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ABSTRACT

A 15-month followup study was made of an experimental group of 79 home economics teachers who attended workshops encouraging adoption of wage-earning emphases in comprehensive high schools and a control group of 79 teachers to determine: (1) the extent and nature of curriculum change, (2) the extent to which curriculum change would have occurred without the workshops, (3) characteristics of teachers who did and did not modify curriculum, and (4) differences between teachers who did and did not adopt wage-earning emphases. Data from 129 teachers revealed that the frequency of change reported by the experimental group exceeded the control group from 7 to 17 percent, and the integration of units into existing courses was the most frequently reported type of wage-earning emphasis incorporated. Findings also indicated that teachers most likely to adopt the innovation of wage-earning emphases (1) are mature professionals between 40 and 50 years of age, (2) have stability in their teaching position, (3) report favorable family attitudes toward their working, (4) perceive themselves as highly effective teachers, (5) report participation in professional organizations, and (6) have more highly positive attitudes toward vocational education. Phase I of this project is available as ED 049 358. (SB)

Final Report

An Investigation of the Effectiveness of a Design to Initiate Curriculum Change in Home Economics Follow-Up: Phase II

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May, 1971

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Preface

This monograph has been written as a sequel to "An Investigation of the Effectiveness of a Design to Initiate Curriculum Change in Home Economics, Pilot Study: Phase I," Occupational Research Development Monograph No. 5, The Research Coordinating Unit for Vocational-Technical Education, Bureau of Occupational Research Development, Division of Vocational Education, New Jersey State Department of Education, Trenton, New Jersey. The first report described in detail the stimulus to change, i.e. teacher-led in-service workshops, populations, the rationale for including specific variables and the characteristics of measures of each variable. In this second report, I have tried to achieve a balance between providing sufficient information for the report to be clear, yet not unduly long and repetitive of the first. Therefore if some sections of particular interest do not provide the detail desired, reference to the earlier monograph may.

In addition to those persons acknowledged for assistance during the Pilot Study, I wish to express appreciation to the following:

For their continuous support for the project:

Dr. Myrna Crabtree, State Director, Home Economics
Dr. Morton Margules, Associate State Director, Vocational-Technical Education

Teachers in the control and experimental groups, who graciously consented to be interviewed.

Mrs. Elaine Douma, who served as an interviewer and assistant; and who as her masters thesis concentrated on the development and refinement of the scale to measure teacher perceptions of the supportiveness of the system to change.

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Special appreciation is due the two persons who at different times have served as department chairmen during the time period of the project, Dr. Carl Schaefer, former chairman and current colleague, and Dr. Charles Drawbaugh, Chairman, Department of Vocational-Technical Education. Both never failed to extend the support and encouragement conducive to productivity.

Mary B. Kievit
New Brunswick, N. J.
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In 1968, teacher-led in-service workshops were conducted to disseminate information pertaining to a curriculum innovation, namely incorporating wage-earning emphases in home economics programs in comprehensive high schools. Another purpose was to encourage teachers to seriously consider the innovation for adoption in each of the local schools represented. The 79 teacher participants, i.e. the experimental group, were surveyed near the conclusion of the workshops to obtain data about adoption of the innovation or plans to adopt. Data were obtained on a number of demographic and social-psychological variables thought to be related to adoption behavior. A control group composed of 79 secondary teachers of home economics drawn by a random sampling technique from teachers throughout the state were surveyed for the same data in 1967-68. A follow-up study was initiated in 1969-70, i.e. fifteen months after the conclusion of the workshops.

Objectives

The objectives of the follow-up were to ascertain --

1. the number of teacher participants in teacher-led in-service workshops who after fifteen months had in fact initiated curriculum change; the extent and nature of change.

2. the extent to which the number of teachers modifying curriculum exceeded the frequency with which such change could have been expected to occur without the benefit of teacher-led in-service workshops.

3. whether participants who modified curriculum differed significantly on selected characteristics from those participants who did not modify curriculum.

4. whether, irrespective of stimulus, teachers who adopted wage-earning emphases, thus altering curriculum, differed, on selected characteristics, from those who did not adopt wage-earning emphases.

Method

Variables

Within the conceptual framework of a communication model, Source-Message-Channel-Receiver-Effects, additional variables, pertaining to characteristics of the innovation disseminated, receivers, and subsequent effects were selected for inclusion in the follow-up. Variables measured and analyzed to ascertain relationships with adoption behavior were:

Receiver -- Personal: dogmatism, risk-taking propensities, demographic, management of domestic responsibilities, valuing of work.

Professional: teaching-effectiveness, professional participation, professional reading, professional involvement, teacher perceptions of the supportiveness of the school system to change, job satisfaction, self-perception of opinion leadership.

Related to Innovation -- attitudes toward employment, attitudes toward vocational education, perceptions of reference groups valuing of innovation.

Related to Effects -- stage in adoption process, reported action relative to curriculum.

Data Collection and Analysis

Data collection began in August, 1969 and was completed in April, 1970. Data were collected through individual interviews lasting from 45 to 90 minutes. Analysis included computation of proportional variations; chi square tests, multiple regression, and discriminate analysis for two groups.

Respondents

Of the 158 teachers contacted, i.e. 79 in the experimental and 79 in the control group, complete or partial follow-up data were obtained from 129, i.e. approximately 82 percent. Loss of cases was evenly distributed between the experimental and control groups; respondents in each numbering 65 and 64 respectively. Analysis of demographic characteristics of respondents in the pilot as compared to the follow-up, led to the conclusion that the loss of cases did not result in markedly different respondents. At various points throughout the analysis, distortion due to loss of cases was considered and assessed on the basis of characteristics.

Effects of Workshops

The frequency of change reported by the experimental group exceeded that reported by the control group from 7 to 17 percent, depending upon the base of comparison. Thus, the conclusion that teacher-led in-service workshops did induce change in excess of that to be expected without workshops. The type of wage-earning emphases incorporated into home economics programs, most frequently was the integration of units into existing courses. Thus optional type adoption decisions were made more frequently than contingent type.

Findings indicated that the workshops quite probably provided the information necessary for teachers already aware of the innovation for some years to actually take an initial step in adopting it. It was evident that for 1/5 of the experimental group, workshops introduced the innovation. Further, the data indicated almost a 3 to 5 year time lapse between initial contact with the innovation and some implementation. Thus, it is reasonable to conclude that for a number of the workshop participants reporting no change, the workshops may be serving as a component of the exploration stage, intermediate between initial contact and trial adoption.

Findings are less conclusive on the question of communication between the experimental and control group respondents and the extent to which such communication if any increased the change reported by the control group. Considering the data on time of planning changes, geographical distances and dispersion of teachers in the control and experimental groups, and teacher reports of influencing other teachers, it is this writer's opinion that change reported in the control group was minimally, if at all, influenced by the workshops.

After the 15-18 month interval, 65 percent of the teachers participating in the workshops considered these workshops to have been a means of their being better informed and over 90 percent indicated willingness, with some qualifications, to attend similar workshops with different content.

Teacher assessments of the success of adoption indicated that some decisions to adopt on a trial basis may lead to eventual rejection. The majority, however, seemed to be moving towards extension and continuation of wage-earning emphases.

Deterrents to adoption were in large part the delay of teachers in seriously considering the innovation for adoption, perceptions of the relative advantage of the innovation, both to the teacher and the system, and situational constraints.

In conclusion, the findings reported provide additional evidence to the slow rate of change in adopting curriculum innovations, i.e. in this case conservatively from between $1\frac{1}{2}$ to 5 percent increase without workshops, in a $1\frac{1}{2}$ year period. Findings did indicate that teacher-led in-service workshops can be planned and implemented effectively to double the rate of change.

Characteristics of Adopters and Non-Adopters

Consistent with the third and fourth objectives of the study, data on the variables specified were analyzed in terms of the experimental group, dichotomized on the basis of reporting change in curriculum and no change in curriculum, and compared with data for the control group dichotomized on the same basis. Subsequent to that analysis, teachers in the experimental and control groups were combined and then dichotomized on the basis of having changed curriculum and not having changed. Data were then analyzed to ascertain whether significant relationships existed between adopting the curriculum innovation and each variable. Inasmuch as a comparison of findings showed that results from these two approaches were the same except for two variables, findings are reported for the combined groups dichotomized as adopters and non-adopters.

Findings from this analysis indicated that teachers most likely to adopt the innovation of wage-earning emphases in Home Economics were teachers who:

1) are mature professionals, between 40 and 50 years old;
2) have stability in their teaching position;
3) report attitudes of family members are favorable to their employment;
4) value work as an end in itself;
5) perceive themselves as highly effective teachers;
6) report comparatively higher satisfaction with supervision and adult relationships on the job;
7) report participation in professional organizations;
8) see themselves as opinion leaders;
9) perceive the school system as being supportive of educational change;
10) perceive administrators, students, and community as viewing the innovation more positively;
11) have more highly positive attitudes toward vocational education.

Multiple regression analysis using the variables identified above and some additional ones showed eight variables accounted for 25 percent of the variance, as indicated by a multiple r of .50. It was found through discriminate analysis, that on the basis of selected variables it is possible to discriminate adopters from non-adopters.

Implications

Workshops as Channels for Diffusing Innovations

The findings of this two-phase study support the development and implementation of carefully planned workshops as one effective channel for disseminating information about curriculum innovations and for encouraging

their adoption. Evidence indicated that workshops did increase the rate of change, and equally important, teacher participants favored the use of teacher-led workshops. Workshops as a term includes a large variety of experiences. The findings of this study pertain only to workshops as designed and implemented in this project. A review of the description of these workshops (Kievit, 1970) should underscore the careful and deliberate planning of content to be included, teaching techniques to be used, and the involvement and preparation of teacher leaders throughout.

Findings also support the feasibility of selecting participants most likely to be responsive to efforts to diffuse innovations through workshops. For those interested in furthering adoption of wage-earning emphases in Home Economics, some variables have been identified and found to contribute to discriminating between those most likely to adopt and not adopt. Future studies may help to identify which of these variables are generic to adoption of most educational innovations, and which are linked to the unique characteristics of a particular innovation. Specifically, the variables of self-evaluation of teaching effectiveness and teacher perceptions of the supportiveness of the school system to change hold promise of wider applicability. The designs of future studies in this area might benefit by including several categories of variables; one, variables potentially generic to adoption behavior in education and secondly, variables related to characteristics of the particular innovation being studied, and related to adoption or non-adoption.

The findings of this study suggest that variables of a more general level such as demographic characteristics, dogmatism, risk-taking propensities, and attitudes towards employment of women have less discriminating power than those related to the individual's performance as a professional, and the perception of situational facilitators and constraints. One possible explanation for the limited contribution of these types of variables may be related to the comparative homogenity of the population involved. The selective sorting which occurs as individuals choose a vocation and commit themselves to it, as well as the socialization into the beliefs, attitudes, and practices of peers contribute to a leveling effect. Logically this leveling would seem to increase as one moves from the general to the more particular, e.g. teachers, to home economics teachers, to secondary home economics teachers. Thus research efforts might be more advantageously expended in identifying and investigating variables more specifically linked to the innovation, mode of dissemination, setting in which adoption must occur, and the functioning of the teacher within that setting.

CHAPTER II

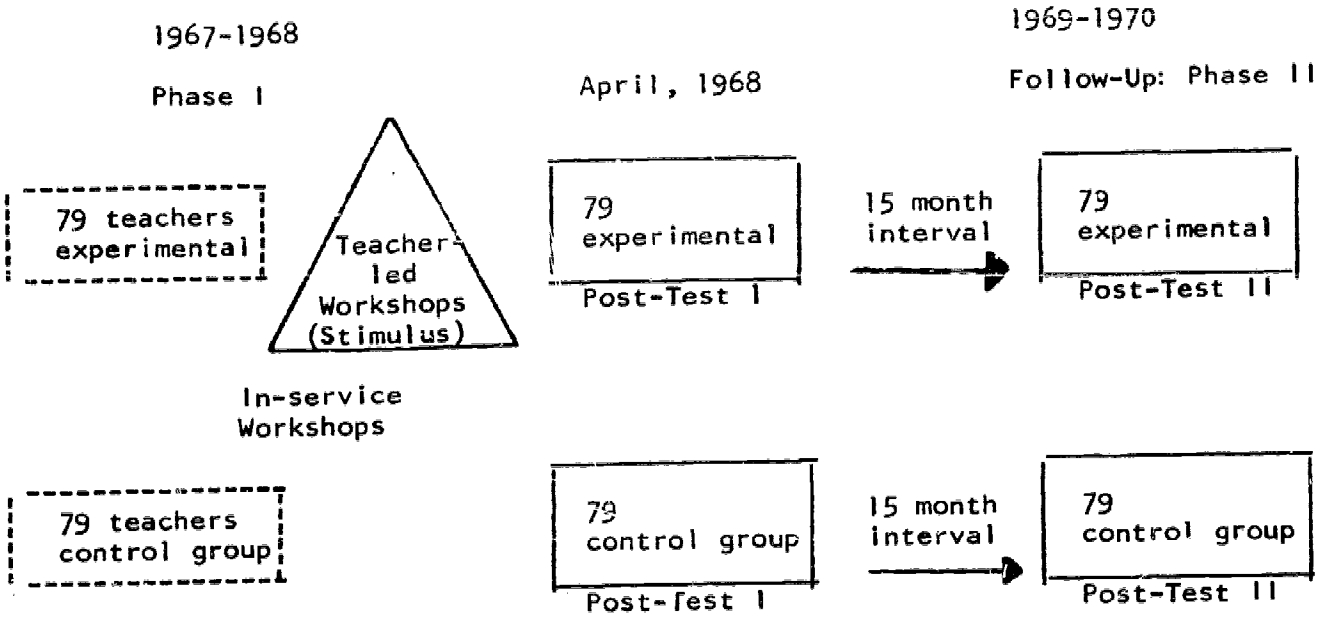
FOLLOW-UP OF A DESIGN TO INITIATE CHANGE

Overview

Change in education is much thought about, as evidenced by the number of articles and speeches which focus directly or indirectly on the subject. Research is valued as one basis for providing accurate information and knowledge to influence changes which are consistent with educational objectives. It is almost a truism, that the weakest link in the efforts to promote change is the dissemination of information to practitioners in such a way, that practitioners become change agents in the local school. The significance of this investigation becomes most apparent when viewed as 1) an endeavor to design one specific approach to dissemination of information to practitioners with the purpose of motivating each to become an agent of change in a specific area within the local school; and 2) through a quasi-experimental design to ascertain the extent to which the treatment was effective in promoting change.

The design for initiating change is: selecting and training of teachers, by teacher educators, to serve as leaders of workshops for other teachers; planning, selecting, and developing content, techniques, and evaluation procedures of workshop sessions; conducting workshop sessions for teachers within reasonable traveling distance. The content to be disseminated, or the skills to be developed would vary in relation to the curriculum change sought. Such a design is applicable to most areas in vocational-technical education as well as non-vocational areas.

The investigation was implemented in two phases; a pilot phase and a follow-up. The research design is diagrammed on the following page.



Pilot: Phase I

Since the pilot phase was reported in detail (Kievit, 1970) only a brief summary is included here.

The content disseminated in the workshops pertained to incorporating wage-earning emphases in secondary school programs of home economics and was planned to answer the basic questions of why; what; and how.

Seven teachers were selected on these criteria: demonstrated understanding of, and ability to communicate the need for occupational education and information relevant to necessary curriculum change; that as a group, leaders be from areas geographically dispersed throughout the state. (See Kievit, 1970, p. 20 for further details.) These teachers were prepared to serve as leaders of in-service workshops*. Six of these leaders were involved in the selection and preparation of materials and techniques to be used in the workshops. One-hundred twenty-six teachers, dispersed throughout

*Workshop participants attending 6 or 7 sessions were given a certificate for 1 credit of in-service education. This was not graduate credit nor was it applicable to filling academic degree requirements. Some districts might base salary adjustments on it.

the state were invited to attend. Four factors determined the teachers to be invited: 1) geographical proximity to the workshop location; 2) limit of 18 invitations per workshop; 3) when potential numbers of participants exceeded 18, a random sampling technique was used to determine who would be invited; and 4) did not have a home economics occupation course. On the basis of these criteria, names of teachers were identified from a Directory of Home Economists in New Jersey. One hundred and twenty-six invitations were extended. Eighty-eight accepted the invitation to attend. Of these eighty-eight, 87.5 percent (77) attended 6 or more of the 7 sessions which constituted the workshop. Workshop sessions were held on alternate weeks from 3:30 - 5:30 or 3:45 - 5:45. Systematic and detailed evaluation of each workshop session found that consistently a large majority of participants rated the various facets of each session "good" to "excellent." Of 68 responding, 90 percent said the workshops should be offered to other teachers in the state.

Workshop participants constituted the experimental group in the research design. A control group was selected by a random sampling technique from a list of names of all secondary teachers of home economics in the state, after the names of workshop participants were excluded. No treatment was given to the control group which was used primarily to be able to answer these two questions.

1) in what characteristics and to what extent do teachers in the experimental group* differ from being representative of secondary home economics teachers in the state; thus limiting the extent to which findings can be generalized;

2) to what extent can changes in curriculum be attributed to the stimulus, i.e. in-service workshops, rather than to other factors such as reading about and implementing curriculum ideas from professional literature, contact with teachers who have modified courses in other schools, and administrative pressure, which were experienced in varying degrees by all teachers.

The control group would be affected by such factors while not experiencing the in-service workshops. Teachers in the experimental group would be subject to both types of influences.

In the pilot, data were obtained from 79 teachers in the control group by interview; this number constituted 82 percent of the sample drawn. Loss of cases and reasons are reported in detail elsewhere (Kievit, 1970). Comparable data were obtained from 79 workshop participants in sessions 5 and 7; and partial data from 28 non-participants.

An area of secondary concern was whether significant differences existed on selected variables between teachers who attended the workshops and modified curriculum and those who attended but did not modify curriculum. In effect

*It was not known whether the criteria (p.2) employed in selecting teachers for the experimental group had resulted in an atypical group of teachers. The use of a representative control group provided comparative data for determining this.

asking,"Is this design of dissemination and motivation effective for teachers with identifiable characteristics but not for others?" The answer to this question, potentially provides more relevant information for designing alternative approaches to dissemination activities for specific populations where the known probability of success of this design is least.

A third question to which answers were sought was: Do teachers who alter curriculum, irrespective of stimulus, i.e. workshop or other influences differ significantly on selected variables from those who do not alter curriculum?

The pilot study was used to test out the adequacy of measures on these selected variables: demographic characteristics, curriculum change, professional involvement, teaching effectiveness, work orientation, job satisfaction, self-perception as an opinion leader, belief system and risk-taking propensities. Most of the measures were found adequate as a basis upon which to differentiate among respondents (Kievit, 1970).

In sum, during the first phase of the project, it was evident that the stimulus for change, i.e. the workshops, had been successfully implemented. Data obtained from the workshop participants as the experimental group and from the control group were adequate to provide a base for comparison, over time, in terms of the extent of change to incorporate wage-earning emphases in home economics programs.

Further, the findings indicated that teachers in the experimental and control groups were very similar in: socioeconomic origins; being upwardly mobile; and patterns of employment, when age variations were considered. They differed in that the teachers in the experimental group tended to be older, be married, have more children, and fewer masters degrees than those in the control group. Slightly higher proportions of teachers in the experimental group reported more professional involvement than did those in the control group.

Reports of respondents in the experimental and control groups indicated no significant variations in management of domestic responsibilities, self-evaluation of teaching effectiveness; open-closed belief systems (dogmatism); risk-taking propensities; and work orientation. Experimental group respondents on two measures of job satisfaction tended to report somewhat lower satisfaction than those in the control group. Somewhat unexpectedly, experimental group respondents did not as strongly perceive themselves as opinion-leaders as compared to control group respondents.

In sum, on most of the variables measured the experimental and control groups were very similar, thus supporting the assumption that the procedures utilized for selecting teachers to participate in in-service workshops did not create a sharply atypical experimental group.

Follow-Up: Phase II

Phase II was initiated in June, 1969 approximately fourteen months after the workshops were completed. The objectives of the follow-up were to ascertain -

1. The number of teacher participants in teacher-led in-service workshops who after fifteen months had in fact initiated curriculum change by incorporating wage-earning emphases in home economics; the extent and nature of change.

2. The extent to which the number of teachers modifying curriculum exceeded the frequency with which such change could have been expected to occur without the benefit of teacher-led in-service workshops.

3. Whether participants who modify curriculum differed significantly on selected characteristics from those participants who did not modify curriculum.

