would seem that education is really at the dawn of a new era in this field. It would be premature to make definite predictions for the future, but most authorities seem to feel that automation in this field is here to stay, and that educators will make a mistake if they do not make the most of this opportunity. The wise use of these machines may well be at least one answer to the problems facing education at this time.

Douglas Porter in "A Critical Review of a Portion of Literature on Teaching Devices" included in Lumsdaine and Glazer's book makes the only attempt which the writer was able to find of classifying the new types of learning aids that have been produced up to this time. However, he cautions the reader that his classification which follows is not perfect and that the correct category would depend on how the device was used:

Types of Teaching Aids and Devices



8. Lumsdaine and Glazer, op. cit., p. 116.

### To Mechanize, or Not to Mechanize?

The new teaching aids, like most new developments, have been met with some resistance in the educational field. Authorities indicate that some teachers fear they may be replaced by machines. There are critics who feel that costs are prohibitive. However in all printed materials found on the subject of teaching machines, the writer was not able to find an article that discredited them. The chief limitations seem to be human rather than tecnnical.

Eugene Galanter from the University of Pennsylvania indicates their possibilities in this statement:

> The devices are available; there is some intelligence around that can write programs for them and we cannot afford to spend time discussing whether or not it is possible. Meanwhile, by capitalizing on the practical reliability of Aids, we can also learn something more about our structure and characteristics as human beings.<sup>9</sup>

The problem of programming or preparation of material for learning aids requires training and real insight of the learning process as well as knowledge of the subject. Skinner points out that the success of these aids depends on the materials used in them. Glazer has shown concern in this statement:

> We are in the situation of having shells with no innards. Once programmed learning sequences are prepared in various subject matters that teach better than existing methods an educational revolution may not be far behind....

<sup>9.</sup> Eugene Galanter (Ed.), <u>Automatic Teaching--The</u> <u>State of the Art</u> (New York: John Wiley and Sons, Inc., 1959), p. 9.

Learning programs based upon even our present knowledge can scarcely fail to be an improvement over anachronistic methods of teaching certain subjects by lecturing to large groups with little close control of student behavior in acquiring the subject matter.<sup>10</sup>

It is of interest to note that practically all authorities feel that through the use of these devices the best possible research can be done and our knowledge of how learning takes place will be greatly increased.

Biyth participated in an experiment conducted at Hamilton College in which a class in Logic was taught through the use of a machine combined with lectures. He indicated that they found many advantages and no disadvantages. The advantages he described included the following:

- 1. Class efficiency increased one-third. Material was covered in two hours class work per week that had previously taken three hours. This was due to the fact that no time in class was wasted on routine checking or drill with unprepared students. Work on programmed material was the ticket of admission to class.
- 2. Individual differences were not entirely removed but every student was close to mastery.
- 3. Fewer private conferences were needed because concepts were learned by the individual at his own speed, through drill work required with the machine.

10. Lumsdaine and Glazer, op. cit., p. 29.

4. The interest in the subject increased and morale was improved.

All tests have not prove as successful as this one presented by Blyth, but in practically all cases where studies have been made, the degree of learning has been as high or higher and the work has been done in a shorter period of time.

Even though the cost of such teaching proves expensive, it is possible that quality and time saved may over balance this cost. It is also felt that as machines are developed which have a wider use and as programming becomes more efficient costs will be cut considerably.

### Learning Aids in Cooperative Extension Teaching

Cooperative Extension, like other educational institutions, has the problem of working with larger numbers of people without an increased staff. At the present time there is also a demand for subject matter of greater depth in contrast to the "how-to-do-it" projects of the past. With the possibility of the Continuing Education programs being combined with Cooperative Extension, such problems would certainly not decrease and in most cases would logically increase.

There is a genuine need for research in the use of the new learning aids in our Extension Service. Many of these machines may have been designed for use in public schools and

11. Lumsdaine and Glazer, op. cit., p. 404.

colleges, but with research it may be found that they can also be adapted to extension's teaching situations.

In <u>A Guide to Extension Programs for the Future</u> this statement is made:

> All teaching procedures must be continously evaluated and improvements made in light of the evaluation. Extension will need to take initiative in testing the usefulness of new methods and new mass media, and also in systematically experimenting with alternative ways of using older methods of media.<sup>12</sup>

Increased adult education appears to not be a passing fad but a trend that will continue. The Report of the National Conference of Professors of Educational Administration indicates this in the following statement:

> We believe that a life long participation in individual and cooperative educational activities will become a significant pattern of living for people of all ages, capacities, and interests during the age of automation ahead.15

As educators in other fields have indicated the machines are available. The manner in which the Cooperative Extension Service meets this challenge may well play an important part in deciding the future of the Cooperative Extension Service.

<sup>12.</sup> H. L. Ahlgren and C. B. Ratchford (Eds.), <u>A Guide</u> <u>to Extension Programs for the Future</u> (The Agriculture Extension Service, North Carolina State College, Raleigh, North Carolina, 1959), p. 48.

<sup>13. &</sup>lt;u>Automation--Its Meaning for Educational Adminis-</u> <u>tration</u>, A Report of the National Conference of Professors of Educational Administration, Tenth Annual Meeting, University of Arkansas, Fayetteville, August 20-31, 1954 (Bureau of Publications, Teachers College, Columbia University, New York, 1957), P. 53.