4. Whether, irrespective of stimulus, teachers who adopted wage-earning emphases, thus altering curriculum, differed on selected characteristics, from those who did not adopt wage-earning emphases.

A conceptual framework was sought to strengthen the effort to include measures of as many relevant variables as feasible, so that maximum understanding of relationships between the dissemination activity, the characteristics of teacher participants, and action or inaction relative to curriculum, would result. Rogers (1970: 1-26) points out the similarity between elements in the diffusion of innovations and the S-M-C-R-E communication model. This communication model provides a conceptual framework which is helpful in describing the different components of this study and appears as Figure 2.1.

Figure 2.1 Design for Initiating Curriculum Change (Within S-M-C-R-E Communication Model)

Source	Message	Channel	Receiver	Effects
Teacher Educator as Change Agent via Opinion Leaders	Knowledge about and persuasion to use innovation: i.e. wage-earning emphases in Home Economics programs in comprehensive high schools. Characteristics of Innovation 1. relative advantage prestige value from a) other home economists b) superordinates c) clients, i.e. students community increased job satisfaction 2. compatability R) attitudes towards e) vocational education c) e) attitudes towards i) employment of v) women e) r) 3. complexity complete adoption would rate high on complexity; becomes a contingent decision to adopt 4. trialability could be tried in stages with the first an optional decision 5. observability moderate observability of results student response to course improved attendance interest, increased enrollment over-time, post-school success	1. Professional activities, e.g. journals, interaction with peers and superordinates at the local, county, and state level, which included wage-earning emphases as one of many professional concerns. 2. Teacher (opinion-leaders) conducted in-service workshops for other teachers a) homophilous leaders b) interpersonal c) credible, i.e. either had adopted innovation or were in process d) were of slightly higher social status e) length of time - 14 clock hours	As members of a system Teachers of Home Economics in comprehensive high schools who had not adopted innovation. Characteristics related to adopter categories P) dogmatism e) risk-taking r) propensities s) time restraints o) professional- n) domestic a) familial- l) demographic P) teaching effec- r) tiveness o) job satisfac- f) tion e) professional s) involvement s) opinion leader- i) ship o) perception of n) supportiveness a) of the system l) to change	Consequences over time Movement through stages in adoption process 1) awareness 2) interest 3) evaluation 4) trial)curri- 5) adoption)culum)change

Source:

Within the last decade a number of forces have contributed to directing efforts to the extension and improvement of vocational education within the public schools. Home economics as an area of vocational education - heretofore primarily to prepare girls and women for their roles as homemakers - was considered to have potential for preparing youth for employment in occupations related to home economics content. Personnel at the federal and state level sought extension of home economics programs to include preparation for employment.

In this report, the term wage-earning emphases is used to refer to several means of including preparation for employment. (See p. 30., for specifics.)

Viewed within the communications models, the teacher educators in home economics were among state level personnel acting as change agents. The approach to initiating change was to involve those who had in some degree adopted the innovation in high school programs to inform and persuade others. As determined in the pilot study, these teachers did see themselves as opinion leaders to a greater degree than did other teachers in the study. (Kievit, 1970, p. 102.)

Message:

The message, briefly, was information about the innovation and persuasion to adopt it. The specific information and the means to persuade are described in detail elsewhere (Kievit, 1970).

Characteristic of the Innovation:

Five characteristics found (Rogers, 1970) to influence the acceptance or rejection of innovations are: relative advantage, compatability, complexity, trialability, and observability. Wage-earning emphases, as an innovation, is described in terms of these five attributes.[1]

1. Relative advantage according to Rogers (1970) "may be measured in economic terms but often social prestige factors, convenience, and satisfaction are also important."

   The teacher who incorporated wage-earning emphases would not be likely to experience much of any economic advantage; thus any relative advantage is more likely to be in other areas. Prestige value could be obtained from different groups, such as other home economists, superordinates, students and the community. Data

[1]This description is based on the writer's general information about the innovation, school settings, experience with home economics teachers, and logical deductions and inferences.

were collected relative to the value accorded the innovation by these various groups.

Generally, teachers would experience greater inconvenience in adopting the innovation than in rejecting it. Adoption would necessitate, minimally, the reorganization of course outlines and instruction to include newly developed units with additional information. Adoption to the fullest extent would potentially involve gaining support of school administrators, writing a proposal for state funds, ordering additional equipment and supplies, surveying the community employment situation, student interests, and developing a curriculum, to mention only some of the work involved.

Potentially, adopters would derive more satisfaction from teaching, or would sustain and reinforce existing satisfaction derived from being sensitive to student educational needs and from being responsive to those needs. Data on job satisfaction and teaching effectiveness were obtained.

2. Compatability is the degree to which an innovation is perceived as consistent with the existing values and past experiences of receivers (Rogers, 1970). Data were collected on two variables which are related to relevant values, namely attitudes towards vocational education and attitudes towards employment in the lives of women. Receivers (teachers) who do not value vocational education would seemingly be more apt to reject an innovation which involves them, directly and obviously, in preparing youth for employment. Furthermore, since occupations related to home economics would attract girls, though not exclusively, the valuing of the innovation and its adoption would seem to be related to whether the teacher thought employment an essential or likely part of a girl's adult role.

3. Complexity is the degree to which an innovation is perceived as difficult to understand and use. Some of the complexity of wage-earning emphases as an innovation were described above under relative advantage. Data elicited by questions concerning problems encountered relative to adoption provided some indication of the extent to which complexity was a deterrent to adoption.

4. Trialability - Rogers notes that this attribute refers to the degree to which an innovation can be experimented with on a limited basis. Further, that innovations which can be tried on the 'installment plan' will generally be adopted more quickly than innovations which are not divisible (Rogers, 1970). Wage-earning emphases could be incorporated in several ways, with some necessitating an "optional" decision, i.e. made by an individual teacher regardless of the decisions of other members of the social system, whereas others require a "contingent" decision, i.e. made by individuals, but can only occur after the social system makes a

prior innovation-decision. When a teacher decides to "integrate" wage-earning emphases into her existing courses by the inclusion of units on the applicability of course content to employment, she is making an optional decision. Its implementation requires minimal, if any, involvement of other members of the school staff. When she seeks to develop an occupation course to prepare students in a one or two-year period for employment as food service workers, child care aids, or in diverse occupations related to home economics she is seeking system approval of the innovation. Thus the decision is contingent upon the agreement to either reallocate human and material resources within the system, or in some way to increase resources available to the system. Data were collected to ascertain the type of wage-earning emphases which was incorporated into programs.

5. Observability, as the degree to which the results of the innovation are visible to others, would vary with the means by which wage-earning emphases were incorporated. Some indications of results might be through student responses to the course, such as improved attendance, and interest. Over time results might be evident in increased course enrollment, and the success of graduates in work. Teachers were asked about the extent to which implementation of adoption decisions had fulfilled their expectations. Responses to this question provided some information relative to observability.

Channel:

The channels for disseminating the message, i.e. information about wage-earning emphases in home economics programs include professional journals, professional meetings at the national, state, and county level; and interaction between superordinates at the state, county, and local level as well as between peers, i.e. teacher to teacher.

Within this project, in addition to the usual channels listed above, another was designed to be used as a treatment with the experimental group and to be tested for its effectiveness in stimulating change. This channel was teacher-led in-service workshops. As a stimulus to change it can be characterized as follows:

1) The teacher leaders tended to be homophilous, i.e. very much like the receivers. They differed from receivers in these important ways:

   a) they tended to see themselves as opinion leaders more so than receivers,

   b) they had credibility in the message to be communicated in that each either was in the process of adopting or had to some extent adopted the innovation, and

c) they tended to be of slightly higher socioeconomic status.

2) The message included information dissemination and persuasion, and the channel was structured for small groups, face-to-face interaction.

3) The contact time of leader and teachers approximated fourteen hours, in two-hour blocks, over a period of fourteen weeks.

4) Access to the message was made as convenient as possible for each receiver (participant).

Receivers (Teachers):

The receivers of the message via workshops were randomly selected teachers of home economics in comprehensive high schools who had not adopted the innovation. Theoretically, receivers of the message through the other channels mentioned were all home economics teachers in the state.

Among all receivers, some would become innovators, early adopters, early majority, late majority and laggards. Since the innovation had been adopted by some as early as 1965-66, receivers during the workshops (1967-68) would be less likely to be innovators and more likely to be dispersed among the remaining adopter categories. Based on generalizations about characteristics of these adopter categories as reported by Rogers (1962), the following receiver characteristics were measured: Personal -- dogmatism (open-closed belief systems); risk-taking propensities; time restraints, as indicated by familial-domestic-professional responsibilities; demographic. As Members of a System -- teaching effectiveness; job satisfaction; professional involvement; opinion leadership; and perceptions of the supportiveness of the system to change.

The basic question was: Do those who adopt the innovation differ significantly on these variables from those who do not adopt it?

Effects:

The effects of the message communicated via the channels described were measured in terms of: information, movement or lack of movement in the adoption process, and reported behavioral change in terms of incorporating wage-earning emphases in the home economics program. An assessment of the effects of workshops for the experimental group included an open-ended question asking what each participant considered to be a major outcome. Teachers in the control groups, as well as in the experimental group, were asked when they first heard of the innovation and whether they sought further information. This line of questioning continued as a means of determining the stage in the adoption process, i.e. from awareness, interest, evaluation, trial, and adoption.

Behavioral change was reported as having considered or not considered adoption; having incorporated or not having incorporated wage-earning emphases; and describing the way in which wage-earning had been incorporated, problems encountered, degree of satisfaction with decision, and with implementation; and last, persons initiating the adoption.

Variables were measured by the device indicated during either the pilot phase, follow-up, or both. (See appendix for all measures except Ryans Teacher Characteristic Schedule.)

Receiver	Variable	Measurement	Phase
Personal	Open-closed belief system	Rokeach Dogmatism Scale	Pilot
	Risk-taking propensities	8 forced choice items "Job Preference Inventory" by L. Williams (Guttman Scale)	Pilot
	Demographic	Direct question	Pilot Follow-up
	Management of domestic responsibilities	Direct question	Pilot
Professional	Teaching effectiveness-self rating	10 item, 5 point rating scale	Pilot
	Teaching effectiveness-indirect	Ryans Teacher Characteristic Schedule	Follow-up
	Professional involvement Professional memberships	Adapted Chapin social participation scale	Pilot
	Professional reading		Pilot
	Attendance at professional meetings		Pilot Follow-up
	Supportiveness of system to change	Developed 26 item rating scale	Follow-up
	Job satisfaction	5 item scale adapted from Morse scale	Pilot and Follow-up
	Opinion leadership	6 item scale modified version of Roger's scale	Pilot
	Job satisfaction	Job Descriptive Index by Patricia C. Smith	Pilot

Related to Innovation	Variable	Measurement	Phase
	Attitudes toward employment of women	Katelman & Barnett	Follow-up
	Attitudes toward vocational education	Wenrich & Crowley	Follow-up
	Reference groups valuing of innovation		Follow-up
Related to Effects			
	Stage in adoption process		Follow-up
	Reported action relative to curriculum		Follow-up

More detailed descriptions of measures appear prior to the presentation of the findings on relationships with each variable.

Data Collection

The data were obtained by interviewers. Six interviewers were employed with two persons interviewing approximately 1/2 of the respondents. Interviewers had a 2-3 hour training session in the use of the interview schedules, self-administered questionnaire, and explanations of the project for use in answering questions. The length of the training was adequate inasmuch as five of the persons doing interviews were home economics teacher educators or teachers who were familiar with fundamentals of interviewing.

Interviewing began in August, 1969 and was completed in April, 1970.

The total 158 teachers,[1] i.e. 79 in the control group and 79 in the experimental were asked, in a letter, to cooperate by granting an interview. On the basis of the information returned, interviewers contacted the teacher and scheduled the interview in the school. Time required for the interview ranged from forty-five minutes to one and a half hours.

Respondents

Of the 158 teachers contacted, complete or partial follow-up data were obtained from 129, i.e. approximately 82 percent. The lost cases were almost evenly distributed between the experimental (14 cases) and the control (15 cases) groups. Reasons for loss of cases were: 1) left position without a forwarding address, 10; 2) moved out of state and failed to respond to mailed questionnaire, 5; 3) refused to schedule an interview, 5; 4) deceased or severe prolonged illnesses, 3; 5) data returned incomplete, 3; 6) miscellaneous, 3.

In an effort to assess whether the loss of cases had been widely distributed or led to the elimination of highly select respondents, comparisons were made on selected demographic variables, of age, marital status, degrees, years teaching, and years in present position. Tables 2.1 through 2.5 report these comparisons.

[1] Contacting the 158 respondents in the pilot constitutes a departure from the plans for the follow-up reported earlier (Kievit, 1970, p. 11). The intent had been to survey, only teachers in the control group who had reported that wage-earning emphases had not been incorporated into the program. As planning for the follow-up phase progressed, it was decided that potential advantages from surveying the total group outweighed the added cost.

TABLE 2.1 Comparison of Age of Follow-Up Respondents with Pilot Phase Respondents By Experimental and Control Group

	N	Age 21-30 Percent	31-40 Percent	41-50 Percent	51-Over Percent
Experimental					
Follow-up	65	29.7	9.4	45.3	15.6
Pilot	79	29.1	11.4	40.5	17.7
Control					
Follow-up	64	31.7	14.3	30.2	23.8
Pilot	79	32.9	17.7	26.6	21.5

Age data analyzed for follow-up and pilot were obtained during the pilot phase, thus proportional shifts between categories are not influenced by increased age during the time lapse between the two phases. It is evident that the alteration in proportional age composition of the two groups was relatively slight and in all but the 51 years and over category were in the same direction.

TABLE 2.2 Comparison of Marital Status of Follow-Up Respondents with Pilot Phase Respondents by Experimental and Control Group

	N	Marital Status Single Percent	Married Percent	Other Percent
Experimental				
Follow-up	65	18.5	64.6	16.9
Pilot	79	16.5	63.3	20.2
Control				
Follow-up	64	26.6	54.7	18.8
Pilot	79	34.2	50.6	15.2

Proportional variations reported include change from two sources, namely loss of cases, and also change of status from 1968 to 1969-70. Thus in the single and married categories, although proportional variations are evident, these are slight and the experimental group is still characterized by a larger proportion of married respondents than is the control group.

TABLE 2.3 Percent of Follow-Up and Pilot Phase Respondents by Highest Earned Degree and Experimental and Control Group

	N	Highest Earned Degree	
		Bachelors Percent	Masters* Percent
Experimental			
Follow-up	65	81.5	13.8
Pilot	79	82.3	14.0
Control			
Follow-up	64	64.1	34.3
Pilot	79	70.9	25.3

*less than 100 percent indicates rate of no response and non degree teachers.

Variations reflect change from loss of cases and change in degrees earned during time interval between pilot and follow-up. Thus from both sources follow-up respondents show a gain of 9 percent in teachers of the control group holding masters degrees; whereas the distribution among experimental group respondents is almost the same.

TABLE 2.4 Years of Teaching of Follow-Up and Pilot Phase Respondents by Experimental and Control Group

	N	Years Teaching 1-2 Percent	3-5 Percent	6-10 Percent	Over 10 Percent
Experimental					
Follow-up	65	3.1	24.6	30.8	41.5
Pilot	79	16.5	20.3	24.1	39.2
Control					
Follow-up	64	1.6	29.7	28.1	40.6
Pilot	79	21.5	29.1	10.1	39.2

Observable shifts between categories reflect both loss of cases and increase in number of years during the lapse of time between the two phases of the project. Thus for both groups, fewer follow-up respondents report 1 or 2 years of teaching, with the largest increases occurring in the 6-10 year category. The overall effect of the changes in experimental and control group respondents from the pilot to the follow-up is to decrease some of the variations, with the proportional composition of the two groups being much the same on this variable. This generalization is also valid for variations related to the number of years in present position as reported in Table 5.

TABLE 2.5 Years in Present Position of Follow-Up and Pilot Phase Respondents by Experimental and Control Group

	N	Years in Present Position 1-2 Percent	3-5 Percent	6-10 Percent	Over 10 Percent
Experimental					
Follow-up	65	32.3	29.2	12.3	26.2
Pilot	79	30.4	29.2	13.9	26.5
Control					
Follow-up	64	32.8	31.3	12.5	23.4
Pilot	77	37.7	28.6	14.3	19.5

When asked if they were in the same school as "last year", 84.6 percent of the experimental group and 85.9 percent of the control group responded "yes". The remaining 15 and 1[illegible] percent respectively reported having changed schools. Of the experimental group, 76 percent reported their position had not changed; as did 75 percent of the control group. Among those reporting changes 10 percent of the experimental group became full-time homemakers, as did approximately 5 percent of the control group. Approximately 6 percent of each group reported teaching a different content area; and $4\frac{1}{2}$ percent reported a change to supervision. Slightly under 5 percent of the control group reported changing from senior high instruction to junior high.

In sum, respondents in the follow-up were not markedly different from pilot respondents, as a result of a loss of cases. Further variations noted in the pilot between experimental and control groups in age, marital status, and advanced degrees persisted for follow-up respondents. Variations in years of teaching and years in present position tended to decrease.

Analysis

Data obtained from these respondents during the follow-up were coded and prepared for machine tabulation. These data were then merged with data obtained from each respondent during the pilot. Findings of the follow-up are based on data collected at two points in time, between October, 1967 and April, 1968, and August, 1969 to May, 1970.

Data were analyzed to ascertain proportional variations, with the Chi Square test of significance employed where warranted. Mean analysis was utilized with some data, also. Multiple regression analysis and discriminate analysis for two groups were employed also.

Limitations

Valid generalizations pertaining to the effectiveness of the design for information dissemination to induce change are limited to the specific innovation chosen to be presented, namely incorporating wage-earning emphases in home economics. This study in effect constituted a first step in testing the design which could be followed by subsequent tests using different content and/or skills to be disseminated.

No specific effort was made to control for a Hawthorne effect. Several factors, however, would seem to reduce such effect. Specifically, there was very little attention on the "specialness" of the experimental group.

Some emphases may have resulted informally among teachers as they interacted with peers. However, the change in curriculum sought required time to plan, effort to implement and to continue over months of instruction. Further, at no time during the conduct of the workshops or the interviews with teachers in the control group were participants told that information about their efforts to change curriculum would be sought $1\frac{1}{2}$ years later.

Evidences of change are self-reported, i.e. teachers reporting whether curriculum has been altered. Within the limits of the project evidences of change from external sources were not feasible; e.g. periodic and systematic before and after observation by an outside observer. The presence of an outside observer would introduce another variable which could be additive to the workshop as a stimulus for change and thus raise the question whether workshops sans observers would produce the same effect.

Generalizations about relationships between changing curriculum and selected social-psychological variables are limited to change which incorporates this specific innovation. No case can be made on the basis of data from this project that teachers who adopt or reject incorporating wage-earning emphases would also generally be receptive or resistant to all other innovations in curriculum.

In summary, this project investigated the effectiveness of a design for dissemination of information in such a manner as to motivate teacher participants to initiate curriculum change. The pilot phase of the project was briefly described. The objectives of the follow-up were reported; the conceptual framework and variables selected for study presented; data collection, respondents, analytical procedures, and limitations described. The findings pertaining to effects of this design are reported in the next chapter.

CHAPTER III

EFFECTS OF WORKSHOPS

Theoretically, teachers in the experimental group came to the workshops at different stages in the adoption process. Consequently it was anticipated that workshops would be the channel through which some teachers would become aware of the innovation and move to a subsequent stage; others, in the interest stage would become well enough informed to evaluate the innovation and move to the trial stage; whereas others, in the evaluation stage would try the innovation and move to adopt it for continued use. The major objective of the workshops was to motivate teachers to adopt wage-earning emphases in home economics curricula in comprehensive high schools. When this objective was not achieved, evidences of some movement through earlier stages of the adoption process toward later stages were desired outcomes. Findings relative to the effects of workshops are presented in the following sequence: 1) extent of curriculum change; 2) nature of curriculum change; 3) secondary effects on curriculum change; 4) effects relative to movement in the adoption process; and 5) deterrents to adoption.

Extent of Curriculum Change

The first objective of the follow-up was to ascertain the number of teachers in the experimental group who reported having initiated curriculum change by incorporating wage-earning emphases in secondary school programs and to compare this with the number of teachers reporting similar change in the control group. Thus, those teachers who responded "yes" to the question, "Have the high school home economics courseswhich you teach been modified or extended to incorporate a wage-earning emphases?" and were able to substantiate their claim by describing the change were categorized as having changed curriculum. All others were categorized as not having changed. Subsequent descriptions of the changes were analyzed and categorized as to which of the alternative ways wage-earning was incorporated. These descriptions provided the basis for specifying the nature of changes introduced. Table 3.1 reports the number of teachers reporting curriculum change.