### CHAPTER III

### PROCEDURE

### kechanical Learning Aid

The machine used in this study is being perfected by the Needs Corporation of Jackson, Michigan. It consists of a small, compact automatic slide projector which is equipped with a cartridge capable of holding a total of thirty-six 35 mm slides. With this projector a tape player is used. As the tape is played, it activates the automatic slide projector so that the slides are synchronized with the message delivered from the tape. Two complete sets were furnished for use in making this study.

### Specialist and Home Agent Cooperation

In order to carry out this study in a normal Extension situation, the cooperation of an extension specialist and a home demonstration agent of the Michigan Cooperative Extension Service was secured.

The specialist when contacted was scheduled to hold a training meeting for the leaders of Home Demonstration Clubs in the home agent's county in April on the topic "Building for Family Security." This was a lesson of considerable depth giving the general principles which should be considered in developing a savings plan for the family, as well as going into detail on two specific types of investments--home ownership and stocks and bonds.

The home  $a_{\varepsilon}$ ent agreed to divide the leaders of her thirty-one Home Demonstration Clubs into two groups. Plans were made to have the leaders of fifteen clubs attend the first training meeting to be held on April 4 and the leaders of the remaining sixteen clubs attend a second training meeting to be held on the following day, April 5.

Group I or those attending the first day would be trained by the specialist in the usual manner, while Group II would be trained with the use of the teaching machine by the home agent and also be taught how to use the machine in giving the lesson to their respective groups.

### Programming of Subject matter

After the preceding over-all plans were made, the writer with the specialist planned the 30 slides to be used in illustrating and emphasizing key points of the narrative to be taped. The plans for these slides were reviewed and improved by Mr. Veedendaal of the Michigan State Audio-Visual Department before they were prepared by the same department. The first slide showed the specialist holding a poster giving the title, "Building for ramily Security," and the script was taped using the specialist's voice. As she is known by many club women, it was felt that the use of her picture and voice would make it more acceptable and the personal touch would not

be lost. Examples of slides are to be found in Appendix E. The cost of preparing the set of 36 slides was  $\varphi$ 225.30.

The specialist prepared the script for the tape including the same subject matter as would be used in her lecture for the Traditional Method. A few introductory paragraphs of this script are to be found in Appendix E.

The three tapes prepared were furnished by the Needs Corporation and prepared by the Audio-Visual Center of Michigan State University.

A complete set of these slides with the tape is on file with this thesis at the michigan State University Library.

### Questionnaires

The writer prepared a questionnaire covering the subject matter to be used with the presentation of the lesson "Building for Family Security." This test was to be given to: (1) leaders of both Group I and II before and after training, and (2) all Home Demonstration Club members before and after the lesson was presented to them by their leaders. This questionnaire included four questions requiring a response in the cooperators own words, and twenty true-false questions. The questionnaire to be used following the presentation of the lesson also included six questions pertaining to the cooperators age, marital status, children, educational background and years of club membership. Questionnaires were numbered so that each cooperator would fill out two questionnaires carrying the same number in order to facilitate comparisons.

A second questionnaire was prepared for leaders of clubs using the mechanical learning aid in order to secure their reaction to a lesson presented with the use of this method. Copies of these questionnaires may be found in Appendix A.

In validating questionnaires, Extension staff members in Home management and Sociology were consulted. Pretesting was done with non-extension homemakers living in a Married Housing Unit of the University.

### Training Meeting for Leaders of Group I

The specialist conducted the training for Group I on April 4 using an informal lecture and discussion method. A flannel graph was effectively used as a visual aid. Following the presentation of subject matter, the group was divided into two sections and each given a description of a family situation. Each group was instructed to discuss the given situation and work out a tentative savings plan for the family described. After the group discussion a recorder from each group gave the entire group a summary of the problem and their suggested solution.

Aids given the leaders to assist them in presenting the lesson to their groups included:

- 1. A leader's outline.
- 2. A leader's suggestion sheet.

- 3. Problem sheets as used in the training.
- 4. Extension Bulletin 340 Family Investments.<sup>14</sup>
- 5. A pamphlet <u>What Everybody Should Know About This Stock</u> and Bond Business.<sup>15</sup>

Copies of the first three aids listed above may be found in Appendixes B and C.

The questionnaires were distributed before and after the training period to the nineteen leaders present, and approximately fifteen minutes were used for their completion. It was explained to the leaders that two different methods of training were being used that month and that the questionnaires were a test of methods rather than their ability.

Leaders were also given copies of the questionnaire to be used at their local meetings and to be filled out by club members in the same manner. They were asked to return them to the local extension office or to mail them to the writer following their local meeting.

### Training Meeting for Group II

When Group II composed of twenty-five women was trained the following day, April 5, the home agent conducted the meeting. Leaders completed the questionnaires before and

<sup>14.</sup> Lucile Ketchum, <u>Family Investments</u>, Extension Bulletin 340, Cooperative Extension Service, Michigan State University, East Lansing, Michigan, 1959.