TABLE 3.1 Respondents Teaching Wage-Earning Emphases as Reported in the Pilot Phase and Follow-Up by Experimental and Control Group

	Pilot Phase 1967-68			Follow-Up 1969-70			
	Total N	N	Percent	Total N	N	Percent	Percent Gain
Experimental	79	1	1.2	65	14	20.2	19.0
Control	79	22	27.8	64	19	29.6	1.8

As can be noted from Table 3.1 the number of teachers reporting wage-earning emphases increased by 13 from the pilot to the follow-up,[1] reflecting a percentage gain of 19 points as contrast to a decrease in numbers from 22 to 19 for the control group though reflecting a gain of 1.8 percentage points. It should be recalled that one criterion for including teachers in the experimental group had been the fact that she was not teaching a home economics occupations course. The control was selected to be representative of home economics teachers in the state, and thus included a proportion teaching wage-earning emphases in various ways. On this basis it can be stated that the gain of 1.8 percent increase constitutes an index of the rate of change for incorporating wage-earning emphases over a 15 to 18 month period as a result of a variety of influences, excluding, however, teacher-led in-service workshops. Further, data from the experimental group indicated that the workshops increased change by 17.2 percent over what could have been expected without the workshops, i.e. assuming a rate of change equivalent to that evident in the control group. Thus, in effect the workshops stimulated slightly less than 10 times the change to be expected without them.

Certain assumptions are essential to the validity of these deductions. First, that the experimental and control groups are comparable in those characteristics related to change; and secondly, that the cases lost from each are not atypical in reference to having incorporated wage-earning emphases. With reference to the first assumption, data from the pilot and from the follow-up found the experimental group to be somewhat older, more likely to be married, to have more children, and to report with somewhat greater frequency, professional involvement, and to have fewer with masters degrees.

Discriminate analysis for two groups which included 24 variables (see Chapter iV, p. 30) related to adoption had a mahalanobis D Square of 1.50 and failed to be significant by .14. Thus indicating that on the basis of these variations it was not possible to discriminate between the experimental and control groups.

With reference to the second assumption, it can be stated that of 15 teachers in the control group who did not participate in the follow-up, 7 had reported incorporating wage-earning emphases. Of the 7, 4 had left the school in which they were teaching in 1967-68 and could not be located; 1 had moved out of state, and 2 refused to be interviewed. Inasmuch as the experimental group was chosen on the criteria of not having an occupations course, non-respondents in the follow-up from the experimental group without exception had not reported having adopted the innovation in 1967-68 in the pilot. What happened during the period between the pilot and the

[1] This definition of "changed curriculum" is more rigorous than that employed in the pilot which included respondents who reported changes were <u>planned</u> (as well as implemented) by her or <u>another teacher</u>. Thus, in the follow-up, with respondents categorized as having changed only if the changes were <u>implemented</u> in courses she <u>taught</u>, 21 respondents in the experimental group categorized in the pilot as having "changed curriculum," were categorized as "no change" in the follow-up. A similar shift in category occurred for 17 cases in the control group.

follow-up for non-respondents in either group can only be speculative.

Table 3.2 reports differences between experimental and control groups including non-respondents, who are treated as if practices reported at the time of the pilot were continued.

TABLE 3.2 Revised Number of Respondents Teaching Wage-Earning Emphases, Assuming Non-Respondents in the Follow-Up Continued Practices Reported During Pilot by Experimental and Control Group

	Pilot 1967-68			Follow-Up 1969-70			
	Total N	N	Percent	Total N	N	Percent	Gain Percent
Experimental	79	1	1.2	79	14	17.7	16.5
Control	79	22	27.8	79	26	32.9	5.1

Employing the assumption of continuity in practices for non-respondents in the follow-up, the gain for the experimental group is reduced from 19 to 16.5 percent; and increased from 1.8 to 5.1 percent for the control group. Thus the gain attributable to the workshop is 11.4, i.e. assuming 5.1 percent of the gain for the experimental group resulted from the same influences experienced by the control group. Thus a conservative appraisal indicates that workshops contribute twice the frequency of change to be expected without workshops.

One additional approach was used to ascertain the frequency with which teachers in the experimental group reported changes as compared to those in the control group. In this approach, responses of teachers were analyzed who 1) had reported in 1967-68 that they had not modified their courses to incorporate wage-earning and 2) were teaching in 1969-70 and had provided data for the follow-up. Thus this analysis eliminated respondents in both the experimental and control groups who had left teaching and in effect could not have modified courses even if so inclined. Table 3.3 reports the results.

TABLE 3.3 Teachers Reporting Courses Changed to Incorporate Wage-Earning Emphases by Experimental and Control Group

	Changed		Did not Change		
	N	Percent	N	Percent	Total
Experimental	14	23.3	46	76.7	60
Control	8	15.7	43	84.3	51

$x^2 = .98$ n. sign.

These results indicate that the proportion of teachers participating in workshops reporting change exceeded by 7.6 percent, the proportion in the control group reporting change.

In the above analysis, the teacher and course taught by her was the unit for assessing the extent of change. The school might also be used as the unit for assessing change, since options available through courses taught by other teachers in the department may provide adequate preparation for wage-earning. Thus assessing change on the basis of schools we found as reported in Table 3.4, that 3.5 percent more of the schools from which there were workshop participants had some type of wage-earning empl. ses than did schools without workshop participants.

TABLE 3.4 Number of Schools Reported as not Providing Wage-Earning Emphases in Home Economics in 1967-68 and Providing Wage-Earning Emphases in 1969-70 by Experimental and Control Group

	No Wage-Earning Emphases 1967-68	Incorporated Wage-Earning Emphases by 1969-70	
	N	N	Percent
Experimental	56	17	30.4
Control	41	11	26.8

x^2 n. sign.

In sum considering the school as the unit of change led to the lowest gain resulting from workshops, due to the fact that wage-earning emphases may have been available to students from other teachers in the school prior to the workshop. Thus a change in these schools may have resulted in increased options among occupational areas. Considering the results reported above, it is pertinent to ask to what extent change reported by teachers in the control group was stimulated by contact with workshop participants. Available information relevant to this question is two-fold. First, in more sparsely populated counties, the procedure for selecting workshop participants on geographical distance from workshop locations, left few teachers in the total population from which the control group was drawn. Thus in these areas, i.e. seven counties, teachers were in either the experimental or control group. In eleven counties, some teachers were in the experimental and some were in the control group. In these counties, the trend was for a larger proportion to be in either the experimental or the control group, e.g. in several counties the ratio was 3 to 8; 3 to 6; 5 to 2; 6 to 12; 11 to 4 and so on. In each of seven school systems, one teacher was in the experimental group while one other teacher was in the control group. A case by case analysis found that in five of these districts, teachers in both groups

reported no change. In two districts only the control teachers reported having changed by incorporating wage-earning emphases. In only one case, however, was the change initiated concurrent with or after the workshops and thus may have been influenced by them.

In two large city districts, the case by case analysis supported the fact that proportional change reported in the control group was not inflated by contact with teachers in the experimental group. Although it cannot be stated that communication did not occur between the two groups, the numbers involved and geographical dispersion of the two groups suggest that extensive communication probably did not take place.

Some more specific data tend to support the opinion that communication between workshop participants and teachers in the control group did not serve as a major stimulant to change among teachers in the latter group. After teachers were asked if courses which they taught had been modified, they were asked to indicate the year in which changes were planned. Table 3.5 reports responses.

TABLE 3.5 Respondents Reporting Years in Which Wage-Earning Emphases Were Planned by Experimental and Control Group

	N	Pre 1967-68 Percent	1967-68 Percent	1968-69 Percent	1969-70 Percent
Experimental	13	46.2	46.2	7.7	
Control	19	57.9	15.8	21.1	5.3

[1]Data incomplete for one respondent

For both groups, plans were in process prior to 1967 for over 45 percent of those who altered courses. However, the proportional variation between the two groups is considerable for 1967-68, the period during which the workshops were in process. Whether the 21 percent of the control group reporting plans to change in process during 1968-69 was contributed to by the workshops and reflects a time delay in communication is speculative.

In another context in the interview, teachers were asked the year in which they had first heard of incorporating wage-earning emphases in home economics curriculum. Table 3.6 reports those data.

TABLE 3.6 First Contact With Wage-Earning Emphases in Home Economics by Year and Experimental and Control Group

	N	1963 Percent*	1964 Percent	1965 Percent	1966 Percent	1967 Percent	1968 Percent	Don't know Percent
Experimental								
Wage-Earning Emphases	13	30.8	7.7	30.8	7.7		7.7	15.4
No Wage-Earning Emphases	52	7.7	13.5	9.6	19.2	13.5	21.2	7.7
Total	65	18.5	12.3	13.8	16.9	10.8	18.5	9.2
Control								
Wage-Earning Emphases	20	20	25	20	10	20		5.0
No Wage-Earning Emphases	44	11.4	11.4	13.6	25	20.5	6.8	1.4
Total	64	14.	15.6	15.6	20.3	20.3	4.7	9.4

*Customarily with such a limited number of cases percents would not be computed, however here it serves as a means for comparison as a basis for suggesting relationships.

Relative to communication between the two groups, it is pertinent to note that of teachers reporting wage-earning emphases, none reported having first contact with the idea in 1968.

It is noteworthy that of the experimental group reporting courses modified between Spring 1968 and 1969-70, close to 70 percent had first heard of wage-earning emphases by 1965; whereas of those reporting no change only about 31 percent had heard of the innovation by 1965. Of this group the single largest proportion, i.e. 21.2 percent reported hearing of it in 1968, in the workshops. Similarly, within the control group, 65 percent of those having incorporated wage-earning, first heard of it by 1965; in contrast to only 36.4 percent of those who had no such emphasis. These data indicate that the workshops served different participants in different ways. For those coming to workshops with information about wage-earning emphases, sessions provided more extensive information. For others, sessions apparently provided initial contact with the idea as well as information. One can infer from these reports that there was a 3 to 5 year time lapse between initial contact with the innovation and trial of it by teachers in the experimental group. If the relationship between time of initial contact and trial is

relatively stable, full impact of the workshops is yet to be manifest.

Considering the total control group and total experimental group, with the exception of 1963 and before, and 1968, the proportions of the experimental group learning of the innovation is slightly though consistently lower than the control group. Thus, as another piece of evidence concerning the accuracy of assuming that the rate of change in the experimental group would be comparable to that in the control group, these data suggest a somewhat slower rate of change for teachers in the experimental group.

Nature of Curriculum Change

Wage-earning emphases in home economics within the framework of this study included the following: 1) diversified, ie. a course which included several different home economics related occupations; 2) integrated, i.e. where some learning experiences were planned to inform students about the relevancy of existing course content to wage-earning; 3) occupation mix; course content drawing from several areas, e.g. home economics and distributive education; 4) occupational course, one directed to instruction for wage-earning in an occupational cluster, e.g. food preparation and service; 5) occupational co-op course, i.e. one planned with supervised work as well as related classroom instruction.

Of the fourteen teachers in the experimental group who reported the courses taught had been modified to include wage-earning, the type of emphasis was as follows: diversified, 2; integrated, 9; and occupation courses, 3. Of the eight in the control group reporting change, between 1967-68 and 69-70, 5 integrated wage-earning emphases in existing courses, and 3 reported developing occupation courses. Integrating wage-earning emphases was then the most frequently reported change in both groups. Inasmuch as this is an optional-type adoption decision, change could be introduced with minimal involvement of administrators and other teachers, and was the most feasible within a short period of time. Other approaches would influence scheduling, facilities and require additional funds, and as a contingent-type adoption decision would be more difficult to implement.

Of the 52 respondents in the experimental group, reporting no change, 9, i.e. 17 percent indicated that plans were in process to incorporate wage-earning emphases. Of the 42 teachers in the control group reporting no wage-earning emphases, 8, i.e. 19% reported plans for change.

Table 3.7 reports by whom course changes were initiated.

TABLE 3.7 Persons Initiating Course Changes by Experimental and Control Group

	N	Home Economist Percent	Administrator Percent	Home Economist and Administrator Percent	Other Percent
Experimental	13	30.8		53.8	15.4
Control	20	50	15	10	25

It is evident from teacher respondents that the teacher was the most frequent agent for curriculum change in the control group, whereas combined efforts of the teacher and administrator were most frequently reported by experimental group respondents. The "other" category which was reported by over 15 percent of each group included state department personnel, department chairman and combinations of these two with teachers and administrators.

Over $\frac{1}{4}$ of the teachers reporting change in both the experimental and control groups, 31 and 25 percent respectively, indicated that information from students was elicited to develop course content. Of the experimental group reporting change, 38.5 percent indicated that information from existing curriculum guides, community and students influenced course content; 20 percent of the teachers in the control group reported use of combinations of sources of information. None of the experimental group reported sole use of information from the community, in contrast to 20 percent of the control group who so reported. Approximately 15 percent of both groups reported sole use of existing curriculum material.

Information about the community, including employment surveys and surveys of industries were reported by 60 percent of the experimental group who changed curriculum, and by 62 percent of a similar segment of the control group as having influenced curriculum. To the extent that value is placed on use of information from existing materials, students, and community, the workshop participants would rate somewhat higher than those teachers in the control group. Of concern, however, is the fact that although job analysis as a basis for curriculum development was included in workshop content no teacher reported using it.

Perhaps concern should be tempered by the fact that relatively few teachers had developed occupation courses in which job analysis should play a particularly important role.

Approximately 70 percent of teachers in both groups reported using the same teaching techni ues as in homemaking education courses, with the addition of field trips technicians from the community as resource persons.

The largest proportions in both groups, 54 percent in the experimental and 35 percent in the control reported no efforts to inform the community of course changes. None of the experimental groups reported use of press releases, as contrast to 30 percent of the control group. However, 15 percent of the experimental group reported giving talks to PTA's and press releases, as did 10 percent of the control group. Approximately 75 percent of the experimental group reporting change, indicated that several efforts were made to recruit students, i.e. talking to classes and through curriculum guides for course selection; 60 percent of the control teachers reported similar efforts. Sixty percent of each group reported ordering library materials for course changes. Only 30 percent of the experimental group considered library holdings adequate as did 45 percent of the control group. Between 70 and 75 percent of each group reported that instruction included efforts to encourage students to use library materials.

Secondary Effects on Curriculum Change

Recognizing that teachers who attended workshops might be influential with other teachers in the school, who might incorporate wage-earning emphases, each respondent was asked if courses taught by other teachers had been changed and if so what role, if any, she (the respondent) had played. Within the experimental and control group, responses were as reported in Table 3.8.

TABLE 3.8 Wage-Earning Emphases Incorporated in Courses Taught by Other Teachers by Experimental and Control Group Categories

	N	Reported Other Teachers Incorporated Wage-Earning	
		N	Percent
Experimental			
Wage-Earning	13	5	38.5
No Wage-Earning	49	6	12.2
Control			
Wage-Earning	20	7	35.0
No Wage-Earning	39	9	23.1

Only 7 teachers in the experimental group reported having played some role in the other teacher's course change in contrast to 12 teachers in the control group. The majority of these respondents described their role as one of encouragement.

Effects Relative to Movement in the Adoption Process

The last area to be considered is effect on movement in the adoption process. Questions were formulated to elicit data concerning the time at which respondents had first heard of the innovation; their reaction to the innovation; whether they sought additional information; reaction to further information; whether they had made a decision for trial adoption or rejection; their feelings about the decision; the degree to which the decision was implemented; their assessment of the implementation; and their reaction to the program change; predicted continuance, extension, or discontinuance of the innovation. (See Appendix A, pp. A.19-A.20.)

All respondents were asked these questions. Thus, the variations in responses between experimental and control group respondents provided an indication of the effect of the workshops, as treatment, on the adoption process.

Proportional variations in responses to the question, "When did you first hear about wage-earning emphases in home economics?" are reported in Table 3.9.

TABLE 3.9 Year of First Information About Innovation by Experimental and Control Groups

	N	1963 & Before Percent	1964-1965 Percent	1966-1967 Percent	1968 Percent	Don't Know Percent
Experimental	65	18.5	26.1	27.7	18.5	9.2
Control	64	14.	31.2	40.6	4.7	9.4

These data indicate that teachers in the experimental group became aware of the innovation later than did teachers in the control group. Note that by 1967, whereas approximately 72 percent in the experimental group had heard of wage-earning emphases, close to 86 percent of the control group had heard of it. The fact that approximately 14 percent more of the experimental group than of the control group reported first information in 1968 suggests that one outcome of workshops was to increase awareness of the innovation over what might have been expected otherwise.

As reported before (see page 29), over 50 percent of the teachers in both the experimental and control groups reporting having incorporated wage-earning emphases had heard of the innovation between 1963 and 1965. In contrast, between 30 and 36 percent of those reporting no wage-earning were aware of the innovation during the same period.

Source of Information:

Respondents identified various sources of information about the innovation, including the State Department, college courses, reading, other teachers, and various combinations of these.

TABLE 3.10 Source of Information by Experimental and Control Group Wage-Earning Category

	N	Source: State Department Percent	Professional Journals Other Teachers Percent	College Course Percent	Work-shops Percent	Some Combination Percent
Experimental						
No Wage-Earning	50	14.	30.	22.	22.0	12.0
Wage-Earning	12	8.3	25.	50	8.3	8.3
Total	62	12.9	29.	27.4	19.4	11.3
Control						
No Wage-Earning	41	29.3	17.1	26.8	4.9	21.9
Wage-Earning	20	25.0	10.0	40.0		25.0
Total	61	27.9	14.7	31.1	3.3	22.9

Slightly under 30 percent of teachers in the experimental group reported professional journals and other teachers, and college courses as sources of information; 13 percent referred to the State Department; and 19 percent to workshops. In comparison, 31 percent of the control group referred to college courses; 28 percent to the State Department; and over 1/5 to some combination; about 15 percent cited journals and other teachers.

Of teachers in both the experimental and control groups reporting wage-earning, the single largest proportion, 50 and 40 percent respectively, cited college courses as the source of information. Whereas, 1/4 of the experimental group cited journals and other teachers; 1/4 of the control group cited the State Department and combinations.

First Reactions:

Close to 60 percent of all teachers reported very positive reactions to the first information relative to wage-earning emphases. Approximately 1/4 reported slightly positive reactions.

TABLE 3.11 First Reaction to Innovation by Experimental and Control Group Wage-Earning Category

		Reaction			
	N	Can't Recall Percent	Negative Percent	Indifferent Percent	Positive Percent
Experimental					
No Wage-Earning	52	3.8	5.7	3.8	86.5
Wage-Earning	13	15.4	15.4		69.3
Total	65	6.2	7.7	3.1	83.1
Control					
No Wage-Earning	44		4.6	4.5	90.9
Wage-Earning	20	10.0		10.0	80.0
Total	64	3.1	3.2	6.2	87.5

Wage-earning emphases as an innovation was favorably received by the largest proportions of each category in each group. Of teachers reporting some degree of adoption in both groups, between 20 and 30 percent reported either being unable to recall reactions and/or indifferent or negative reactions.

Seeking Further Information:

When asked, "Did you seek further information?" the responses were as reported below.

TABLE 3.12 Proportions Seeking Further Information by Experimental and Control Group Wage-Earning Category

	N	Did Not Seek Information Percent	Sought Information Percent
Experimental			
No Wage-Earning	56	30.8	69.2
Wage-Earning	13	7.7	92.3
Total	65	26.2	73.8
Control			
No Wage-Earning	44	61.4	38.6
Wage-Earning	20	20.0	80.0
Total	64	48.4	51.6

Experimental Group Categories $X^2 = 2.86$ 1 df sign. beyond .10 level
Control Group Categories $X^2 = 9.42$ 1 df sign. beyond .01 level
Gamma .68; .73

Over 70 percent of teachers in the experimental group reported seeking further information, as did slightly over 1/2 of the control group. In both the experimental and control group, 80 percent and over of those reporting wage-earning reported seeking more information. For the control group the difference in proportions between wage-earning categories exceeded the .01 level of significance and for the experimental group categories slightly exceeded the 10 percent level.