<sup>15.</sup> What Everybody Should Know About This Stock and Bond Business (Merrill Lynch, Pierce, Fenner, and Smith, Inc., New York), 1960.

after the presentation of the subject matter as on the preceding day. The training consisted of presentation of the subject matter using the tape and slides with the machine. This was followed by a question-answer period, then the group divided for consideration of the problems as at the first training meeting.

The meeting concluded with a brief training session by the agent on the use of the tape player and slide projector. Leaders were informed that two complete sets of equipment, including the slide projector with slides, tape player with tape, and projection screen with detailed instructions for use would be available at the extension office when each club held its meeting.

The same circulars and problem sheets were distributed to leaders of this group as at the first training meeting along with a different leader's outline. A copy of the leader's outline for this group may be found in Appendix B.

### Assembling of Data

The writer scored the questionnaires filled out before and after the presentation of the lesson "Building for Family Security" by:

- 1. Group I leaders
- 2. Group II leaders
- 3. Club members taught by Group I leader
- 4. Club members taught by Group I leader

The mean difference in scores made between the first and second questionnaire for each of the four groups listed above was secured. Then a statistical test (t test) was used to determine if there was a significant degree of difference in scores resulting from the use of the two methods in the case of the leaders as well as the members.

Data secured on the special questionnaire for leaders using the Mechanical Learning Aid Method were also summarized.

## Other Data Secured

In June, after all questionnaires had been returned, a letter of thanks was written to each cooperating club in care of the leader. At the same time each leader was asked to answer two questions typed on the back of a self-addressed post card. These two questions asked the leader to estimate the amount of time spent in giving the subject matter for the lesson "Building For Family Security," and the amount of help that they felt club members had received from the lesson. A copy of the post card questionnaire is included in Appendix A. Facts obtained from this follow-up post card questionnaire were summarized.

### CHAPTER IV

### PRESENTATION OF DATA

### Group I - Traditional Training Method

The two questionnaires, one given before and one given after presentation of lesson subject matter, were completed by each of the 19 leaders attending the first training meeting which was conducted by the use of the traditional training method by the specialist.

The mean score of the leaders in the pre-test was 39.00, and 47.58 for the post-test, resulting in a mean difference of 8.58.

The 96 club members to whom the lesson was presented by the above leaders, using the Traditional method, scored a mean of 33.39 in the pre-test and 36.59 in the post-test. The mean difference was 5.21.

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### Group II - Mechanical Learning Aid Method

The 24 leaders attending the second meeting were trained by the home agent using the Mechanical Learning Aid Method. They also completed the two questionnaires, one before and one after receiving the training. The mean score of this group in the pre-test was 34.79 and in the post-test 44.17, resulting in a mean difference of 9.38.






Leavers of Group II - mechanical Learning Aid method Pre-test-----Posi-test-----

FIGURE II - PRE-LEST ARD POST-TEST SUDES OF GROUP I AND GROUP II CLUB MERSAS



One hundred twenty-five club members to whom the lesson was presented by the above leaders using the mechanical Learning Aid Method also completed the two questionnaires. The mean score for the pre-test was 35.59. The mean score for the post-test was 42.61, resulting in a mean difference of 7.02.

Data for both groups are summarized in Table 1 which follows. A more detailed breakdown of these data may be found in graphs given on pages 24 and 25.

		Leaders	wembers			
	Group I (Tradi- tional)	Group II (Learning Aid)	t-value	Group I (Tradi- tional)	Group II (Learning Aid)	t-value
Pre-test	39.00	34.79		33.39	35.59	
Post-test	47.58	44.17		38.59	42.61	
Mean Dif- ference	8.58	9.38	1.76*	5.21	7.02	1.66*

TABLE 1

SUMMARY OF MEAN SCORES, MEAN DIFFERENCE AND t-VALUES FOR LEADERS AND MEMBERS OF GROUP I AND II

\* Not significant at the 0.5 level.

#### Statistical Test

Using the statistical t-ratio test, the t value for the mean difference in leaders' scores with the use of the two methods was found to be 1.76 for leaders, and 1.66 for members. Although the average mean difference in scores for both leaders and members was greater when the Mechanical Learning Aid Method was used, this difference was not significant at the .05 level. Consequently the hypothesis was disproven.

#### Group II Leaders Questionnaires

Fourteen leaders of Group II who presented the lesson to their club groups using the Mechanical Learning Aid Method returned completed questionnaires on use of this method.

The summary of this questionnaire by questions follows:

- 1. Twelve leaders (56 per cent) reported that they did not have any mechanical trouble in using the projector and tape player. Two reported that they did have trouble... the projector did not work automatically.
- 2. No other problems were encountered by the leaders in presenting the lesson.
- 3. Eleven leaders who had previously served as leaders for their clubs reported that this method required less preparation time on the part of the leader than the traditional method.
- 4. The response of club members to this method of lesson presentation was reported as follows: two clubs did not like it, two did not show any special feeling about the method, and ten (71 per cent) enjoyed it.