When asked from which sources they sought information, teachers responded as follows:

TABLE 3.13 Sources of Sought After Information by Experimental and Control Group Wage-Earning Category

	N	Source: State Department Percent	Other Teachers Percent	Reading Percent	College Course Percent	Work-shops Percent	Other Percent
Experimental							
No Wage-Earning	36	13.9	8.3	30.6	13.9	33.3	
Wage-Earning	12	16.7		33.3	25.0	16.7	8.3
Total	48	14.6	6.2	31.3	16.7	29.2	2.1
Control							
No Wage-Earning	17	35.3		41.2	5.9	11.8	5.9
Wage-Earning	16	37.5	12.5	12.5	6.3	12.5	18.9
Total	33	36.4	6.1	27.3	6.1	12.1	12.1

Some interesting variations between the experimental and control groups resulted. The largest proportion of teachers in the experimental group cited seeking information by reading, and the second largest by attending workshops, third, college courses, and about 15 percent cited the State Department. In contrast, the largest proportion of the control group (over 1/3) cited the State Department; the second largest, reading; and the third, workshops and other sources, in these cases, supervisors and administrators.

Variations between wage-earning categories were most marked in the experimental group, with 1/3 of those reporting no wage-earning citing workshops as the source of information, and those reporting wage-earning almost twice as frequently referring to college courses as the source of information.

Within the control group, over 40 percent of the teachers reporting no wage-earning, cited reading as a source whereas only 12 percent of those adopting wage-earning cited reading, almost 1/5 cited other sources, and 12 percent cited other teachers as source.

Data from the wage-earning categories within the experimental group, although subject to several interpretations seem, in light of other data, to support the view that for some teachers, the workshops were a means of further exploration.

When asked the year in which further information was sought, over 1/2 of the experimental group replied, 1968; whereas close to 1/3 of the control group replied, 1965; and another 1/3, 1967. Table 3.14 reports the full details.

TABLE 3.14 Year of Information-Seeking by Experimental and Control Group Wage-Earning Category

	N	1963 & Before Percent	1964-1965 Percent	1966-1967 Percent	1968 Percent	Can't Recall Percent
Experimental						
No Wage-Earning	34		5.9	35.3	55.9	2.9
Wage-Earning	11	27.3	18.2	18.2	36.4	
Total	45	6.6	8.9	31.1	51.1	2.2
Control						
No Wage-Earning	16	6.3	31.3	43.8	18.8	
Wage-Earning	16	12.5	31.3	31.3	18.8	6.3
Total	32	9.4	31.2	37.5	18.8	3.1

These data provide further support that teachers in the experimental group became informed later about the innovation than did the majority of teachers in the control group. Further, since workshops, i.e. the treatment for the experimental group, were implemented in 1968, the large proportions citing that year support the view that one effect of workshops was to expedite the adoption process at the information-seeking stage.

Further corroboration was evident in responses to the question: "What do you consider to be major outcomes for you from the workshops?" Responses were categorized as outcomes related to 1) methods of teaching; 2) curriculum materials; and 3) being better informed.

A comparison of responses between workshop participants who subsequently reported change and participants who reported no change found no significant

differences between groups. Consequently only total group responses are reported. Sixty-five percent (42) mentioned major outcomes related to being better informed; 48 percent (31), teaching methods; 31 percent (20), curriculum materials. None mentioned the in-service credit given for attendance at 6 out of the 7 sessions.

Reported reactions to this additional information is detailed in Table 3.15.

TABLE 3.15 Reported Reactions to Additional Information Relative to Innovation by Experimental and Control Group Wage-Earning Category

	N	Negative Percent	Indifferent Percent	Slightly Positive Percent	Very Positive Percent
Experimental					
No Wage-Earning	38	5.2	2.6	15.8	76.3
Wage-Earning	13			30.8	69.2
Total	51	4.0	2.0	19.6	74.5
Control					
No Wage-Earning	19	5.3		15.8	78.9
Wage-Earning	17		5.9	11.8	82.4
Total	36	2.8	2.8	13.9	80.6

For both groups, close to 3/4 or more reported very positive reactions to the innovation. Between categories within the experimental group, of those reporting some degree of adoption almost twice the proportion reported being slightly positive as compared with those reporting no adoption; and a lesser proportion reported "very positive" reactions. The reverse of this is true for categories within the control group where the proportion of those reporting wage-earning and having had very positive reactions exceeded that of the no wage-earning category.

Adoption Decision:

Each respondent was asked if she had ever considered incorporating wage-earning emphases in some form in her instruction.

TABLE 3.16 Consideration of Innovation for Adoption by Experimental and Control Group Wage-Earning Category

	N	No Percent*	Yes, Casually Percent	Yes, Seriously Percent
Experimental				
No Wage-Earning	52	23.1	32.7	42.3
Wage-Earning	13	7.7	30.8	61.5
Total	65	20.0	32.3	46.2
Control				
No Wage-Earning	44	27.3	31.8	40.9
Wage-Earning	19		10.5	89.5
Total	63	19.0	25.4	55.6

$\chi^2 = 13.18$ with 2 df sign. at .01 level, between categories in control group
* reflect 1 no response

As expected, those reporting adoption in some form also in larger proportions reported having considered the innovation. The fact that 30 percent of the wage-earning category within the experimental group reported "casual consideration" may reflect the choice of integrating wage-earning emphases within existing courses, i.e. an optional type adoption decision, rather than a contingent type.

When asked what decision was made relative to adoption, 1/3 of the teachers in the experimental group reporting no wage-earning indicated a decision to adopt; slightly over 1/4 of the teachers in this category within the control group also reported a decision to adopt.

Table 3.17 reports specific proportions.

TABLE 3.17 Reported Adoption Decision by Experimental and Control Group Wage-Earning Category

	N	Not to Adopt Percent	To Adopt Percent
Experimental			
No Wage-Earning	52	65.4	33.8
Wage-Earning	13		100
Total	65	53.9	46.1
Control			
No Wage-Earning	43	72.1	27.9
Wage-Earning	19		100
Total	62	50	50

Responses to this question suggest that some teachers in the no wage-earning categories are moving towards adoption.

Teachers who reported a decision to adopt were then asked the extent to which the decision was implemented. Responses were categorized as "not at all," "partially" and "completely." Subsequent to this question each was asked to assess the extent to which the implementation had fulfilled expectations.

Tables 3.18 and 3.19 report the results.

TABLE 3.18 Decision Implementation by Experimental and Control Group Wage-Earning Category

	N	Extent of Implementation: Not at All Percent	Partially Percent	Completely Percent
Experimental				
No Wage-Earning	16	31.3	43.8	25
Wage-Earning	12		83.3	16.7
Total	28	17.9	60.7	21.4
Control				
No Wage-Earning	15	66.7	33.3	
Wage-Earning	19		36.8	63.2
Total	34	29.4	35.3	35.3

TABLE 3.19 Assessment of Success of Implementation by Experimental and Control Group Wage-Earning Category

	N	Failed Percent	Too Soon To Assess Percent	Some Success Percent
Experimental				
No Wage-Earning	10	20	50	30
Wage-Earning	12	16.6	25	58.4
Total	22	18.1	36.4	45.4
Control				
No Wage-Earning	6	50	50	
Wage-Earning	19	10.3	15.8	73.7
Total	25	20.0	24.0	56.0

As evident in Table 3.18 almost 1/3 of those categorized as no wage-earning in the experimental group reported that the decision was not implemented; approximately 40 percent indicated partial implementation and 1/4 complete implementation. Although this might seem to suggest that these teachers were erroneously categorized as "no wage-earning," it should be recalled that those in the "wage-earning" category had to report some course or program modification in effect. Since a planning phase prior to incorporating wage-earning would be a reasonable step in a decision to implement, it is not necessarily inconsistent for those categorized as "no wage-earning" to report a decision to adopt and for some to report complete implementation -- which at this stage may be planning for a subsequent period of time.

Of those teachers reporting wage-earning in the experimental group, over 80 percent reported only partial implementation and over 15 percent, complete. Of the total experimental group, slightly less than 2/3 reported partial implementation; approximately 20 percent, complete; and over 15 percent, none.

A larger proportion of the experimental group reported some degree of implementation (82 percent) than did the control group (71 percent). Within the control group, of those categorized as "no wage-earning," 2/3 reported no implementation, and 1/3 reported partial implementation. Of those in the wage-earning category, almost 2/3 reported complete implementation, and slightly over 1/3 reported partial implementation.

When asked to assess the degree of success of the implementation of the decision to adopt, of those reporting some degree of implementation close to 1/5 reported failure; between 1/4 and 1/3 reported it was too soon to assess; and between 45 and 56 percent reported some success. Comparing the experimental and control groups, approximately 80 percent of each reported "too soon to assess" or "some success." Considering the length of time some of the programs have been in existence, it is not surprising that over 70 percent of those in the control group wage-earning category reported some success, as compared to only 48 percent of those so categorized in the experimental group.

Asked about their reaction to the (change, modification, extension) of program, teachers responded as reported in Table 3.20 below.

TABLE 3.20 Reactions to Program Modification by Experimental and Control Group Wage-Earning Category

	N	Reactions Negative Percent	Indifferent Percent	Positive Percent
Experimental				
No Wage-Earning	10	10		90
Wage-Earning	12			100
Total	22	4.5		95.5
Control				
No Wage-Earning	6	16.7	16.7	66.7
Wage-Earning	19	10.6		89.4
Total	25	12.0	4.0	84

The largest proportion of all categories in both experimental and control groups had positive reactions. The proportion of the experimental group exceeded that of the control group. These data suggest that the amount of change contributed to by the workshops will become increasingly evident with the passage of time, i.e. assuming no counter or competing influences intervene.

Those reporting some decision to adopt were asked, "Do you think wage-earning emphases in home economics in your school will be (extended soon to other areas; extended eventually but not now; gradually extended; continued indefinitely; gradually diminished; eliminated; don't know)?"

Responses are reported in Table 3.21 below.

TABLE 3.21 Prediction of Continuation and Extension of Innovation by Experimental and Control Group Wage-Earning Category

	N	Extended Percent	Continued Percent	Diminish & Eliminate Percent	Don't Know Percent
Experimental					
No Wage-Earning	13	69.3	7.7	7.7	15.4
Wage-Earning	13	61.8	7.7	15.4	15.4
Total	26	65.4	7.7	11.5	15.4
Control					
No Wage-Earning	7	42.9		14.3	42.9
Wage-Earning	20	65.	5.0	10.0	20.0
Total	27	59.2	3.7	11.1	25.9

Between 15 and 25 percent of both the experimental and control group "don't know" the future of the innovation in their schools; over 65 percent of the experimental group and 60 percent of the control predicted extension to other areas; 11 percent predicted wage-earning emphases will be diminished or eliminated; and under 10 percent predicted continuation indefinitely.

All respondents reporting no decision relative to wage-earning or a decision to reject were asked: "Do you think the home economics program in this school will be modified or extended to include wage-earning emphases within the next five years?" Of 46 respondents in the experimental group, about 1/5 (21.7 percent) replied "no"; over 1/3 (37 percent) said "yes"; and over 40 percent were undecided. Of the 37 respondents in the control group 30 percent said "no"; 40 percent said "yes";and 30 percent were undecided. The groups were nearly comparable in the predictions with the largest proportion of the experimental group undecided and the largest proportion of the control group affirming adoption of the innovation.

In sum, data relative to the stage in the adoption process support the conclusion that the experimental group differed from the control in these ways: slower in becoming aware of the innovation; more frequently sought information from impersonal sources, i.e. reading, than from interpersonal contacts. Since impersonal sources tend generally to be viewed as being less supportive of change than interpersonal sources, this as well as other findings indicated that the experimental group would be slower to change than the control.

Data support the conclusion that one effect of the availability of workshops to the experimental group was to provide a source of information for a number in the exploration stage. Evidence indicated that the workshops were an agreeable and effective form of information dissemination. Teachers who attended the workshops in 1968 were asked whether these workshops should be repeated for other teachers throughout the state. Of the 63, 97 percent responded "yes." Of the 13 reporting they had changed curriculum, all thought the workshops should be repeated.

When asked if they would attend similar workshops with different content, 76 percent (48) responded with an unqualified "yes," 17 percent (11) gave a qualified "yes," i.e. depending on content and time offered; 6 percent (4) responded "no."

Deterrents to Adoption:

Conceptually, deterrents to adoption may be linked to inadequate relative advantage, through inconvenience, limited if any economic or social rewards, attached to adoption. Similarly, deterrents may exist in other characteristics of the innovation, e.g. complexity in the system. Responses to several questions elicited information pertinent to understanding deterrents to incorporating wage-earning emphases.

First, since the stimulus to change in this action research project was in effect a specific design for the dissemination of information relative to an innovation in curriculum, respondents were asked from what sources they had obtained the most up-to-date information about home economics curriculum. Since the question was purposely open-ended, the responses were analyzed in terms of the frequency with which different modes of information dissemination were mentioned.

Table 3.22 reports the results.

TABLE 3.22 Sources of Most Up-To-Date Information Cited by Experimental and Control Group Categories

	Experimental		Control	
N=	13	52	20	44
	Change Percent	No Change Percent	Change Percent	No Change Percent
Professional Meetings	30.8	21.2	25	24.4
Workshops	46.2	40.4	20	14.6
Professional Magazines	61.3	55.8	50	63.4
State Department	30.8	25.0	5	29.3
Other Teachers	15.4	13.5	20	19.5
College Courses	23.1	9.6	30	19.5

As can be noted from the table, professional magazines were considered by the largest proportions to provide the most up-to-date information about curriculum. For the experimental group, workshops ranked second to professional magazines. In view of the previous analysis reported in the pilot study (Kievit, 1970) of magazines teachers listed as professional journals and the proportions of teachers indicating they "usually" read these magazines, these findings support the opinion that present information dissemination about wage-earning as an innovation is limited.

Secondly, when asked about problems encountered in changing curriculum, no single problem was cited by a sizeable proportion. Slightly over 20 percent of the experimental group having changed, reported problems of physical facilities, as did 15 percent of the control group. Fifteen and 23 percent of the experimental and control group respectively, reported the "calibre of students" a problem. Seven and 35 percent of the experimental and control group respectively reported no problems.

In addition to analyzing the problems reported by those having changed curriculum, responses of experimental and control group teachers who reported 1) no wage earning, 2) no plans in process to incorporate wage-earning, and 3) teaching at the secondary level were analyzed. Forty three and 34 respondents met the three criteria in the experimental and control groups respectively.

Almost 40 percent (17) of the experimental group and 53 percent (13) of the control group, gave no reason for not incorporating wage-earning emphases or indicated that such a change had not been considered. (The larger number in each reported not having considered such a change.) Slightly over 20 percent (10) of the experimental and 11 percent (4) of the control group reported that there was no need for such emphases. Approximately 17 percent of each group indicated physical facilities were a deterrent. The remaining 15-20 percent of respondents cited a variety of reasons including: limited funds for personnel and facilities; lack of interest by administrator and students; not timely in terms of other school priorities; teacher perceiving self as having no authority to implement change; and lack of work stations in community.

In brief, a deterrent to adoption for the largest proportion was in the failure of each to seriously consider the potential value of the adoption in the local situation. This can be interpreted in several ways, first, that at the time of the follow-up these respondents were at the awareness stage and had not moved to the interest and evaluation stage. Secondly, for those teachers in the experimental group, workshop sessions had limited effectiveness in expediting the process of adoption. Apparently 20 percent of the experimental group and 11 percent of the control had reached the evaluation stage and decided wage-earning emphases were not needed in programs in the local situation. For others, as well, relative advantage of innovation to the adopter and to the system, was a deterrent in addition to situational constraints and role perceptions of teachers.

Summary and Conclusions

The frequency of change reported by the experimental group exceeded that reported by the control group from 7 to 17 percent, depending upon the base of comparison. Thus, the conclusion that teacher-led in-service workshops did induce change in excess of that to be expected without workshops. The type of wage-earning emphases incorporated into home economics programs, most frequently was the integration of units into existing courses. Thus optional type adoption decisions were made more frequently than contingent type.

Findings indicated that the workshops quite probably provided the information necessary for teachers already aware of the innovation for some years to actually take an initial step in adopting it. It was evident that for 1/5 of the experimental group, workshops introduced the innovation. Further, the data indicated almost a 3 to 5 year time lapse between initial contact with the innovation and some implementation. Thus, it is reasonable to conclude that for a number of the workshop participants reporting no change, the workshops may be serving as a component of the exploration stage, intermediate between initial contact and trial adoption.

Findings are less conclusive on the question of communication between the experimental and control group respondents and the extent to which such

communication if any increased the change reported by the control group. Considering the data on time of planning changes, geographical distances and dispersion of teachers in the control and experimental groups, and teacher reports of influencing other teachers, it is this writer's opinion that change reported in the control group was minimally, if at all, influenced by the workshops.

After the 15-18 month interval, 65 percent of the teachers participating in the workshops considered these workshops to have been a means of their being better informed and over 90 percent indicated willingness, with some qualifications, to attend similar workshops with different content.

Teacher assessments of the success of adoption indicated that some decisions to adopt on a trial basis may lead to eventual rejection. The majority, however, seemed to be moving towards extension and continuation of wage-earning emphases.

Deterrents to adoption were in large part the delay of teachers in seriously considering the innovation for adoption, perceptions of the relative advantage of the innovation, both to the teacher and the system, and situational constraints.

In conclusion, the findings reported provide additional evidence to the slow rate of change in adopting curriculum innovations, i.e. in this case conservatively from between $1\frac{1}{2}$ to 5 percent increase without workshops, in a $1\frac{1}{2}$ year period. Findings did indicate that teacher-led in-service workshops can be planned and implemented effectively to double the rate of change.

CHAPTER IV

CHARACTERISTICS OF ADOPTERS AND NON-ADOPTERS

A question of basic concern is whether it is possible to predict with greater than chance accuracy those teachers most likely to adopt innovations. If the precision of prediction can be increased, it could be a step toward maximizing the return from systematic efforts to achieve change in curriculum and educational practices. As efforts to induce change are conceptualized and implemented as different types of information dissemination, it is relevant to seek the data necessary to ascertain which types of information dissemination induce the most change and the characteristics of the persons most responsive. Theoretically and in practice, dissemination activities in education include large group meetings of varying durations of time, all day workshops, with an emphasis on interpersonal interaction; spot announcements on radio and television, to mention only a few. Yet the effectiveness of these various approaches in achieving the desired outcomes can only be speculated, in large part. Similarly it is speculative as to which audience is most responsive to each approach, if indeed differences exist.

An objective of this follow-up study was to seek to ascertain the characteristics of those teachers participating in the workshops who altered curriculum and on which they differed significantly from those who did not alter curriculum. Thus, in effect, seeking to determine an answer to this question, "What teachers are most responsive to teacher-led in-service workshops as a channel for disseminating information for curriculum change?". Conversely, the question, "Who are not responsive to workshops and for whom other types of dissemination should be designed and implemented?" would also be answered. A related objective was to ascertain those characteristics of teachers who adopted the innovation of incorporating wage-earning emphases in home economics irrespective of the source of information and mode of dissemination. In essence, the first questions are a refinement of this last and more general query. Furthermore, the merit of seeking an answer to the more specific questions is based upon the assumption that the answer is, indeed, different from the answer to the more general question of "What characterizes adopters vs. non-adopters?". To be explicit, let us assume a concerted effort has been undertaken to initiate specific curriculum innovations throughout a given geographical area. Specific information essential to curriculum change has been identified for dissemination. Discussion centers on the means of dissemination, whether one mode should be used for all or whether several should be developed for different target populations. Of further concern is how thepopulation shall be selected. Should selection be on the basis of characteristics known to be positively associated with responsiveness to a particular mode of information dissemination or on the basis of characteristics known to be associated with innovative behavior? Or does the latter, in fact, subsume the former?

Within this action framework, data on variables described earlier (Chapter II, p.16) were analyzed in terms of the experimental group, dichotomized on the basis of having changed or not having changed curriculum, compared to the control group dichotomized on the same basis. Subsequent to that analysis, the experimental and control groups were combined as a single population, and then dichotomized on the basis of having changed or not having changed curriculum. Data were then analyzed to ascertain whether significant relationships existed between adopting the curriculum innovation and each of the variables measured. The findings derived from each analytical approach were compared in order to ascertain, if in fact results differed. It was found that results differed significantly on only two variables. Inasmuch as the number of cases was larger for the combined experimental and control groups, it was possible to use tests of statistical significance. Consequently, the findings reported in this chapter are based in large part on the combined groups. Most of the tables reporting the same analysis for the experimental and control groups as a separate population appear in Appendix B. Where the findings differed, these findings are reported in the text.

The sequence of presentation proceeds from personal characteristics of teachers, to professional, to those viewed as potentially related to the innovation.

Personal Characteristics

Demographic

Demographic data included the variables of age, marital status, number of children, socioeconomic origins, education, and occupational experience in business, and in present position. Results of Chi Square tests of frequency distributions between categories developed* for each of these variables found no differences statistically significant at the .05 level. Proportional variations between categories did suggest positive relationships between adopting wage-earning emphases and the following variables.

Teacher-adopters were disproportionately represented in the 41 to 50 year age category, when compared with total population distribution, and non-adopters.

Similarly, though to a lesser degree, they were disproportionately represented in the married, widowed, or divorced categories.

They were disproportionately represented among those teaching between 6 and 15 years; reporting only one interruption in their employment; and being in their present position between 3 and 10 years.

*Definitions of categories for each variable were the same as those reported in the tables appearing in Appendix B, pp. B-1 - B-3.

Socioeconomic Status:

Analysis of socioeconomic data for the combined experimental and control groups showed no significant relationship to adoption. Analysis of data for the two as separate groups did find sizeable proportional variations between teachers in the experimental group categorized as not having incorporated wage-earning emphases, i.e. did not adopt, and those incorporating wage-earning, i.e. did adopt.

Specifically, occupational information about the respondent, her father, and husband, if married, was the basis for ascertaining socioeconomic status. Occupations reported were coded with a socioeconomic index developed by Duncan (1961). The procedures of analysis and rationale were fully explicated in the pilot study (Kievit, 1970, p. 56-66). Findings presented here pertain specifically to ascertaining whether workshop participants who modified curriculum differed in socioeconomic characteristics from those who did not. The two characteristics examined were social mobility and status consistency. Categories were defined as follows:

> Upwardly mobile was defined as originating from a family in which the father was engaged in an occupation indexed as 62 or less.
>
> Status maintained was defined as originating from a family in which the father was engaged in an occupation indexed between 63 and 82.
>
> Downwardly mobile was defined as originating from a family in which the father was engaged in an occupation between 83 and 96.

Table 4.1 presents the results relative to socioeconomic mobility.

TABLE 4.1 Socioeconomic Mobility by Wage-Earning Category

	Upwardly Mobile		Status Maintained		Downwardly Mobile		Total	
	N	Percent	N	Percent	N	Percent	N	Percent
Experimental								
No Wage-Earning	38	73.1	8	15.4	6	11.5	52	100
Wage-Earning	12	92.3	1	7.7	0	0.0	13	100
Total	50	76.9	9	13.8	6	9.2	65	100
Control								
No Wage-Earning	27	61.4	11	25.0	6	13.6	44	100
Wage-Earning	13	65.0	5	25.0	2	10.0	20	100
Total	40	62.5	16	25.0	8	12.5	64	100

As indicated, the largest proportion of all respondents were upwardly mobile, with a small proportion downwardly mobile. A disproportionate number of those reporting wage-earning emphases in the experimental group, as compared to the total, were upwardly mobile. Variation in the control group is in the same direction but much less.

Status Consistency categories were defined as follows:

Status Consistent - socioeconomic index of the husband's occupation is between 63 and 82.

Status Inconsistent, Husband Higher - index of husband's occupation exceeds 82.

Status Inconsistent, Wife Higher - index of husband's occupation is less than 62.

These categories combined were labeled Socioeconomic Ratio. Analysis showed no significant variations between categories within the experimental group

and control. Nor were significant differences evident when these two groups were combined and data compared for non-adopter and adopter categories. (See Table B.6, Appendix B, p. B-3.)

Management of Domestic Responsibilities

Respondents were asked to indicate the assistance with routine domestic responsibilities provided by husbands, children, and mothers; services purchased; and the attitudes of spouse and children relative to employment. The rationale in seeking such data was that teachers who reported greater assistance might have more time and energy to direct to professional activity such as the planning and additional effort required for curriculum change. In only two areas of domestic routine, did differences attain statistical significance at the .05 level. Teacher adopters significantly more frequently reported assistance with dishes and laundry chores from children.

Proportional variations suggested low but positive associations between these variables:

Teacher adopters were disproportionately (over $1\frac{1}{2}$ times) more frequently represented in the category of reporting that the husband strongly favored her teaching than were non-adopters. Adopters similarly reported slightly more frequently than non-adopters that children favored their teaching.

In brief, though lacking statistical significance, proportional variations in responses to questions in the area of domestic responsibilities provided corroboration of the importance of psychological support of family members in freeing a wife-mother for professional involvement. Findings also indicated that these teachers received psychological support more frequently than routine assistance with domestic responsibilities.

Open-Closed Belief Systems (Dogmatism)

In an effort to ascertain whether teachers who adopted the curriculum innovation tended to have more open-belief systems than those who did not alter curriculum, scores on the short form (10 items) of Rokeach's Dogmatism scale were analyzed (Appendix A, p. A.8). Three categories were developed: high, 70-44; middle, 43-34; and low, 33-7. The lower the score the more open is the belief system. Boundary points for the high and low categories approximate the first and fourth quartile of the 193 respondents in the pilot study.

Results of this analysis appear in Table 4.2 below.

TABLE 4.2 Dogmatism by Adoption Category

	N	Dogmatism Category High (70-44) Percent	Middle (43-34) Percent	Low (33-0) Percent
Adoption Category				
Non-Adopter	96	24	45.8	30.2
Adopter	33	21.2	42.4	36.4
Total	129	23.3	45.0	31.8

The proportional variations between categories were not statistically significant, although slightly larger proportions of the adopters than non-adopters were low in dogmatism thus indicating the presence of more open-belief systems.

Risk-Taking Propensities

A measure of risk-taking propensities was included in view of research which supported the thesis that innovators are more venturesome than others. (See Rogers, 1962, p. 169; Kievit, 1970, p. 136.) Data obtained in the pilot on an eight item forced-choice scale (Appendix A, p. A.7) of risk-taking propensities were re-analyzed in the follow-up with respondents more rigorously categorized relative to curriculum change.

On the basis of scale scores, respondents were categorized as: high risk-takers (8-7); middle (6-4); and low (3-1). The high and low categories approximate the first and fourth quartiles of the 193 respondents in the pilot study.

Table 4.3 reports the results.

TABLE 4.3 Risk-Taking Propensities by Adoption Category

	N	Risk-Taking Propensity Category High (8-7) Percent	Middle (6-4) Percent	Low (3-0) Percent
Adoption Category				
Non-Adopter	96	16.7	52.1	31.3
Adopter	33	15.2	63.6	21.2
Total	129	16.3	55.0	28.7

Proportional variations did not attain statistical significance but suggested a low positive relationship with adopters being disproportionately represented in the middle category and under-represented in the low risk category.

Intrinsic Value of Work

With the rationale, that persons who value their work for intrinsic reasons, as well as a means of earning a livelihood, might be more innovative and receptive to change respondents were asked: "If all economic needs of you and your family were met by previous existing resources, would you ____ quit work, ____ work full-time, ____ seek part-time employment, ____ other?".

TABLE 4.4 Reported Hypothetical Action Related to Employment Assuming All Economic Needs Were Met by Adoption Category

	N	Quit Work Percent	Work Full-Time Percent	Work Part-Time Percent	Other Percent
Adoption Category					
Non-Adopter	90	6.7	55.6	31.1	6.7
Adopter	32	3.1	71.9	25.0	
Total	122	5.7	59.8	29.5	4.9

As reported in Table 4.4, slightly larger proportions of adopters responded that they would continue to work full-time than did non-adopters. The proportional variations did not attain statistical significance at the .05 level.

Professional Characteristics

Variables related to each respondent's professional attributes included: teaching effectiveness; job satisfaction; professional involvement; self perception as an opinion leader and perception of the supportiveness of the system to change.

Teaching Effectiveness

Two measures provided data relative to teaching effectiveness: one was a self-evaluation; the second was an indirect measure, Ryans Teacher Characteristic Schedule.

Self-Evaluation of Effectiveness:

The self-evaluation scale consisted of ten Likert-type items (see Appendix A, p. A.5). The theoretical range of scores on the self-evaluation rating scale is 10 to 50, with a high score indicative of high effectiveness. Data obtained during the pilot found the distribution of scores to be heavily skewed toward the upper end of the scale. Therefore, three categories were defined with the high and low categories approximating the first and fourth quartiles of the 193 pilot study respondents.

Table 4.5 reports the specifics.

TABLE 4.5 Self-Evaluation of Teaching Effectiveness by Adoption Category

	N	Teaching Effectiveness Category High (50-45) Percent	Middle (44-40) Percent	Low (39-10) Percent
Adoption Category				
Non-Adopter	96	17.7	47.9	34.4
Adopter	33	36.4	51.5	12.1
Total	129	22.5	48.8	28.7

$X^2 = 8.11$ 2 df sign. .02 level

Proportional variations showed adopters with significantly greater frequency to be in the high effectiveness category. Variations were statistically significant beyond the .02 level.

Of the ten items on the scale, items 1, 4, and 9 showed differences in responses between the two categories, significant at the .05 level or beyond.

Indirect Measure of Teaching Effectiveness:

Ryan's Teacher Characteristic Schedule and its development is described in detail in Characteristics of Teachers (1960). Briefly, the measure consists of a series of multiple choice questions. The content of the items is quite diverse and does not focus directly upon the respondents' assessment of teaching effectiveness but rather on teacher characteristics which correlate with effectiveness. Items constitute ten scales. For this study, only seven of the scales were used in order to keep the data collection time to a reasonable length. The items excluded were measures of: emotional stability, verbal ability, and validity of responses. The seven scales used measured the following variables:

X_{co} - warm, understanding, friendly vs. aloof, egocentric, restricted classroom behavior.

Y_{co} - responsible, businesslike, systematic vs. evading, unplanned, slipshod classroom behavior.

Z_{co} - stimulating, imaginative vs. dull, routine classroom behavior.

R_{co} - favorable vs. unfavorable opinions of pupils.

R_{lco} -favorable vs. unfavorable opinions of democratic classroom procedures.

Q_{co} - favorable vs. unfavorable opinions of administrative and other school personnel.

B_{co} - learning-centered ("traditional") vs. child-centered ("permissive") educational viewpoints.

Three categories were developed for each scale and labeled high, middle and low. Cut-off scores were established from the distribution of scores for all 129 respondents to approximate the first and fourth quartiles for the polar categories, with the second and third comprising the middle category.

Tables 4.6 through 4.12 report proportional variations between adopter categories.

TABLE 4.6 Scale X_{co} (Understanding, Friendly Behavior) by Adoption Category

	N	Scale Category High (99-59) Percent	Middle (58-54) Percent	Low (53-0) Percent
Adoption Category				
Non-Adopter	96	25	35.4	39.6
Adopter	33	33.3	33.3	33.3
Total	129	27.1	34.9	38.0

X^2 = .911 df 2 n. sign.

TABLE 4.7 Scale Y_{CO} (Responsible, Systematic Behavior) by Adoption Category

	N	Scale Category High (99-59) Percent	Middle (58-54) Percent	Low (53-0) Percent
Adoption Category				
Non-Adopter	96	20.8	41.7	37.5
Adopter	33	27.3	51.5	21.2
Total	129	22.5	44.2	33.3

$\chi^2 = 2.946$ df 2 n. sign.

TABLE 4.8 Scale Z_{CO} (Stimulating, Imaginative Behavior) by Adoption Category

	N	Scale Category High (99-59) Percent	Middle (58-54) Percent	Low (53-0) Percent
Adoption Category				
Non-Adopter	96	30.2	35.4	34.4
Adopter	33	48.5	33.3	18.2
Total	129	34.9	34.9	30.2

$\chi^2 = 4.51$ df 2 n. sign.

TABLE 4.9 Scale R_{co} (Favorable Opinions of Pupils) by Adoption Category

	N	Scale Category High (99-56) Percent	Middle (55-50) Percent	Low (49-0) Percent
Adoption Category				
Non-Adopter	96	28.1	39.6	32.3
Adopter	33	39.4	30.3	30.3
Total	129	31.0	37.2	31.8

$X^2 = 1.604$ 2 df n. sign.

TABLE 4.10 Scale R_{col} (Favorable Opinions of Democratic Pupil Practices) by Adoption Category

	N	Scale Category High (99-54) Percent	Middle (53-51) Percent	Low (50-0) Percent
Adoption Category				
Non-Adopter	96	16.7	55.2	28.1
Adopter	33	24.2	63.6	12.1
Total	129	18.6	57.4	24.0

$X^2 = 3.679$ df 2 n. sign.

TABLE 4.11 Scale Q_{CO} (Favorable Attitude Towards Administrative and Other School Personnel) by Adoption Category

	N	Scale Category High (69-52) Percent	Middle (51-45) Percent	Low (44-1) Percent
Adoption Category				
Non-Adopter	96	26.9	49.5	23.7
Adopter	33	30.3	39.4	30.3
Total	129	27.8	46.8	25.4

$X^2 = 1.053$ 2 df n. sign.

TABLE 4.12 Scale B_{CO} (Learning-Centered Vs. Child-Centered) by Adoption Category

	N	Scale Category High (69-54) Percent	Middle (53-49) Percent	Low (48-1) Percent
Adoption Category				
Non-Adopter	93	26.9	49.5	23.7
Adopter	33	24.2	39.4	36.4
Total	126	26.2	46.8	27.0

$X^2 = 2.049$ 2 df n. sign.

None of the proportional variations on these scales attained statistical significance at the .05 level. On five of the seven scales, however, proportional variations were consistently in the direction of greater effectiveness for adopters than non-adopters. These five scales were: understanding, friendly behavior; responsible, systematic behavior; stimulating, imaginative behavior; favorable opinions of pupils; favorable opinions of democratic pupil practices. On one of the remaining two scales, adopters were more frequently child-centered vs. learning-centered.

On two of these scales, findings from comparing wage-earning categories within the experimental group and within the control indicated proportional variations statistically significant at the .05 level. Specifically, among teachers in the experimental group who reported adopting wage-earning emphases, significantly larger proportions were in the high category of responsible vs. evasive classroom behavior than those reporting no wage-earning. This was not the case between categories within the control group. (See Table B.17, p. B-9, Appendix B.) On the scale measuring stimulating vs. dull classroom behavior, proportional variations between wage-earning categories within the control group attained significance at the .05 level, with those adopting wage-earning being disproportionately represented in the high(i.e. stimulating) category. (See Table B.18, p. B-9, Appendix B.) Variations between categories within the experimental group, though not significant, were in the same direction.

Job Satisfaction

Since adoption of the innovation would alter previous job practices, measures of job satisfaction were included. The Job Descriptive Index (Smith, et al, m/meo) is composed of four scales measuring satisfaction with work, supervision, adult relationships and pay. (See Appendix A, pp. A.10-A.13, and Kievit, 1970, pp. 116-126.) Three satisfaction categories of high, middle and low were established with score ranges approximating the first, second and third and fourth quartiles, respectively, of the pilot study respondents. Data collected during the pilot on this measure were re-analyzed for adoption categories determined by data on adoption from the follow-up.

Tables 4.13, 4.14, 4.15 and 4.16 report the results.

TABLE 4.13 Work Satisfaction Category by Adoption Category

	N	Work Satisfaction Category High (54-45) Percent	Middle (44-38) Percent	Low (37-0) Percent
Adoption Category				
Non-Adopter	96	33.3	41.7	25.0
Adopter	33	30.3	45.5	24.2
Total	129	32.6	42.6	24.8

X^2 = .157 2 df n. sign.

TABLE 4.14 Satisfaction With Supervision Category by Adoption Category

	N	Satisfaction With Supervision Category High (54-51) Percent	Middle (50-39) Percent	Low (38-0) Percent
Adoption Category				
Non-Adopter	96	32.3	39.6	28.1
Adopter	33	39.4	48.5	12.1
Total	129	34.1	41.9	24.0

X^2 = 3.445 2 df n. sign.

TABLE 4.15 Satisfaction With Adult Relationships by Adoption Category

	N	Satisfaction Category High (54-51) Percent	Middle (50-41) Percent	Low (40-0) Percent
Adoption Category				
Non-Adopter	96	22.9	49	28.1
Adopter	33	42.4	33.3	24.2
Total	129	27.9	45	27.1

X^2 = 4.818 2 df sign. beyond 10 percent level

TABLE 4.16 Satisfaction With Pay Category by Adoption Category

	N	Pay Satisfaction Category High (24-19) Percent	Middle (18-13) Percent	Low(12-0) Percent
Adoption Category				
Non-Adopter	96	32.3	39.6	28.1
Adopter	33	36.4	45.5	18.2
Total	129	33.3	41.1	25.6

X^2 = 1.277 2 df n. sign.

As evident, proportional variations between adopter categories did not attain statistical significance at the .05 level. However, variations on the three scales: supervision, adult relationships, and pay were consistently in the direction of adopters reporting higher satisfaction than non-adopters.

The second measure of job satisfaction was a five item rating scale. Four of the items were developed by Morse (1953). A fifth was added which was directly related to the teaching situation. Items were rated from 1 to 5, with the total score a summation of ratings. Scores could range from 1 to 25. (See Appendix A, pp. A.5 - A.6.) Categories established in the pilot study were used in a second analysis of pilot data after respondents were re-categorized as non-adopters or adopters on the basis of follow-up data. (Kievit, 1970, pp. 111-115.) This measure of job satisfaction was used a second time during the follow-up. Thus job satisfaction of respondents was measured at two points in time, during the pilot in 1968, and during the follow-up in 1969-70.

The extent of the relationship between job satisfaction and adoption of the curriculum innovation is detailed in Tables 4.17 and 4.18.

TABLE 4.17 Job Satisfaction Reported During Pilot by Adoption Category

		Job Satisfaction Category		
	N	High (25-24) Percent	Middle (23-21) Percent	Low (20-0) Percent
Adoption Category				
Non-Adopter	96	27.1	44.8	28.1
Adopter	33	36.4	45.5	18.2
Total	129	29.5	45.0	25.6

$X^2 = 1.669$ 2 df n. sign.

TABLE 4.18 Job Satisfaction Reported During Follow-Up by Adoption Category

	N	Job Satisfaction Category High (25-24) Percent	Middle (23-19) Percent	Low (18-1) Percent
Adoption Category				
Non-Adopter	93	25.8	54.8	19.4
Adopter	33	27.3	57.6	15.2
Total	126	26.2	55.6	18.3

X^2 = .288 2 df n. sign.

Proportional variations between job satisfaction categories based on the 5 item measure used during the pilot were in the direction of higher job satisfaction more frequently reported by adopters than non-adopters. Data from the follow-up on this measure showed a similar trend but of smaller magnitude. None of these variations attained statistical significance.

In sum, considering all data related to job satisfaction, a conservative conclusion is that no relationship exists between satisfaction and incorporating wage-earning. A somewhat less conservative interpretation is that a low but positive relationship exists between the two variables.

Supportiveness of the System to Change

Both theoretical considerations and practical experience supported the view that the supportiveness of school systems to change could facilitate or impede a teacher's efforts to modify curriculum. Consequently a 26 item Likert-type scale was developed for use in the follow-up study to measure the teacher's perception of the system's supportiveness of change (Appendix A, pp. A.23, A.24). Reliability of the scale was tested by using a split-half reliability test. The correlation coefficient for 129 cases was .87. Theoretically, scores could range from 26 to 130, with a mean of 78. For the 129 respondents in the follow-up, scores ranged from 39 to 126 with a mean of 81.76 and a standard deviation of 16.10.

Respondents were grouped into perception categories of high supportiveness to change, moderate, and low supportiveness to change. The high and low categories approximate the highest 1/3 and the lowest 1/3 of the total sample (N=129).

Table 4.19 presents the results.

TABLE 4.19 Perceived Supportiveness of System to Change by Adoption Category

	N	Supportiveness to Change Category High (126-90) Percent	Moderate (89-75) Percent	Low (74-39) Percent
Adoption Category				
Non-Adopter	96	27.1	35.4	37.5
Adopter	33	45.5	36.4	18.2
Total	129	31.8	35.7	32.6

$X^2 = 5.428$ 2 df sign. beyond .10 level

Proportional variations between adoption categories were in the direction of adopters perceiving the system as being more supportive of change. These variations attained statistical significance beyond the 10 percent level but slightly under the 5 percent level.

Variations between categories within the experimental group indicated that workshop participants who changed curriculum had twice the proportion perceiving the system as highly supportive of change than did those reporting no change. To compute X^2, the moderate and low categories were collapsed. The X^2 obtained was 4.41 and with 1 df was significant beyond the .05 level.