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- 5. All but one leader felt that club members were able to learn as much by this method of presentation as with the traditional method.
- 6. Five leaders indicated that they would like to use this method of presentation often, eight preferred to use it occasionally, and one club did not wish to use it at all.
- 7. The following is a summary of further reactions of the leaders in regard to the use of this method.
  - a) Wished they could stop the machine at intervals for discussion (5 clubs).
  - b) Did not like music with the voice.
  - c) Disliked absence of the personal touch.
  - d) Club responded better than had been expected and some were able to pick out things which seemed to fit their own needs.
  - e) Each slide left on too long.
  - f) Difficult to sit still for so long.
  - g) Some members became drowsy.
  - h) Attention wandered.
  - Less trouble (for leaders) as far as interruptions were concerned.
  - j) Very interesting to present.
  - k) Felt it was rather boring.
  - 1) Members were more quiet.

#### Leaders Follow-Up Questionnaire

Twenty of the thirty-nine leaders to whom the follow-up questionnaire was sent returned the completed questionnaire.

In answering question one of the questionnaire in regard to the amount of time spent in presenting the lesson to their respective clubs, they answered as follows: 3 leaders - 16 to 30 minutes; 6 leaders - 31 to 45 minutes; 3 leaders - 46 to 60 minutes; 3 leaders - 61 to 75 minutes; and 3 leaders - over 75 minutes.

Question two asked leaders to estimate the amount of help provided to members by the lesson. They reported as follows: large - 0; fairly large - 4; moderate - 14; fairly small - 1; and small - 1.

A procedural difficulty made it impossible to identify respondents as to Group I and Group II, but since the Learning Aid Presentation was of a forty minute duration it may be assumed that respondents who indicated having spent less than forty minutes on the lesson used the Traditional Method.

The relationship between the time spent by leaders in presenting the lesson and the amount of help received by members is shown on the graph given on page 30.



FIGURE 3 - THE RELATIONSHIP BETWEEN TILE SPENT AND HELP RECEIVED FROM LESSON



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#### Limitations of Study

It should be taken into consideration that this study is limited in a number of ways:

- The groups used for the study were of one county or locality.
- 2. One mechanical learning aid, the automatic slide projector-tape player combination, was used.
- 3. The lesson presentation was the work of one specialist.
- 4. Only one set of tape and slides was used.
- 5. The novelty appeal of a study situation, as has been shown in the <u>Bank Wiring Observation Room Group Study</u> made by Roethlesberger and Dickson, could be significant.

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#### CHAPTER V

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS

#### Summary

This was a study to test the relative change of knowledge of Home Demonstration Club leaders and members resulting from the use of the following two methods of subject matter presentation:

1. Traditional Method using lectures and discussion.

2. Mechanical Learning Aid Method using an automatic slide projector and tape player.

The cooperation of a specialist and county home agent of the Cooperative Extension Service of Michigan State University was secured in order to carry out the study in a normal extension situation.

The specialist was scheduled to hold a training meeting for leaders of Home Demonstration Clubs in the agent's county on the topic "Building for Family Security." This was a lesson of considerable depth covering the general principles involved in family financial planning and going somewhat in detail into two areas of family investment (home ownership and corporate securities).

The home agent divided the leaders of her thirtyone Home Demonstration Clubs into two groups. Group I was trained using the Traditional Method and Group II was trained using the Mechanical Learning Aid Method. Leaders in turn agreed to use the method by which they were trained in presenting the lesson to their respective groups.

The first leaders training meeting for leaders of Group I was conducted by the specialist using the Traditional Method. The subject matter was presented by use of lecture and discussion, with a flannel graph presentation of illustrative material. The entire meeting was completed in three hours.

At the second training meeting held for leaders of Group II, the home agent trained the leaders using the Mechanical Learning Aid Method. The tape and slides used with the machine were planned by the specialist and writer and prepared by the Audio-Visual Center of Michigan State University. They included the same subject matter as was given by the specialist's lecture at the first training meeting. Leaders were also trained to operate the tape player and slide projector. This meeting also required three hours time.

Leaders attending both training meetings were asked to complete a questionnaire based on knowledge of subject matter included in the lesson. Each leader completed the questionnaire twice--once before receiving training and once following the training. The same questionnaire was also completed twice by each club member who attended club meetings held by their leaders.

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Leaders of Group II were also asked to fill out a third questionnaire after presenting the lesson to their clubs using the Mechanical Learning Aid Method. The purpose of this questionnaire was to get the reaction of both members and leaders to this method.

After the first three questionnaires had been returned, a letter of thanks was sent to each leader which included a self-addressed post card asking two further questions: (1) The amount of time spent in presenting the lesson at the club meeting, and (2) the amount of help the leader felt had been derived by the members from the lesson presentation.

The subject matter questionnaires for both leaders and members when scored showed the mean difference between pre-test and post-test scores to be slightly higher when the Mechanical Learning Aid Method was used. However, this difference was not found to be significant at the .05 level.

The questionnaire completed by leaders who used the Mechanical Learning Aid Method in their clubs indicated that:

- 1. Leaders experienced few mechanical difficulties.
- 2. The method required less preparation time on the part of the leaders than the Traditional Method.
- Seventy-one per cent of the club members appeared to enjoy this method.

4. Leaders would enjoy using this method occasionally.5. Most adverse criticisms of the method were of the type

that might be overcome through a better knowledge of programming methods and principles on the part of the programmer.

The follow-up questionnaire indicated that although the average leader spent 46 to 60 minutes presenting the lesson subject matter, only a moderate amount of help was secured by members from the lesson. However there was a slight indication that a shorter period of presentation resulted in a greater amount of help to the members.

## Conclusions

The data obtained in this study show that leaders and members receiving subject matter through the use of the Mechanical Learning Aid Method scored higher in the mean difference between pre-test and post-test than leaders and members receiving subject matter through the Traditional Method. Although this difference is not significant, it provides evidence that in this type of situation the Mechanical Learning Aid Method is at least as effective as the Traditional Method.

The reports from leaders who used the mechanical Learning Aid Method reveal the following facts:

1. Eighty-six per cent of the leaders had no mechanical problems when using the automatic slide projector and tape player. The problem met by fourteen per cent could easily be remedied through additional training

or more thorough training. Leaders would undoubtedly become more skilled in the use of the machine through experience.

- 2. All leaders who had previous experience as leaders indicated that the Mechanical Learning Aid Method of presentation required less preparation time on their part.
- 3. Seventy-one per cent of the leaders indicated that their members enjoyed this new method of presentation. As the writer and specialist involved in preparation of the tape and slides had no previous experience in the programming of subject matter for this type of presentation, they feel that through training in this field the criticisms given of this method could easily be overcome through presentation of less subject-matter material in one lesson which would result in a shorter tape with a more frequent change of slides.

Information obtained through the follow-up questionnaire indicates that as a result of this lesson most leaders felt that only a moderate amount of help had been provided, regardless of the length of time spent in presenting the lesson. However, there was a slight indication that more help was provided when the presentation was of shorter length.

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### Implications

From the results of this study a number of implications for extension work can be suggested:

- 1. Programmed lessons to be used with Mechanical Learning Aids if used occasionally could be a means of relieving specialists from the time-consuming task of conducting numerous training meetings on a county level which are so often required when subject matter of greater depth and scope is requested. More time would then be available for production of new materials.
- 2. Programmed materials as prepared by the specialists could be a means of strengthening the training of leaders as presently carried on by the specialists and agents as well as the strengthening of leaders' presentations in their clubs.
- 3. A stock of programmed lessons prepared in the various areas of Home Economics and Agriculture for different age levels could result in:
  - a) Reaching far beyond the organized extension groups that the average county agent is able to serve by making the material available to the public in general and for use on TV programs.
  - b) Making it possible for individual community groups to carry out a program to meet their special problems. (County programs cannot always meet the needs of smaller groups.)

- c) County agents being able to spend more time training leaders in effective use of programmed materials. (How to conduct discussions, etc.)
- d) An exchange between states as is now done with bulletins.
- 4. Preliminary to the preparation of programmed materials by specialists, thorough training in programming would be necessary to insure high quality programs.
- 5. There is need for additional research in regard to programming of lessons to be used with mechanical learning aids in regard to:
  - a) Costs
  - b) Most effective timing for greatest degree of learning. (There is indication from this study that lesson presentations should be shorter.)
- 6. There is also need for continued research with other types of mechanical learning aids to determine the most effective teaching methods.

APPENDIX A

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To help us determine how effective our teaching methods are, we would like to have you again fill out this questionnaire. We are not testing you; we are testing ourselves.

### Part I

1. There are a number of ways of saving and making investments that are available to the average family. List as many as you can.

2. Families should consider different things in deciding whether or not an investment or method of saving is wise for them. What things would you consider in making such a decision for your family?

3. What points would you consider important when deciding whether or not to invest in a home?

4. What family circumstances would justify investment in the stock market?

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### Part II

#### TRUE - FALSE QUESTIONS

If you understand the statement please check it true or false whichever you believe to be correct. If you do not understand the statement check column (3) only.

(1) True	(2) Fal <b>se</b>	(3) Do <b>not</b> understau terms or question	nd	
			1.	There is one model or plan for saving that can be followed by all families.
	<u></u>		2.	A wise use of a family emergency fund would be to invest it in real estate.
	<u></u>	<del></del>	3.	High income and a high degree of safety are not likely to come with one investment.
		<del></del>	4.	Series E Savings bonds are a good investment for the small saver.
			5.	A home of your own is a "must" in every family security plan.
			6.	A real estate loan may be covered by a mortgage against the real estate as security for the loan.
			7.	As a stock holder you are a creditor and you have first claim to the profits of the company for the interest payments specified by your stock certificate.
			8.	There is a place for corporate securities (stocks & bonds) in family investment plans but not for every family.
<del></del>			9.	As a stock holder of a company you share in whatever profits there are after the creditors' claims are paid.
			10.	A house that has been in use a few years may be a better buy than one that has just been built.
			11.	Investment or savings plans for your family must be made in relation to your own goals, resources, and capabilities in order to be successful.

(1) True	(2) False	(3) Do not understand terms or question	đ	
			12.	The term "liquidity" in relation to a means of saving refers to safety.
			13.	The man who owns his home, some life insurance, a savings account, his grocery store or his farm, and several government bonds has diversified his investments.
			14.	Mortgage terms are determined entirely by the particular lending agency concerned.
			15.	As a bond holder you are really "part owner" of the company.
<del></del>			16.	As a stockholder you will always receive the same income from your investment.
			17.	A broker acts as an agent for persons wishing to buy or sell stocks. His earnings are from commissions which he charges on both purchase and sale of a security.
			18.	Safety of an investment refers to how quickly you can "get at" it.
	<b></b>		19.	Prices of preferred stocks are not likely to fluctuate as much as those of common stocks.
			20.	Bonds pay dividends at a fixed rates.