TABLE 4.20 Supportiveness to Change Categories of Experimental and Control Groups by Wage-Earning Category

	Supportiveness to Change Category							
	High (126-90)		Moderate (89-75)		Low (74-39)		Total	
	N	Percent	N	Percent	N	Percent	N	Percent
Experimental								
No Wage-Earning	16	30.8	19	36.5	17	32.7	52	100
Wage-Earning	8	61.5	4	30.8	1	7.7	13	100
Total	24	36.9	23	35.4	18	27.7	65	100
Control								
No Wage-Earning	10	22.7	15	34.1	19	43.2	44	100
Wage-Earning	7	35.0	8	40.0	5	25.0	20	100
Total	17	26.6	23	35.9	24	37.5	64	100

Variations between categories within the control group were in the direction of larger proportions of those reporting wage-earning also to be in the high or moderate categories of perceiving the system as supportive of change. The X^2 computed for the three categories was 2.12, and with 2 df did not attain statistical significance.

These results indicated that it is possible to measure with some degree of precision teacher perceptions of the supportiveness of the system to change and, in turn, that these perceptions have a positive association with adoption of a curriculum innovation. In sum, not only can a case be made for a degree of face validity, but validity substantiated by an external criterion.

Professional Involvement

Two variables were measured relative to professional activities, participation in professional organizations and meetings and reading professional journals. Data on these two variables were combined to provide an index of professional involvement. The measures used asked respondents to list organizations of which they were a member, frequency of attendance, offices held, and committee memberships. (Appendix A, p. A.6.) These were weighted to derive a total score as described previously (Kievit, 1970, pp. 76-85). Similarly,

respondents were asked to list the professional journals to which they subscribe; which are accessible from other sources; and the frequency with which articles are read. Weights were assigned and total scores derived. Data on professional participation and reading obtained during the pilot were re-examined after respondents were categorized as having changed or not having changed curriculum on the basis of data from the follow-up.

Tables 4.21, 4.22 and 4.23 report the results.

TABLE 4.21 Professional Participation Category by Adoption Category

		Professional Participation Category		
	N	High (99-12) Percent	Middle (11-8) Percent	Low (7-0) Percent
Adoption Category				
Non-Adopter	96	33.3	28.1	38.5
Adopter	33	42.4	33.3	24.2
Total	129	35.7	29.5	34.9

X^2 = 2.234 2 df n. sign.

TABLE 4.22 Professional Reading Category by Adoption Category

		Professional Reading Category		
	N	High (99-15) Percent	Middle (14-9) Percent	Low (8-0) Percent
Adoption Category				
Non-Adopter	96	55.2	25.0	19.8
Adopter	33	39.4	39.4	21.2
Total	129	51.2	28.7	20.2

X^2 = 2.99 2 df n. sign.

TABLE 4.23 Professional Involvement Category by Adoption Category

	N	Professional Involvement Category High (99-27) Percent	Middle (26-17) Percent	Low (16-0) Percent
Adoption Category				
Non-Adopter	96	40.6	34.4	25
Adopter	33	42.4	33.3	24.2
Total	129	41.1	34.1	24.8

X^2 = .032 2 df n. sign.

As evident, no differences between categories attained statistical significance at the .05 level. Adopters, however, were disproportionately represented in the high professional participation category, while non-adopters were disproportionately represented in the high professional reading category. The opposing directions of variations in these two dimensions resulted in minor variations between categories of professional involvement.

These findings might be interpreted as supporting the generalization that receiving information relative to the innovation via interpersonal relations facilitate adoption to a greater extent than do impersonal sources of information. The journals cited by respondents as professional reading were reported in the pilot study. What's New in Home Economics and Practical Forecast were most frequently listed. The content of these magazines varies from issue to issue, but attention to teaching materials, methods, and curriculum are linked more with new products and new processes related to foods, nutrition, clothing, and home furnishings than new curricular emphases such as wage-earning. Similarly, organizational activities would vary and reflect a spectrum of interests within the field rather than being limited to curriculum. Participation in organizational activities however, unlike use of magazines, would include informal interaction with other teachers thus increasing the possible exposure to a broader spectrum of interests than those given attention in the formal program.

In the follow-up study an effort was made to measure cosmopolitanism through eliciting data relative to participation in professional meetings and the distance traveled in order to participate. This information did not prove useful due to the narrow range of variation among respondents.

Self-Perceptions as an Opinion Leader

Six forced choice questions were formulated, as adaptations of those developed by Rogers (1962) to measure perceptions as opinion leaders (Appendix A, p. A-9). Each response indicative of opinion leadership was scored 1. Total scores were obtained by adding item responses. Possible score range, then, was from 1 to 6, with the latter the highest frequency of responses indicative of seeing oneself as an opinion leader. Data obtained from respondents at the time of the pilot were re-analyzed in terms of adoption data from the follow-up.

As reported in Table 4.24, approximately two thirds of adopters were in the high opinion leadership category as compared to slightly over one third of the non-adopters. Proportional variations attained statistical significance beyond the .02 level.

TABLE 4.24 Self-Perception As An Opinion Leader Category by Adoption Category

		Self-Perception Category		
	N*	High (6-5) Percent	Middle (4) Percent	Low (3-1) Percent
Adoption Category				
Non-Adopter	95	36.8	28.4	34.7
Adopter	32	65.6	18.8	15.6
Total	127	44.1	26.0	29.9

$X^2 = 8.23$ 2 df sign. .02 level
*2 responses ambiguous

Thus, findings relative to adopting this particular innovation support the generalization that persons who perceive themselves as opinion leaders are most likely to adopt innovations.

Characteristics of the Innovation

Rogers (1962, p. 28) described some of the characteristics of innovations as perceived by receivers which influence their differential rate of adoption. The five attributes mentioned: relative advantage, measurable in economic terms, social prestige factors, convenience and satisfaction; compatability with prevalent values and norms; complexity, i.e. difficult to understand and use; trialability, i.e. the degree to which it can be tried on a limited basis; and observability, i.e. the degree to which results of the innovation are visible to others.

Three variables included in the follow-up study relate to values and perceived values relevant to this particular innovation of incorporating wage-earning emphases. Attitudes towards work in the lives of women is one; attitudes towards vocational education, a second; and last the perception of the value accorded wage-earning emphases by other home economists, school administrators, students, and community members.

Attitudes Towards Employment of Women

T curriculum change sought would increase the options for girls (as well as boys) who wanted preparation for employment, and should include information which would contribute to realistic expectations about the importance of employment in the lives of women. In view of this, it was thought that teachers having a more traditional orientation towardswomen's roles, might be less receptive to according value to the innovation and thus less apt to adopt it. To test this thesis in the follow-up phase, teachers were asked to respond to an 11 item Likert-type scale (Appendix A, p. A.25) developed by Katelman and Barnett (1968) to measure attitudes towards employment for women, referred to as work orientation.

An illustrative item stated: "Women have a desire for the sense of competence which can be more completely fulfilled if she works than if she remains a housewife." A response to each item was scored from 1 to 5, with 5 indicating a more modern orientation to employment of women. The theoretical range of scores was 11 to 55.

The scores for the teacher respondents ranged from 16 to 47. Mean score for the experimental group was 32, s.d. 5.79 and 32.83, s.d. 4.41 for the control group. Three categories were developed with the high and low categories approximating the first and last quartile of all respondents. Cut-off scores were as follows: High, 55-35 (Modern); Moderate 34-31; Low 30-11 (Traditional).

As evident in Table 4.25, proportional variations were small though in the expected direction.

TABLE 4.25 Work Orientation Categories by Adoption Category

	N*	Favorable Towards Employment High (55-35) Percent	Moderate (34-31) Percent	Low(30-1) Percent
Adoption Category				
Non-Adopter	93	26.9	39.8	33.3
Adopter	33	33.3	42.4	24.2
Total	126	28.6	40.5	31.0

$X^2 = 1.047$ 2 df n. sign.
*3 ambiguous responses omitted

Attitudes Towards Vocational Education

Generally, vocational education is viewed as preparation for employment. The incorporating of wage-earning emphases in home economics programs moves home economics into vocational education, as generally conceived. Vocational education has no assured place among the types of education which are prized by many in American society. The considerable commitment to baccalaureate education as the preferred post secondary education for all youth, except those incapable of academic achievement has led many to consider vocational education as second best, if that. Thus it was hypothesized that since wage-earning as an innovation constitutes a commitment to vocational education and identification as a teacher of vocations for any "adopter," attitudes favorable to vocational education would facilitate adoption. A 28 item Likert-type scale (Appendix A, pp. A.21, A.22) was included in the follow-up to provide a test of this hypothesis. Illustrative of the items is this statement: "I am of the opinion that vocational education is too costly in proportion to its worth to the community." Responses, positive to negative about vocational education were scored 5 through 1. The theoretical range of scores is 28 to 140. Actual range of scores was from 58 to 137; with a mean score of 108.1 and a standard deviation of 13.34. Respondents were categorized into three categories: Positive, 137-115; Moderate, 114-103; Negative 102-58. Boundary points of categories were chosen to approximate the upper, middle, and lower thirds of all respondents.

Table 4.26 reports the results.

TABLE 4.26 Attitudes Toward Vocational Education by Adoption Category

	N	Favorable Toward Vocational Education High (137-115) Percent	Middle (114-103) Percent	Low (102-58) Percent
Adoption Category				
Non-Adopter	96	26.0	35.4	38.5
Adopter	33	36.4	51.5	12.1
Total	129	28.7	39.5	31.8

$X^2 = 7.915$ 2 df sign. beyond .02 level

Variations between adopter categories indicated adopters more frequently were in the high and middle categories, thus having more favorable views towards vocational education than non-adopters. Chi square at 7.92 and 2 df was significant beyond the .02 level.

Perceptions of Value Accorded Innovations by Reference Groups

Six questions were formulated to ascertain the perceptions of the value accorded wage-earning emphases in home economics by various categories of persons (Appendix A, p. A.26). Teachers chose one of five responses. Responses were scored from 5 (most positive) to 1 (most negative).

To illustrate, one item was:

"Home Economists generally view the incorporation of wage-earning emphases in Home Economics programs negatively." Strongly Agree, Agree, Uncertain, Disagree, Strongly Disagree.

The remaining items asked about perceptions of the views of: home economists within the county; home economists within the local school; the school administrator; students; and the community.

The majority of respondents reported that other home economists generally, in the county, and in the school viewed the innovation of wage-earning positively. Between 5 percent and 25 percent perceived views as being negative. None of the variations between adopters and non-adopters attained statistical significance. (For experimental and control group analysis see Tables B.36, B.37, B.38, Appendix B, pp. B.18, B.19.)

Responses to the questions about the views of administrators, students, and community are reported in Tables 4.27, 4.28, and 4.29 respectively.

TABLE 4.27 Perception of Administrator's View of Innovation by Adoption Category

	N	Perception of Administrator's View Positive (5-4) Percent	Indifferent (3) Percent	Negative (2-1) Percent
Adoption Category				
Non-Adopter	90	38.8	48.9	12.2
Adopter	33	48.5	48.5	
Total	123	41.4	48.8	9.7

$X^2 = 2.624$ 2 df n. sign.

TABLE 4.28 Perceptions of Student's View of Innovation by Adoption Category

	N	Perception of Student's View Positive (5-4) Percent	Indifferent (3) Percent	Negative (2-1) Percent
Adoption Category				
Non-Adopter	90	44.5	47.8	7.8
Adopter	33	63.7	33.3	3.
Total	123	49.6	43.9	6.5

$X^2 = 3.782$ 2 df n. sign.

TABLE 4.29 Perceptions of Community's View of Innovation by Adoption Category

	N	Perception of Community's View: Positive (5-4) Percent	Indifferent (3) Percent	Negative (2-1) Percent
Adoption Category				
Non-Adopter	87	32.1	62.1	5.7
Adopter	33	54.5	45.5	
Total	120	38.3	57.5	4.2

$X^2 = 6.162$ 2 df sign. .05 level

Teacher perceptions that administrators, students, and the community each viewed the innovation favorably were related positively with adoption, although the first two relationships did not attain statistical significance. The third was significant beyond the .05 level.

In sum, attitudes towards employment of women may not be linked closely enough with the innovation to relate to its adoption or rejection. Another consideration, however, is the comparative homogenity of attitude held by the sample. Attitudes towards vocational education were related to adoption, in the direction of positive attitudes towards vocational education being positively associated with adopting the innovation. Perceptions of the views of the innovation held by other home economists were not positively and significantly related to adoption. It should be noted, however, that the large majority of respondents, often in excess of 80 percent, perceived other home economists to hold positive views of the innovation or to be uncertain of the views held. Perceptions of views held by this reference group might be significantly related to adoption of innovations which were viewed negatively. In brief, in this particular instance, views of other home economists were not apparently a deterrent to adoption; on the other side, neither were these sufficient reason to adopt. The more significant reference groups for adoption were those in the local school, namely administrators, students and community. Inasmuch as each of these groups have an important role in the success or failure of any movement toward adoption, this is not surprising.

Multivariate Analysis

Multiple Regression:

Multiple regression analysis and discriminate analysis were employed to ascertain the degree to which information about selected characteristics of teachers increase the accuracy of predicting whether a teacher would be in the adopter or non-adopter category. The variables chosen were those found to have the highest association with change when examined as single predictors. Due to a particular interest in relationships between the scales composing Ryan's Characteristics of Teacher Schedule and other measures, these were also included. The variables selected were: 1. age; 2. number of years in teaching position; 3. intrinsic value of work; 4. attitude of husband towards employment; 5. attitude of children towards employment; 6. self-evaluation of teaching effectiveness; 7. participation in professional organizations; 8. self-perception as an opinion leader; 9 satisfaction with supervision; 10. satisfaction with adult relationships in work; 11. attitude towards vocational education; 12. valuing of innovation by administrator; 13. valuing of innovation by student; 14. valuing of innovation by community; 15. warmth vs. aloofness in classroom behavior; 16. responsible vs. evasive classroom behavior; 17. stimulating vs. dull classroom behavior; 18. favorable vs. unfavorable opinions of students; 19. favorable vs. unfavorable opinions of democratic classroom procedures; 20. favorable vs. unfavorable opinions of administrative and other school personnel; 21. learning-centered vs. child-centered educational viewpoints; 22. perceptions of the supportiveness of the system to change; 23. stage in adoption process.

The dependent variable was adoption vs. non-adoption, i.e. reported change of courses taught by the teacher respondent to incorporate wage-earning emphases. The BMD02R Stepwise Regression Program, Health Sciences Computing Facility, UCLA, was used to analyze the data. From this analysis, a multiple R of .53 was obtained from the inclusion of nineteen variables which accounted for 28 percent of the variance. The inclusion of the remaining four variables would not produce a substantial increment in variance accounted for. Twenty-five percent of the variance was accounted for by eight variables; as indicated by a multiple R of .506. The eight variables in order of amount of variance explained were: 1. self-evaluation of teaching effectiveness; 2. perception of the supportiveness of the system to change; 3. satisfaction with supervision; 4. perceived valuing of the innovation by community; 5. intrinsic valuing of work[1]; 6. satisfaction with adult relationships; 7. responsible vs. evasive classroom behavior; & warm vs. aloof classroom behavior. Use of the first three variables account for 17 percent of the variance; adding variables 4 and 5 increases this to 21 percent; 6 and 7, to 23 percent.

[1] Intrinsic value of work was derived from the question which asked: "If all economic needs of you and your family were met by previously existing resources, would you ____quit work, ____work full-time, ____seek part-time employment, _____other?".

In sum, information about these eight variables would make it possible to account for 1/4 of the total variation in the dependent variable scores.

Discriminate Analysis[2]:

The program BMD04M, Discriminate Analysis - Two Groups from the Health Sciences Computing Facility, UCLA, was used with the twenty-four variables designated above.

Mean Z values were -0.115 for the non-adopters and -0.136 for the adopters, with standard deviations of .013 and .012 respectively. Values ranged from -0.077 to -0.161. The range for non-adopters was -0.077 to -0.149; for adopters -0.12 to -0.16. The Mahalanobis D Square was 2.56. Since only a 2.14 was required as an indication that discrimination did occur, the conclusion was that on the basis of known Z values, it was possible to discriminate between the two groups.

[2]Discriminate analysis involves the computation of a Z value utilizing and combining the scores from each single variable. Cases in each group are then ranked from lowest to highest Z value. From this ranking, it is possible to ascertain the extent to which each of the two groups cluster between different intervals and hence can be discriminated.

Summary and Conclusions

Consistent with the third and fourth objectives of the study, data on the variables specified were analyzed in terms of the experimental group, dichotomized on the basis of reporting change in curriculum and no change in curriculum, and compared with data for the control group dichotomized on the same basis. Subsequent to that analysis, teachers in the experimental and control groups were combined and then dichotomized on the basis of having changed curriculum and not having changed. Data were then analyzed to ascertain whether significant relationships existed between adopting the curriculum innovation and each variable. Inasmuch as a comparison of findings showed that results from these two approaches were the same except for two variables, findings are reported for the combined groups dichotomized as adopters and non-adopters.

In conclusion, findings from this analysis indicated that teachers most likely to adopt the innovation of wage-earning emphases in Home Economics were teachers who:

1) are mature professionals, between 40 and 50 years old;
2) have stability in their teaching position;
3) report attitudes of family members are favorable to their employment;
4) value work as an end in itself;
5) perceive themselves as highly effective teachers;
6) report comparatively higher satisfaction with supervision and adult relationships on the job;
7) report participation in professional organizations;
8) see themselves as opinion leaders;
9) perceive the school system as being supportive of educational change;
10) perceive administrators, students, and community as viewing the innovation more positively;
11) have more highly positive attitudes toward vocational education.

The first ten variables may show positive relationships with adopting other educational innovations as well as wage-earning emphases. Thus, the findings of this project support the consideration of these variables by other investigators concerned with initiating educational change.

Two types of multivariate analysis were employed, multiple regression analysis and discriminate analysis for two groups. The multiple regression analysis found that eight variables account for 25 percent of the variance, with a multiple r of .50. These variables were 4, 5, 6*, 9 plus community's view of innovation, responsible vs. evasive classroom behavior, and warm vs. aloof classroom behavior. The discriminate analysis found that it was possible to discriminate between the two groups. The practical implications

*variables combined in this statement.

of this are somewhat exciting. Specifically, given limited resources with which to disseminate information relative to curriculum change, information on selected variables would provide criteria on which to select the target population with the highest probability of being responsive, in action, to the message. In this particular situation, the cut-off Z value would be -0.12. All teachers below would be screened out, with the information disseminated to those with Z values at or above this level. Although slightly less than 1/3 of the non-adopters have Z values above this point, all of the adopters are within this range. The rationale is, then, that within this range those who will change are included, and that of all non-adopters, those with characteristics most closely resembling adopters have a higher probability of becoming adopters.

Practically, it must be acknowledged that the cost in both time and money of obtaining and analyzing data on these selected variables might outweigh the gains. This might be true, particularly when contributions are made to movement through earlier stages of the adoption process. Such movement may be a desired outcome though it will not appear as reports of adoption. In conclusion, perhaps the more immediate value of this particular analysis is linked to the potential it suggests. This potential and its value can be adequately understood only if future studies are designed to further specify relationships between types of innovations sought, types of situations, types of information dissemination used, and characteristics of adopters and non-adopters, including the stage of each in the adoption process. Such findings might identify some few generic variables, about which information can be economically obtained.

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APPENDIX A

INTERVIEW SCHEDULE

Are you ____single ____married ____widowed ____divorced?

In what year were you born? _____

(If married, widowed or divorced) Do you have children? ____yes ____no;
____number; ages _____

Institution

Have you completed a ____B.S. degree? ____year

____Master's degree? ____year

Have you earned credits beyond the degree? ____yes ____no ____number

When did you last participate in a course, workshop or institute related to your teaching? _____date

WORK EXPERIENCE:

How many years have you taught? _____

Has this been for a continuous period, i.e., without interruption? ____yes ____no

If no, what were the number and length of the interruptions? _____

_____

How many years have you been teaching in this school? _____

Have you worked in business or community agencies after graduation from college?

____yes ____no. If yes, type of work_____

number of years_____

Which have you enjoyed the most? ____teaching ____business or community

For what single most important reason? _____

_____

1. Have the high school home economics courses which you teach been modified or extended to incorporate a wage-earning emphases? ____yes ____no (If yes, please describe.)

   (If no), are any plans in process or complete for making changes next year? ____yes ____no. (If yes), briefly describe these. (If no) ask: Have possible changes been considered?

2. Have high school home economics courses taught by other teachers been modified or extended to incorporate a wage-earning emphases? ____ yes ____no.
(If no, are any plans in process or complete for next year) ____ yes ____no.
(If yes, briefly describe changes or plans for change.)

(If no), ask whether changes have been considered.

Questions 3 through 14 to be answered only if changes have been made or planned.

3. How was the change initiated? (E.g., home economics teacher met with administrator recommending change; administrator suggested need for change; home economics teacher followed through on planning; state department personnel.)

4. How was the content of the course changes determined?

5. What teaching methods are used for these changes in courses?

6. When were these changes planned? (E.g., Fall, 1966, Spring, 1967)

7. Has anything been done to inform the community of the program change? ____yes ____no (please describe)

8. Have there been efforts to recruit students for revised courses? ____yes ____no (please describe)

9. Have library materials been ordered for use in the wage-earning aspects of the program? ____yes ____no (please describe types of materials, e.g., career monographs)

10. Do you think that present library resources include sufficient numbers and breadth of material on work, types of jobs related to home economics and related topics? ____yes ____don't know ____no

11. Have efforts been made to encourage students to utilize occupational materials? ____yes ____don't know ____no (Please specify nature of efforts.)

12. What problems have you encountered in incorporating a wage-earning emphases in the Home Economics program?

13. What, if any, kinds of information have you obtained about your school and community it serves which has relevance for the home economics curriculum? ____none ____the following:

	Types	Source
e.g.	Types of businesses	Ye low pages of telephone directory

14. Did this information influence the decision to modify the curriculum or to retain the present curriculum? ____yes ____no ____don't know.

Do you attend state-wide meetings of the New Jersey Home Economics Association?
____usually ____sometimes ____rarely ____never

Have you attended state regional meetings for home economists?
____usually ____sometimes ____rarely ____never

Do you attend the national meetings of the American Home Economics Association?
____usually ____sometimes ____rarely ____never

PILOT STUDY

QUESTIONNAIRE

Please fill in the answers to the following questions:

1. How long do you plan to continue work outside your home? ____years. Until what age? ____

2. What are the three most important reasons for your working? (List in order of importance.)

   a. _____

   b. _____

   c. _____

3. If all economic needs of you and your family were met by present existing resources, would you ____quit work, ____work full-time, ____seek part-time employment, _____other?

4. In order to meet your household responsibilities, do you employ domestic help?

   ____not at all
   ____one day per week
   ____two days per week
   ____five days per week
   ____once every 2 weeks
   ____once every 3 weeks
   ____once a month
   _____other (specify)

5. Check any of the following services which you purchase.

   ____all laundry sent out
   ____only shirts sent out
   ____grocery orders delivered
   _____other (specify)
   ____child care
   eat out ____times per week
   ____times per month

6. Suggest three factors which help you achieve your goals in homemaking. (List in order of importance.)

   a. _____

   b. _____

   c. _____

7. If married and living with your husband, does he

   ____ strongly favor your teaching
   ____ favors your teaching
   ____ doesn't care whether you teach or not
   ____ opposes your teaching
   ____ strongly opposes your teaching

8. If you have children living at home, do your children

   ____ strongly favor your teaching
   ____ favor your teaching
   ____ do not care whether you teach or not
   ____ oppose your teaching
   ____ strongly oppose your teaching

Indicate the degree to which the following persons help with the specified tasks:
Place S in the block if they help SOMETIMES
Place R in the block if they help ROUTINELY

Help	Clean House	Do Laundry	Iron Clothes	Cook	Wash Dishes	Shop for Groceries	Family Finances
Husband							
Children							
Mother							
Mother-in-law							
Rommate							

Circle the number which you think best describes your characteristics as a teacher. 1 is poor, 5 is excellent

1 2 3 4 5 Effectively communicate ideas and information to students

1 2 3 4 5 Well informed about current trends and developments in Home Economics education

1 2 3 4 5 Sensitive to students' needs and interests

1 2 3 4 5 Interested in teaching

1 2 3 4 5 Cooperate effectively with other teachers

1 2 3 4 5 Plan courses to meet changing needs of students, community and society

1 2 3 4 5 Establish rapport with students

1 2 3 4 5 Achieve excellent results in terms of student learning

1 2 3 4 5 Develop new course materials to keep program current with recent developments in the profession

1 2 3 4 5 Effectively evaluate student achievement

Circle the number which best expresses the degree of your agreement.

How well do you like the work you are doing?

1 (strongly dislike it) 2 3 4 5 (strongly like it)

Does your work give you a chance to do the things you feel you do best?

1 (strongly disagree) 2 3 4 5 (strongly agree)

Do you get any feeling of accomplishment from this work you are doing?

1	2	3	4	5
(definitely none)				(very much so)

How do you feel about your work? Does it rate as an important job with you?

1	2	3	4	5
(not at all)				(very much so)

How do you think other teachers and administrators feel about your work? Do they rate it as an important job?

1	2	3	4	5
(not at all)				(very much so)

Of what professional organizations are you a member?

Organization	(Check column) Attend Meetings never	rarely	sometimes	usually	(List) Office Held (Currently) Committee Membership

List professional journals to which you subscribe	Read Articles never	rarely	sometimes	usually

List professional journals accessible to you (school, library)	Read Articles never	rarely	sometimes	usually

JOB PREFERENCE INVENTORY

All of us have different requirements for the job that we would find most attractive. The following are a number of alternatives that you might be faced with in considering job opportunities. Please check one alternative in each of the following pairs.

The kind of job that I would most prefer would be:

1. Check one:

____1. A job where I am almost always on my own.
____2. A job where there is nearly always someone available to help me on problems that I don't know how to handle.

2. Check one:

____1. A job where I have to make many decisions by myself.

____2. A job where I have to make a few decisions by myself.

3. Check one:

____1. A job where my instructions are quite detailed and specific.
____2. A job where my instructions are very general.

4. Check one:

____1. A job where I am almost always certain of my ability to perform well.
____2. A job where I am usually pressed to the limit of my abilities.

5. Check one:

____1. A job where I am the final authority on my work.
____2. A job where there is nearly always a person or a procedure that will catch my mistakes.

6. Check one:

____1. A job where I could be either highly successful or complete failure.
____2. A job where I could never be too successful but neither could I be a complete failure.

7. Check one:

____1. A job that is changing very little.

____2. A job that is constantly changing.

8. Check one:

____1. An exciting job but one which might be done away with in a short time.
____2. A less exciting job but one which would undoubtedly exist in the company for a long time.

The following is a study of what people think and feel about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view. You may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin, according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1: I agree a little	-1: I disagree a little
+2: I agree on the whole	-2: I disagree on the whole
+3: I agree very much	-3: I disagree very much

____ 1. Fundamentally, the world we live in is a pretty lonely place.

____ 2. It is often desirable to reserve judgment about what's going on until one has a chance to hear the opinions of those one respects.

____ 3. A person who thinks primarily of his own happiness be beneath contempt.

____ 4. In the history of mankind there have probably been just a handful of really great thinkers.

____ 5. Most people just don't know what's good for them.

____ 6. Once I get wound up in a heated discussion I just can't stop.

____ 7. The worst crime a person can commit is to attack publicly the people who believe in the same thing he does.

____ 8. In this complicated world of ours the only way we can know what is going on is to rely upon leaders or experts who can be trusted.

____ 9. In the long run, the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

____10. If given a chance, I would do something of great benefit to the world.

Check the answer which applies to you.
During the past six months, have you told any other home economists about some new information or practice in home economics.
____yes ____no

Compared with other home economists whom you know, a) are you more or b) are you less likely to be asked for advice about new practices in home economics?
____(a) ____(b)

Thinking back to your last discussion about something new in home economics, a) were you asked for your opinion or b) did you ask someone else?
____(a) ____(b)

When you discuss new ideas about home economics with other home economists, what part do you play?
____mainly listen or ____ try to convince them of your ideas?

Which of these happens more often

____ a) do you tell other home economists about some new practice or

____ b) do they tell you of some new practice?

Do you have the feeling that you are generally regarded by other home economists as a good source of advice about new practices in home economics?
____yes ____no

Place a Y beside an item if the item describes your work. Place an N if the item does not describe your work, and a question mark if you cannot decide.

Work

____ Fascinating

____ Routine

____ Satisfying

____ Boring

____ Good

____ Creative

____ Respected

____ Hot

____ Pleasant

____ Useful

____ Tiresome

____ Healthful

____ Challenging

____ On your feet

____ Frustrating

____ Simple

____ Endless

____ Gives sense of accomplishment

Place a Y, N or ? beside each item, as you did by items on the first list.

Person or persons who supervise your work

____ asks my advice

____ hard to please

____ impolite

____ praises good work

____ tactful

____ influential

____ up-to-date

____ doesn't supervise enough

____ quick tempered

____ tells me where I stand

____ annoying

____ stubborn

____ knows job well

____ bad

____ intelligent

____ leaves me on my own

____ around when needed

____ lazy

Place a Y, N or ? beside each item, as before.

Adults (on job)

____ stimulating

____ boring

____ slow

____ ambitious

____ stupid

____ responsible

____ fast

____ intelligent

____ easy to make enemies

____ talk too much

____ smart

____ lazy

____ unpleasant

____ no privacy

____ active

____ narrow interests

____ loyal

____ hard to meet

Place a Y, N or ? by each item, as on prior lists.

Pay

____ Income adequate for normal expenses

____ Satisfactory salary increases

____ Barely live on income

____ Bad

____ Income provides luxuries

____ Less than I deserve

____ Highly paid

____ Underpaid

What is (was - if deceased or retired) your father's occupation? _____
(Please be specific, e.g., self-employed butcher, truck driver, farm owner and manager, lawyer.)

The last year of education completed by my father was:

____ 8th grade
____ some college
____ post graduate
____ 12th grade
____ graduated college
____ post high school technical

(If married)
My husband's occupation is: _____
(Please be specific - insurance agent, car dealer, etc.)

He completed (last year)

____ 8th grade
____ some college
____ post graduate
____ 12th grade
____ college graduate
____ post high school technical

INTERVIEW SCHEDULE I
FOLLOW-UP STUDY

CODE

1. Are you ____single ____married ____widowed ____divorced _____

2. (If married, widowed, or divorced) Do you have children? __yes__no _____

3. Have you completed a ____B.S. Degree ____year B_____
____Masters Degree ____year Y_____
M_____
Y_____

4. How many years have you taught? _____(TOTAL NUMBER) _____

5. What courses or workshops have you participated in during the past year? (in relation to your teaching) _____

Sponsoring Agency	Content	
_____	_____	SA_____ C_____
_____	_____	SA_____ C_____
_____	_____	SA_____ C_____ TN_____

6. What professional meetings (outside your own school) have you attended within the last academic year?

Approximate Distance Traveled	Content	
_____	_____	D_____ C_____
_____	_____	D_____ C_____
_____	_____	D_____ C_____
_____	_____	D_____ C_____ TN_____

7. Are you working in the same school as last year? ____yes ____no _____

8. Have you experienced a change in position since last year? ___yes _____
____no
If yes, what kind of change was it? From_____to_____

9. Have the high school home economics courses which you teach been modified or extended to incorporate a wage-earning emphases?___yes ____no (If yes, please describe) _____

10. (If no) Are any plans in process or complete for making changes next year? ____yes ____no. (If yes) Briefly describe these. (If no) Ask: Have possible changes been considered? _____

Code

Questions 11 thru 22 to be answered only if changes have been made or planned.

11. How was the change initiated? (e.g. Home economics teacher met with administrator recommending change; administrator suggested need for change; home economics teacher followed through on planning, state department personnel). _____

12. How was the content of the course changes determined? _____

13. What teaching methods are used for these changes in courses? _____

14. When were these changes planned? (e.g. Fall, 1966, Spring, 1967) _____

15. Has anything been done to inform the community of the program change? ___ yes ____no (please describe) _____

16. Have there been efforts to recruit students for revised courses? ____yes ____no (please describe) _____

17. Have library materials been ordered for use in the wage-earning aspects of the program? ____yes ____no (please describe types of materials, e.g. career monographs) _____

18. Do you think that present library resources include sufficient numbers and breadth of material on work, types of jobs related to home economics and related topics? ____yes ____no ____don't know _____

19. Have efforts been made to encourage students to utilize occupational materials ____no ____don't know ____yes Please specify nature of efforts. _____

20. What problems have you encountered in incorporating a wage earning emphases in the Home economics program? _____

CODE

21. What, if any, kinds of information have you obtained about your school and community it serves, which has relevance for the home economics curriculum? ____none ____the following _____

Types	Source
e.g. types of businesses	yellow pages of telephone directory

22. Did this information influence the decision to modify the curriculum or to retain the present curriculum? ____yes ____no ____don't know _____

23. Have home economics courses taught by other teachers in your school been modified to include a wage earning emphases? _____
____yes ____no
If yes, what has been your role, if any, in effecting or carrying out the change?

Questions 24 thru 35 to be answered only if changes have been made or planned.

24. How was the change initiated? (e.g. Home economics teacher met with administrator recommending change; administrator suggested need for change, home economics teacher followed through on planning, state department personnel). _____

25. How was the content of the course changes determined? _____

26. What teaching methods are used for these changes in courses? _____

27. When were these changes planned? (e.g. Fall, 1966, Spring, 1967) _____

28. Has anything been done to inform the community of the program change? _____
____yes ____no Please describe.

29. Have there been efforts to recruit students for revised courses? _____
____yes ____no Please describe.

CODE

30. Have library materials been ordered for use in the wage earning aspects of the program? ____yes ____no (please describe types of materials, e.g. career monographs) _____

31. Do you think that present library resources include sufficient numbers and breadth of material on work, types of jobs related to home economics and related topics? ____yes ____no ____don't know. _____

32. Have efforts been made to encourage students to utilize occupational materials ____no ____don't know ____yes
Please specify nature of efforts. _____

33. What problems were encountered in incorporating a wage earning emphases in the Home Economics program) _____

34. What, if any, kinds of information were obtained about your school and community it serves, which has relevance for the home economics curriculum? ____none ____the following _____

Types e.g. types of businesses	Source yellow pages of telephone directory

35. Did this information influence the decision to modify the curriculum or to retain the present curriculum? ____yes ____no ____don't know _____

36. If there are no courses currently being offered in your school which have incorporated a wage-earning emphases, are plans being made for them? ____yes _____no If yes, describe briefly. _____

37. From what sources have you obtained your most up-to-date information about home economics curriculum? _____

FOR WORKSHOP PARTICIPANTS ONLY-

38. Do you think the inservice education workshop you attended from January to April 1968, should be repeated for other teachers in the state? ____yes ____undecided ____no _____

39. What do you consider to be major outcomes for you from the workshops? _____

40. If content in other areas, of home economics; were developed for presentation through workshops planned and scheduled as those on wage-earning emphases would you be interested in participating? ____yes ____no ____undecided. _____

Comments.

INTERVIEW SCHEDULE II
FOLLOW-UP STUDY

Code

1. When did you first hear about wage-earning emphases in home economics? when___
____can't recall ____it was in____ _____from (source) source-
____State Dept. Meeting (year) _____
____reading ____talking with other teachers

2. What was your reaction? _____
____very positive ____slightly positive ____indifferent
____slightly negative ____very negative ____can't remember

3. Did you seek further information about wage-earning emphases? no-yes
____yes From what sources?_____ source-
____no When approximately? year? _____ year___

4. (If yes to above) As you gained more information did your reaction become: _____
____very positive ____slightly positive ____indifferent
____slightly negative ____very negative

5. Did you ever consider incorporating wage-earning emphases in some form in your instruction? _____
____yes, seriously entertained possibility ____yes, casually considered it ____didn't consider it

6. What was your decision? What stimulated it? (e.g. wanted content taught to be more relevant to student need, programs in other schools) no-yes what stim.it
_____

7. How did you feel about the decision? reaction-
____very positive ____slightly positive ____indifferent _____
____slightly negative ____very negative

(If incorporated wage-earning emphases ask) (If decision was "no" go to 12)

8. To what extent was the decision implemented? _____
____completely ____partially ____not at all

9. Has the implementation _____
____fulfilled your expectations
____somewhat fulfilled your expectations
____too soon to know
____somewhat failed to fill expectations
____failed to fill expectations

10. Is your reaction to the (change, modification, extension) of the Program _____
____very positive ____slightly positive ____indifferent
____slightly negative ____very negative

11. Do you think wage-earning emphases in home economics in your school will be _____

____extended soon to the other areas of home economics
____extended eventually, but not now
____gradually extended
____continued indefinitely
____gradually diminished
____eliminated
____don't know

For those reporting no wage-earning emphases

12. Do you think the home economics program in this school will be modified or extended to include wage-earning emphases within: the next 5 years? ____yes ____no ____undecided _____

ATTITUDE TOWARD VOCATIONAL-TECHNICAL EDUCATION

CIRCLE ONE

1. SA A U D SD	1.	It is more important to provide many students with a sound basic education than to use the time for vocational education.
2. SA A U D SD	2.	A high schooi graduate of a vocational education program impresses me a great deal.
3. SA A U D SD	3.	Those high school students who would want to take vocational education are not mature enough to profit from it.
4. SA A U D SD	4.	Vocational education does not make enough students useful members of society to justify its cost.
5. SA A U D SD	5.	I would favor expanding vocational education programs even if available funds remain the same.
6. SA A U D SD	6.	Most vocational education courses in my opinion lead nowhere.
7. SA A U D SD	7.	In my opinion there are not enough students in vocational education at the high school level.
8. SA A U D SD	8.	I should like to see the values of vocational education made known to more parents than is now the case.
9. SA A U D SD	9.	I am opposed to expanding vocational education programs in high school when so many students need the basic subjects.
10. SA A U D SD	10.	For many students in high school, there should be greater emphasis on earning a living through a vocational education program.
11. SA A U D SD	11.	Vocational education programs cannot possibly prepare high school students for the range of job opportunities available to them.
12. SA A U D SD	12.	In my opinion, taking vocational education hinders students from further education after high school.
13. SA A U D SD	13.	Results of vocational education programs I have seen or heard about were beneficial to the communities involved.

14. SA A U D SD	14.	I do not think vocational education in high school is as necessary for most students as are other worthwhile programs.
15. SA A U D SD	15.	In my opinion, a graduate of a high school vocational education program is generally suited only for unskilled work.
16. SA A U D SD	16.	There should be more money set aside in the school budget for vocational education.
17. SA A U D SD	17.	Most students who take vocational education in high school in my opinion lack too many other scholastic skills.
18. SA A U D SD	18.	I should like to see vocational education encouraged more among high school students.
19. SA A U D SD	19.	In my opinion vocational education in the high school is highly overrated.
20. SA A U D SD	20.	I believe good vocational education programs in public schools attract new industries to a community.
21. SA A U D SD	21.	It seems to me that vocational education in high school does not prepare a student for advancement in an occupation.
22. SA A U D SD	22.	A more considerable portion of the high school curriculum than at present should be devoted to vocational education.
23. SA A U D SD	23.	I am of the opinion that vocational education is too costly in proportion to its worth to the community.
24. SA A U D SD	24.	In my opinion most public schools do not provide vocational education programs early enough.
25. SA A U D SD	25.	I would cooperate with others in order to develop the best vocational education program for this community.
26. SA A U D SD	26.	I favor reducing vocational education programs when available school funds are in short supply.
27. SA A U D SD	27.	This community should provide a wide variety of vocational programs to fit the abilities of most students not going to college.
28. SA A U D SD	28.	I am thoroughly sold on offering vocational education in high school.

Teacher's Perception of the
Supportiveness of the System to Change
M.B. Kievit and E. Douma

Directions: Mark on your answer sheet the number which, in your opinion, most accurately indicates the degree to which each statement describes your school. 1 indicates that the statement does not describe the school to 5 which indicates that it very much applies to the school.

e.g. Most teachers in the school are innovative in their respective field.
1 2 3 4 5

1. There are carefully planned in-service education experiences for all teachers.

2. Departmental meetings are held for the purpose of evaluating and revising curriculum.

3. Teachers in some specialized areas are not included in departmental meetings concerning curriculum evaluation and revision.

4. Provision is made for in-service education for teachers of specialized areas, e.g. music, art, home economics.

5. Released time and money are provided for professional workshops and conferences.

6. Teachers are involved in meetings concerning the evaluation and revision of curriculum, but their ideas are seldom implemented.