The information obtained from this questionnaire can be more useful in planning programs for the future if it is related to certain other factors regarding club members. Will you please give the following information:

1. Please check (i) the age group in which you belong.

25	years	or under	 45 to 54 years
26	to 34	years	 55 to 64 years
35	to 44	years	 65 years or over

2. Marital status--please check ( $\checkmark$ ) the group in which you would be included.

> Married Widoved or divorced Single \_\_\_\_\_

- 3. a. How many children do you have?
  - b. How many of your children that are dependent on you for financial support are in each of the following age groups?

Under 5 years	10	to	14	years	
5 to 9 years	15	to	19	years	
	20	to	24	years	

4. Please check () the statement that will show your educational background.

 

 7th grade or less
 \_\_\_\_\_\_4 years high school

 8th grade
 \_\_\_\_\_\_1 to 3 years college

 8th grade
 1 to 3 years college

 1 to 3 years high school
 4 years or more college

 Other schooling, specify \_\_\_\_

Please indicate whether or not you work away from home for pay. Please 5. check () the answer that fits you best.

> \_\_\_\_ No, not at all Full time (35 hours or more per week) Part time (less than 35 hours per week)

- Please check  $(\nu)$  the number of years you have been a member of a Home 6. Demonstration Club.
  - Less than 1 year 1 to 5 years6 to 10 years11 to 15 years0 years11 to 15 years11 to 15 years

(To be filled out by <u>each</u> project leader.)

We would like to know just how you feel about using the teaching machine in presenting the lesson "Building for Family Security" to your club group. By answering the following questions you can help us to know what your experiences were. Please answer <u>all</u> the questions.

- 1. Did you have any mechanical trouble when using the teaching machine? Yes\_\_\_\_\_No\_\_\_\_ If you checked "yes" above please explain what trouble you had.
- 2. Did you have any other problem in presenting this lesson? Yes\_\_\_\_\_ No\_\_\_\_ If you checked "yes" please explain the problem you experienced below:
- - (3) Less preparation time required than usual\_\_\_\_.
- 4. What did you feel was the response of the majority of the club members to this method of presentation? Check ( $\nu$ ) one of the following:
  - (1) They disliked this presentation method\_\_\_\_\_.
  - (2) They showed no special feeling about this method of presentation\_\_\_\_.
  - (3) They enjoyed this presentation method\_\_\_\_\_.
- 5. Do you feel that the majority of the club members were able to learn as much by this method of presentation as if you had used methods followed in the past? Yes\_\_\_\_\_. No\_\_\_\_\_.
- 6. As a project leader would you prefer to use this method of presentation. (check (//)): Often\_\_\_\_\_ Occasionally \_\_\_\_\_ Never\_\_\_\_\_
- 7. If you have any special reaction to this method of presentation that has not been included in preceding questions, please give your reaction in the following space.

# Follow-up Questionnaire

1. What is your estimate of the amount of time spant in your club for the presentation of the lesson "Building for Family Security"? (check one)

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15 min,	16 to 30	B1 to 45	46 to 60	61 to 75	over 75
or less	minutes	minutes	minutes	minutes	minutes

2. In the opinion of your club group the amount of help provided by this lesson was: (check one)

Large	Fairly Large	Moderate	Fairly Small	Small

APPENDIX B

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Michigan State University	Lucile Ketchum
Cooperative Extension Service	Extension Specialist in
Home Economics	Home Management

Leaders' Lesson Outline

Recently I heard a widowed mother say that a sizeable part of her investment funds are in her son, who is finishing a long period of professional training. She went on to remark that parents today would be considered old-fashioned to talk about dowries for their daughters -- but that modern parents commonly invest a much larger share of their lifetime earnings in education (for both sons and daughters) than ever went into a daughter's dowery in "olden days".

Providing education for children is one of the first things that a group of parents will mention whenever discussion swings to family savings goals and plans for financial security. Retirement income, funds for travel, health protection, pursuit of hobbies -- many more goals and dreams come out as any group talks about investment plans and financial security.

Goals, accomplishments and resources shift as the young couple becomes a family, matures and grows old.

Throughout the life of any family, a successful investment program will be adjusted in relation to all these things, and to many more -- changes in family size, health of individuals, changing family resources, economic changes in the world, and so on.

I. "Typical" adjustments related to family differences and place in life cycle.

a. A young farm family.

b. A middle aged factory worker's family.

c. A 50-year old widow.

d. A young engineer, recently married.

II. Principal ways to save and invest money.

a. Savings accounts.

b. Government bonds.

c. Life insurance.

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d. Annuities, pension plans.

e. Social security.

# f. Investment in a home.l. Preliminary planning, including building up capital for a down payment.

Purchasing the home.
 a. Financing the purchase.

b. Additional costs while home is being paid for.

c. Costs of owning your own home after it is paid for.

- f. Investment in own business or farm.
- g. Investment in other real estate.

# h. Investment in corporate securities (stocks and bonds). l. Characteristics of different types

Common Stock

Preferred Stock

Bonds

Investment trusts and mutual funds.

2. Principle of deversification

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- 3. Investigate before you buy. Get the facts -- don't depend on "tips".
- 4. The place of corporate securities (stocks and bonds) in individual and family investments.
- 5. The stock market
  - (a) Over-the-counter market.
  - (b) The stock exchange (organized market).
  - (c) The commission broker.

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(d) How securities prices are quoted. Stock quotations.

Bond quotations.

a. First, beyond paying for current needs, comes building up an emergency fund and providing protection for dependents.

b. Many people would place next home or farm ownership or own business.

c. Third comes investment to provide better family living.
l. Your investment plan will depend upon your goals, your resources, your own experience and capabilities.

2. It may be a long term investment. Safety of principal is important. Rate of return should be considered in relation to safety or principal. Liquidity may not be important. d. Providing for retirement. Safety or principal, dollar certain income, a hedge against inflation are all points to consider.
### Leaders Outline for Presentation of Lesson

on

### "Building for Family Security"

### Preparation for giving lesson,

- 1. Before meeting, teaching machine and screen should be secured from the extension office.
- 2. Practice using machine at home before the meeting.
- 3. Have extra pencils on hand for members who do not carry their own.
- 4. Divide work of giving lesson between leaders. A suggested division might be for one leader to be responsible for the machine while the other leader might be responsible for questionnaires, and group discussion organization.

### Presentation of lesson.

- 1. Set up machine before meeting.
- 2. Have all questionnaires, problem sheets, and circulars organized and laid out ready for distribution.
- 3. Have members fill out blue questionnaire and collect them as soon as completed.

Please explain to the members that they should not be upset if they do not know the answers. In part I they should answer what they can but not to linger too long over any one question. In part II (true - false questions) they should check all questions. Please ask members not to discuss the questions with each other as they fill out the questionnaires. <u>Stress</u> that they should not put their names on questionnaires.

- 4. Present lesson using the teaching machine.
- 5. Divide group into two sections. Give each group the problem sheets and assign one problem to each group. Then ask each group to select a discussion leader and a reporter.

Under the leaders guidance ask each group to discuss their assigned problem and come to some tentative plan for the situation described. Limit discussion time to ten or fifteen minutes. At the end of this time, the groups would combine and each reporter should give a report of the group's decisions.

6. Give out yellow questionnaire being sure that each members questionnaire has the same number on the upper left hand corner as on the blue one filled out at the opening of meeting. Have members fill out questionnaire as before. Part III should have every question answered. Collect questionnaires as soon as they are completed.

- 7. Pass out circulars.
- 8. After the meeting (within a few days) fill out leaders questionnaire (white) and mail it with members questionnaires in the self-addressed envelope furnished.

APPENDIX C

# COOPERATIVE EXTENSION SERVICE MICHIGAN STATE UNIVERSITY HOME DEMONSTRATION WORK

### FAMILY INVESTMENTS

### SUGGESTIONS FOR LEADERS

Leader 1.

It would be a good division of responsibility for the first leader to present the lesson through section V, g, "Investment in other real estate".

For the first part of section IV, ask the members of your group to name ways to save money or invest it. List these on the blackboard, adding any important ones that may not be suggested by the group.

For the second part of section IV, demonstrate that there are various ways to plan for family security by presenting briefly several family situations and possible ways to build financial security. Following are suggested situations and diagrams.



nearly grown - one employed, one in college.



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Shares 3. Fifty year old widow, with grown children. Investment trust She is employed and expects to be able to work to Annuity Insurance age 65, when she will be entitled to social secur-Home Ownership ity payments. She owns her own home and has Social Security Savings Account \$10,000 from insurance benefits. Annuity Insurance 4. A young college trained engineer Shares of Stocks with employment that is reasonably certain for

the future and gives promise of advancement.

He is married but has no children.



You might choose to discuss only one or two situations. It is important to make it clear that these are possible plans and that there would be other ways any of the families might choose. Use a flannel board and strips of paper (with sand paper on the back) or draw the diagrams on the blackboard.

# Leader 2.

Before procedding with discussion of the second half of the outline the second leader should review briefly the different kinds of investments discussed and make it clear that although we are discussing in detail only home ownership and securities, they are not necessarily the most important means of providing family security. These two have been given most attention because of interest expressed by Extension Group members.

Plan to finish general discussion in time to break up into small groups of 3 to 5 to discuss the two family situations. Each group should discuss only one situation. Give directions: Pick a chairman and secretary, chairman to be responsible for discussion, secretary for reporting. Allow 10 minutes or less for discussion. Suggest that secretary list points as they go along, so that she will be ready to report. Bring the group back together promptly at the end of the time you have set and ask for as many reports as you have time for -- at least one for each family situation.

Family Investments should be presented at an all day meeting or two afternoon or evening meetings.

Lesson Materials To Take Home With You

- 1. Bulletin, Family Investments 1 for each member
- 2. Leader's Lesson Outline 1 for each leader
- 3. Suggestions for Leaders 1 for each leader
- 4. Situation stories The Smith Family and Mrs. Brown 1 for each leader.
- 5. Project Leader's Report 1 for each group.

APPENDIX D

# COOPERATIVE EXTENSION SERVICE MICHIGAN STATE UNIVERSITY HOME DEMONSTRATION WORK

### FAMILY INVESTMENTS

# THE SMITH FAMILY

John Smith is 30 years old, married, has children 6 and 9 years old. He is a skilled worker, earns \$480 per month gross. The family's current expenses including \$90 rent, average about \$400 per month. Mr. Smith's social security deduction of \$14.40 plus deductions for income tax and insurance bring his net monthly earnings down to about \$415.00.

He figures that if he retires at age 65 his average earnings (which up to the present time are abour \$400 per month) will entitle him to maximum benefit payments. Under current social security regulations this would amount to \$127 a month for himself and \$190.50 for himself and his wife when she reaches 65.

If he should die before retirement his wife might receive the maximum payment, \$95.30. If the children should be under 18 and she is caring for them she would receive \$254.10.

Mr. Smith carries \$5000 straight life insurance, premiums \$100 per year. He also has a group health and accident policy which covers the family. The Smith's have \$600 in a savings account, \$200 in savings and loan shares. They are buying Series E. Bonds-5 a year. They have invested \$300 in the bonds over the last two and a half years. They have no debts except for a balance of \$75 due on a washing machine that was bought "on time" and a balance of \$50 on a doctor bill.

What do you see as the Smith family's needs in providing for future security? If you were the Smith's what goals would you be aiming for? What kind of savings and investment program would you plan?

### MRS. BROWN

Mary Brown is 57, in good health. Her husband died recently, leaving her a large and comfortable home, another house which rents for \$65 a month, and insurance policies amounting to \$7000. Her grown children have different ideas about what she should do. A son thinks she should sell the home and spend her time with the children, going from one home to the other. Another son thinks she should sell the home and buy a smaller place. Her daughter hates to see her mother leave their family home, but knows the \$7000 won't last long and wonders how her mother can get along. Mary herself wants to stay in her home.

What do you see as Mary Brown's needs in providing for future security? What are some possible plans she could make with the resources she has?

Revised January, 1960 APPENDIX E

## OPENING PARAGRAPHS OF SCRIPT FOR TAPE

# Building Family Security

# Slide 1.

Family financial security--what does it mean? For most families, it means having something "laid by." It means being able to meet day-to-day living expenses without too much difficulty. It means feeling able to cope with financial emergencies when they come along--the small, and sometimes not so small, items that could "upset the apple cart." It means looking forward to the vacation trip for the family, the day when children will be in college and eventually the leisure of retirement--and all this with the reasonable expectation of being able to "foot the bill."

Financial security just does not happen. It comes about through patient planning and through building block by block over the years. There are a fairly limited number of building blocks but families put them together in different ways.

# Slide 2.

For example, here are the Hendersons--a young farm family with three small children. They have accumulated livestock, equipment, and have built up a small savings account. They rent a farm on shares.

# <u>Slide 3</u>.

Their plan for building family security might look something like this if you were to diagram it. Here would be a savings account, social security, livestock and tools to



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# GUIDING PRINCIPLES FOR FAMILY INVESTMENT

LIQUIDITY - FUNDS READILY AVAILABLE



CONSIDER RATE OF RETURN

DIVERBIFICATION, NOT ALL YOUR EGGS IN ONE BASKET



BIBLIOGRAPHY

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### BIBLIOGRAPHY

# <u>Books</u>

- Galanter, Eugene. <u>Automatic Teaching--The State of the Art</u>. Edited by the University of Pennsylvania. New York: John & Sons, Inc., 1959.
- Harris, Chester W. (ed.). <u>Encyclopedia of Educational</u> <u>Research--1960</u>. New York: <u>Macmillan Company</u>, 1960.
- Lumsdaine, A. A. and Glazer, Robert (eds.). <u>Teaching Machines</u> <u>and Programmed Learning</u>. Department of Audio-Visual Instruction. National Education Association of the United States, 1960.

### Other Sources

- Ahlgren, H. L. and Ratchford, C. B. <u>A Guide to Extension</u> <u>Programs for the Future</u>. Raleigh, North Carolina: The Agriculture Extension Service, North Carolina State College for the various Agricultural Extension Services and the U. S. Department of Agriculture, 1959.
- <u>Automation--Its Meaning for Educational Administration</u>. Report of the National Conference of Professors of Educational Administration. Tenth Annual Meeting, University of Arkansas, Fayetteville. New York: Bureau of Publications, Teachers College, Columbia University, 1957.
- Fry, Edward B., Bryan, Glen L. and Rigney, Joseph W. <u>Teaching</u> <u>Machines: An Annotated Bibliography</u>. Audio-Visual Communication Review, Volume 8, No. 2, Supplement 1. Washington, D. C.: Department of Audio-Visual Instruction, 1960.
- Ketchum, Lucile. <u>Family Investments</u>. Extension Bulletin 340, East Lansing, Michigan: Cooperative Extension Work in Agriculture and Home Economics, Michigan State University, 1959.
- Silverman, Robert E. "Auto-Instructional Devices," <u>Journal of</u> <u>Higher Education</u>, Vol. XXXI, No. 12 (December 1960).
- What Everybody Ought to Know About This Stock and Bond Business. New York: Merrill Lynch, Pierce, Fenner, & Smith, Inc., 1960.

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