7. There is receptivity to budgeting for materials and equipment required for existing and new programs.

8. The board of education supports improvements in educational programs.

9. Administrators want to improve educational programs but are prevented by the board of education from doing so.

10. Administrator-initiated conferences with special area teachers are held to discuss curriculum revision.

11. Administrators give personal and public recognition to the classroom innovations of individual teachers or departments.

12. Administrators encourage teacher-initiated conferences to discuss curriculum and other concerns.

13. Provision is made for some released time to plan curriculum revision.

14. Generally, teachers feel that suggestions for sound changes in curriculum will be accepted for implementation with minimum difficulty.

15. Most teachers feel that their colleagues welcome and support suggestions to improve educational programs.

16. Most teachers are innovative in their respective fields.

17. Most teachers are enthusiastically supportive of the classroom innovations of their colleagues.

18. Most teachers want the status quo and resist change.

19. Administrators are supportive of improved educational programs in all areas of the school.

20. Administrators are supportive o educational innovations and improvements in certain areas of the school but not in others.

21. There is continuing assessment of community and student needs as a basis for curriculum change.

22. There is adequate supportive supervision in my department.

23. The administration is aware of and interested in many of the newest educational concepts, such as modular scheduling, team teaching, programmed instruction, etc.

24. Administrators give verbal support but little financial or other assistance to new ideas in curriculum.

25. The community is supportive of progressive educational programs.

26. Most teachers are too busy with routine duties and extracurricular activities to plan new educational programs.

Work Orientation Scale

Mark the space on the answer sheet which accurately describes the degree to which you agree to disagree with the following statements.

5 = strongly agree; 4 = agree; 3 = undecided; 2 = disagree; and 1 = strongly disagree.

1. Gainful employment gives more prestige to a woman than being a housewife.
2. A wife's education is in many respects wasted if she is not employed.
3. Mothers of preschool children should not work unless it is an absolute necessity.
4. The wife should not work unless her husband approves.
5. The talented or professionally-trained wife has an obligation to society as well as to the home to use her skills.
6. A woman should help increase the family income.
7. A woman's place is in the home.
8. If she employs a competent babysitter, a woman with children is perfectly justified in going to work in order to afford luxury items for the home.
9. An adult and reliable babysitter can take care of the needs of children quite as well as a mother.
10. Women have a desire for the sense of competence which can be more completely fulfilled if she works than if she remains a housewife.
11. A wife should work if homemaking doesn't keep her busy or interested.

Reference Group
Valuing of Innovation

1. Home economists generally view the incorporation of wage earning emphasis in home economics programs negatively.

   1-1 strongly agree
   1-2 agree
   1-3 uncertain
   1-4 disagree
   1-5 strongly disagree

2. Home economists in this county view the incorporation of wage earning emphasis in home economics programs positively.

   2-1 strongly agree
   2-2 agree
   2-3 uncertain
   2-4 disagree
   2-5 strongly disagree

3. Home economist(s) in this school system view the incorporation of wage earning emphasis in home economics programs negatively.

   3-1 strongly agree
   3-2 agree
   3-3 uncertain
   3-4 disagree
   3-5 strongly disagree

4. Do administrators in your school system view the incorporation of wage earning emphasis in home economics programs

   4-1 very favorably
   4-2 favorably
   4-3 indifferently
   4-4 unfavorably
   4-5 very unfavorably

5. Do the students in your school system view the incorporation of a wage earning emphasis in home economics programs

   5-1 very favorably
   5-2 favorably
   5-3 indifferently
   5-4 unfavorably
   5-5 very unfavorably

6. Does the community in which you teach view the incorporation of a wage earning emphasis in home economics programs

   6-1 very favorably
   6-2 favorably
   6-3 indifferently
   6-4 unfavorably
   6-5 very unfavorably

APPENDIX B

Table B.1 Age of Experimental and Control Group Respondents by Wage-Earning Category

	21-30 yrs N	Percent	31-40 yrs N	Percent	41-50 yrs N	Percent	51+ N	Percent	Total N	Percent
Experimental Group										
No Wage Earning	16	31.4	5	9.8	21	41.2	9	17.6	51	100
Wage Earning	3	23.1	1	7.7	8	61.5	1	7.7	13	100
Total	19	29.7	6	9.4	29	45.3	10	15.6	64	100
Control Group										
No Wage Earning	13	30.2	8	18.6	10	23.3	12	27.9	43	100
Wage Earning	7	35.0	1	5.0	9	45.0	3	15.0	20	100
Total	20	31.7	9	14.3	19	30.2	15	23.8	63	100

Table B.2 Marital Status of Experimental and Control Group Respondents by Wage-Earning Category

	Single N	Percent	Married N	Percent	Other N	Percent	Total N	Percent
Experimental Group								
No Wage Earning	10	19.2	32	61.5	10	19.2	52	100
Wage Earning	2	15.4	10	76.9	1	7.7	13	100
Total	12	18.5	42	64.6	11	16.9	65	100
Control Group								
No Wage Earning	15	34.1	23	52.3	6	13.6	44	100
Wage Earning	2	10.0	12	60.0	6	30.0	20	100
Total	17	26.6	35	54.7	12	18.8	64	100

Table B.3 Years of Teaching of Experimental and Control Group Respondents by Wage Earning Category

	1-5 yrs N	Percent	6-15 yrs N	Percent	Over 16 yrs N	Percent	Total N	Percent
Experimental Group								
No Wage Earning	22	42.3	16	30.8	14	26.9	52	100
Wage Earning	4	30.8	5	38.5	4	30.8	13	100
Total	26	40.0	21	32.3	18	27.7	65	100
Control Group								
No Wage Earning	24	54.5	9	20.5	11	25.0	44	100
Wage Earning	9	45.0	6	30.0	5	25.0	20	100
Total	33	51.6	15	23.4	16	25.0	64	100

Table B.4 Experimental and Control Group Respondents by Years in Present Position and Wage-Earning Category

	1-2 yrs N	Percent	3-5 yrs N	Percent	6-10 yrs N	Percent	11+ N	Percent	Total N	Percent
Experimental Group										
No Wage Earning	19	36.5	14	26.9	6	11.5	13	25.0	52	100
Wage Earning	2	15.4	5	38.5	2	15.4	4	30.8	13	100
Total	21	32.3	19	29.2	8	12.3	17	26.2	65	100
Control Group										
No Wage Earning	15	34.1	14	31.8	2	4.5	13	29.5	44	100
Wage Earning	6	30.0	6	30.0	6	30.0	2	10.0	20	100
Total	21	32.8	20	31.3	8	12.5	15	23.4	64	100

Table 8.5 Respondents in Experimental and Control Group Who Worked in Business by Wage-Earning Category

	No		Yes		Total	
	N	Percent	N	Percent	N	Percent
Experimental Group						
No Wage Earning	26	50	26	50	52	100
Wage Earning	4	30.7	9	69.3	13	100
Total	30	46.2	35	53.8	65	100
Control Group						
No Wage Earning	20	45.5	24	5[illegible] 5	44	100
Wage Earning	10	55.6	8	44.4	18	100
Total	30	48.4	32	51.6	6[illegible]	100

Table 8.6 Socio-Economic Ratio by Wage-Earning Category

	Consistent		Husband Higher		Wife Higher		Total	
	N	Percent	N	Percent	N	Percent	N	Percent
Experimental Group								
No Wage Earning	21	51.2	7	17.1	13	31.7	41	100
Wage Earning	4	40.0	3	30.0	3	30.0	10	100
Total	25	49.0	10	19.6	16	31.4	51	100
Control Group								
No Wage Earning	11	40.7	7	25.9	9	33 3	27	100
Wage Earning	9	52.9	4	23.5	4	23.5	17	100
Total	20	45.5	11	25.0	13	29.5	44	100

Table B.7 Dogmatism of Experimental and Control Group Respondents by Wage Earning Category

	High (70-44)		Middle (43-34)		Low (33-7)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	11	21.2	26	50.0	15	28.8	52	100
Wage Earning	2	15.4	6	46.2	5	38.5	13	100
Total	13	20.0	32	49.2	20	30.8	65	100
Control Group								
No Wage Earning	12	27.3	18	40.9	14	31.8	44	100
Wage Earning	5	25.0	8	40.0	7	35.0	20	100
Total	17	26.6	26	40.6	21	32.8	64	100

Table B.8 Risk-Taking Propensities of Experimental and Control Group Respondents by Wage-Earning Category

	High (8-7)		Middle (6-4)		Low (3-1)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	10	19.2	25	48.1	17	32.7	52	100
Wage Earning	1	7.7	10	76.9	2	15.4	13	100
Total	11	16.9	35	53.8	19	29.2	65	100
Control Group								
No Wage Earning	6	13.6	25	56.8	13	29.5	44	100
Wage Earning	4	20.0	11	55.0	5	25.0	20	100
Total	10	15.6	36	56.3	18	28.1	64	100

Table B.3 Mean Scores on X_{co} (Warm vs. Aloof) By Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	55.38	5.69
Wage Earning	13	55.29	6.11
Total	65	55.45	5.74
Control Group			
No Wage Earning	44	54.79	4.64
Wage Earning	20	57.90	5.55
Total	64	55.67	5.17

Table B.10 Mean Scores on Y_{co} (Responsible vs. Evading) By Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	54.78	3.44
Wage Earning	13	56.21	3.89
Total	65	55.07	3.52
Control Group			
No Wage Earning	44	56.38	4.35
Wage Earning	20	55.85	3.53
Total	64	56.24	4.05

Table B.11 Mean Scores on Z_{CO} (Stimulating vs. Dull) By Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	56.08	4.67
Wage Earning	13	57.0	5.31
Total	65	56.24	4.72
Control Group			
No Wage Earning	44	55.81	3.88
Wage Earning	20	58.35	3.98
Total	64	56.70	4.07

Table B.12 Mean Scores on R_{CO} (Favorable vs. Unfavorable Opinions of Pupils) by Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	52.80	5.73
Wage Earning	13	51.71	6.49
Total	65	52.39	5.81
Control Group			
No Wage Earning	44	52.21	5.93
Wage Earning	20	53.85	4.85
Total	64	52.71	5.58

Table B.13 Mean Scores on R_{lco} (Favorable vs. Unfavorable Opinions of Democratic Classroom Procedures) By Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	51.82	1.98
Wage Earning	13	52.71	1.90
Total	65	51.97	2.00
Control Group			
No Wage Earning	44	51.98	2.01
Wage Earning	20	52.25	2.25
Total	64	52.05	2.06

Table B.14 Mean Scores on Q_{co} (Favorable vs. Unfavorable Attitudes Towards Administration) By Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	49.22	5.48
Wage Earning	13	47.21	5.94
Total	65	48.72	5.55
Control Group			
No Wage Earning	44	47.33	5.24
Wage Earning	20	49.35	4.92
Total	64	47.97	5.15

Table B.15 Mean Scores on B_{CO} (Learning-Centered vs. Child-Centered) By Experimental and Control Wage-Earning Category

	N	$\bar{X}$	SD
Experimental Group			
No Wage Earning	52	51.22	3.867
Wage Earning	13	50.79	3.19
Total	65	51.33	3.78
Control Group			
No Wage Earning	44	51.33	4.61
Wage Earning	20	49.85	4.49
Total	64	50.81	4.56

Table B.16 Categories of X_{CO} (Warm vs. Aloof) of Experimental and Control Group Respondents By Wage-Earning Category

	High (69-59)		Middle (58-54)		Low (53-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	16	30.8	15	28.8	21	40.4	52	100
Wage Earning	4	30.8	3	23.1	6	46.2	13	100
Total	20	30.8	18	27.7	27	41.5	65	100
Control Group								
No Wage Earning	8	18.2	19	43.2	17	38.6	44	100
Wage Earning	7	35.0	8	40.0	5	25.0	20	100
Total	15	23.4	27	42.2	22	34.4	64	100

Table B.17 Categories of Y_{co} (Responsible vs. Evasive) of Experimental and Control Groups By Wage-Earning Category

	High (69-59) N	Per cent	Middle (58-54) N	Per cent	Low (53-0) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	5	9.6	25	48.0	22	42.3	52	99.9
Wage Earning	4	30.8	5	38.4	4	30.8	13	100.0
Total	9	13.8	30	46.1	26	40.0	65	99.9

$X^2 = 3.90$ (Middle and Low categories combined) 1 df at .05 level

Control Group								
No Wage Earning	15	34.1	15	34.1	14	31.8	44	100
Wage Earning	5	25.0	12	60.0	3	15.0	20	100
Total	20	31.3	27	42.1	17	26.5	64	99.9

$X^2 = 4.02$ n. sign.

Table B.18 Categories of Z_{co} (Stimulating vs. Dull) of Experimental and Control Groups By Wage-Earning Category

	High (69-59) N	Per cent	Middle (58-54) N	Per cent	Low (53-0) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	19	36.5	14	26.9	19	36.5	52	100
Wage Earning	6	46.2	3	23.1	4	30.8	13	100
Total	25	38.5	17	26.2	23	35.4	65	100

$X^2 = .406$ n. sign.

Control Group								
No Wage Earning	10	22.7	20	45.5	14	31.8	44	100
Wage Earning	10	50.0	8	40.0	2	10.0	20	100
Total	20	31.3	28	43.8	16	25.0	64	100

$X^2 = 5.98$ sign. beyond .05 level for Control Group.

Table B.19 Categories of R_{co} (Favorable vs. Unfavorable Opinions of Pupils) of Experimental and Control Groups By Wage-Earning Category

	High (69-56)		Middle (55-50)		Low (49-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	15	28.8	23	44.2	14	26.9	52	100
Wage Earning	4	30.8	4	30.8	5	38.5	13	100
Total	19	29.2	27	41.5	19	29.2	65	100

X^2 n. sign.

Control Group								
No Wage Earning	12	27.3	15	34.1	17	38.6	44	100
Wage Earning	9	45.0	6	30.0	5	25.0	20	100
Total	21	32.8	21	32.8	22	34.4	64	100

X^2 n. sign.

Table B.20 Categories of R_{Ico} (Favorable vs. Unfavorable Opinions of Democratic Classroom Procedures) of Experimental and Control Groups By Wage-Earning Category

	High (69-54)		Middle (53-51)		Low (53-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	8	15.4	30	57.7	14	26.9	52	100
Wage Earning	4	30.8	8	61.5	1	7.7	13	100
Total	12	18.5	38	58.5	15	23.1	65	100

X^2 = 3.026 n. sign.

Control Group								
No Wage Earning	8	18.2	23	52.3	13	29.5	44	100
Wage Earning	4	20.0	13	65.0	3	15.0	20	100
Total	12	18.8	36	56.3	16	25.0	64	100

X^2 = 1.58 n. sign.

Table B.21 Categories of O_{co} (Favorable vs. Unfavorable Opinions of Administrative and Other School Personnel) of Experimental and Control Groups By Wage-Earning Category

	High (69-52)		Middle (51-45)		Low (44-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	16	31.4	27	52.9	8	15.7	51	100
Wage Earning	2	15.4	6	46.2	5	38.5	13	100
Total	18	28.1	33	51.6	13	20.3	64	100
Control Group								
No Wage Earning	9	21.4	19	45.2	14	33.3	42	100
Wage Earning	8	40.0	7	35.0	5	25.0	20	100
Total	17	27.4	26	41.9	19	30.6	62	100

Table B.22 Categories of B_{co} (Learning-Centered vs. Child-Centered) of Experimental and Control Groups By Wage-Earning Category

	High (69-54)		Middle (53-49)		Low (48-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	11	21.2	28	53.8	13	25.0	52	100
Wage Earning	3	23.1	6	46.2	4	30.8	13	100
Total	14	21.5	34	52.3	17	26.2	65	100
Control Group								
No Wage Earning	14	31.8	18	40.9	12	27.3	44	100
Wage Earning	5	25.0	7	35.0	8	40.0	20	100
Total	19	29.7	25	39.1	20	31.3	64	100

Table B.23 Self-Evaluation of Teaching Effectiveness of Experimental and Control Groups By Wage-Earning Category

	High (50-45)		Middle (44-40)		Low (39-10)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	9	17.3	25	48.1	18	34.6	52	100
Wage Earning	5	38.5	6	46.2	2	15.4	13	100
Total	14	21.5	31	47.7	20	30.8	65	100
Control Group								
No Wage Earning	8	18.2	21	47.7	15	34.1	44	100
Wage Earning	7	35.0	11	55.0	2	10.0	20	100
Total	15	23.4	32	50.0	17	26.6	64	100

Table B.24 Work Satisfaction Categories of Experimental and Control Groups By Wage-Earning Category

	High (54-45)		Middle (44-38)		Low (37-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	18	34.6	20	38.5	14	26.9	52	100
Wage Earning	3	23.1	6	46.2	4	30.8	13	100
Total	21	32.3	26	40.0	18	27.7	65	100
Control Group								
No Wage Earning	14	31.8	20	45.5	10	22.7	44	100
Wage Earning	7	35.0	9	45.0	4	20.0	20	100
Total	21	32.8	29	45.3	14	21.9	64	100

Table B.25 Supervision Satisfaction Categories of Experimental and Control Groups By Wage-Earning Category

	High (54-51) N	Per cent	Middle (50-39) N	Per cent	Low (38-0) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	18	34.6	21	40.4	13	25.0	52	100
Wage Earning	4	30.8	7	53.8	2	15.4	13	100
Total	22	33.8	28	43.1	15	23.1	65	100
Control Group								
No Wage Earning	13	29.5	17	38.6	14	31.8	44	100
Wage Earning	9	45.0	9	45.0	2	10.0	20	100
Total	22	34.4	26	40.6	16	25.0	64	100

Table B.26 Satisfaction with Adult Relationships Categories of Experimental and Control Groups By Wage-Earning Category

	High (54-51) N	Per cent	Middle (50-41) N	Per cent	Low (40-0) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	14	26.9	25	48.1	13	25.0	52	100
Wage Earning	7	53.8	4	30.8	2	15.4	13	100
Total	21	32.3	29	44.6	15	23.1	65	100
Control Group								
No Wage Earning	8	18.2	22	50.0	14	31.8	44	100
Wage Earning	7	35.0	7	35.0	6	30.0	20	100
Total	15	23.4	29	45.3	20	31.3	64	100

Table B.27 Pay Satisfaction Categories of Experimental and Control Groups By Wage-Earning Category

	High (24-19)		Middle (18-13)		Low (12-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	15	28.8	24	46.2	13	25.0	52	100
Wage Earning	4	30.8	6	46.2	3	23.1	13	100
Total	19	29.2	30	46.2	16	24.6	65	100
Control Group								
No Wage Earning	16	36.4	14	31.8	14	31.8	44	100
Wage Earning	8	40.0	9	45.0	3	15.0	20	100
Total	24	37.5	23	35.9	17	26.6	64	100

Table B.28 Job Satisfaction Categories[1] of Experimental and Control Groups By Wage-Earning Category

	High (25-24)		Middle (23-21)		Low (20-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	12	23.1	24	46.2	16	30.8	52	100
Wage Earning	4	30.8	6	46.2	3	23.1	13	100
Total	16	24.6	30	46.2	19	29.2	65	100
Control Group								
No Wage Earning	14	31.8	19	43.2	11	25.0	44	100
Wage Earning	8	40.0	9	45.0	3	15.0	20	100
Total	22	34.4	28	43.8	14	21.9	64	100

[1]Data obtained during pilot phase.

Table B.29 Job Satisfaction Categories[1] of Experimental and Control Groups By Wage-Earning Category

	High (25-24)		Middle (23-19)		Low (18-1)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	11	21.6	29	56.9	11	21.6	51	100
Wage Earning	6	46.2	5	38.5	2	15.4	13	100
Total	17	26.6	34	53.1	13	20.3	64	100
Control Group								
No Wage Earning	13	31.0	22	52.4	7	16.7	42	100
Wage Earning	3	15.0	14	70.0	3	15.0	20	100
Total	16	25.8	36	58.1	10	16.1	62	100

[1]Data obtained during follow-up and score ranges of categories redefined.

Table B.30 Professional Participation of Experimental and Control Groups By Wage-Earning Category

	High (99-15)		Middle (14-9)		Low (8-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	15	28.8	17	32.7	20	38.5	52	100
Wage Earning	7	53.8	4	30.8	2	15.4	13	100
Total	22	33.8	21	32.3	22	33.8	65	100
Control Group								
No Wage Earning	17	38.6	10	22.7	17	38.6	44	100
Wage Earning	7	35.0	7	35.0	6	30.0	20	100
Total	24	37.5	17	26.6	23	35.9	64	100

Table B.31 Professional Reading of Experimental and Control Groups By Wage-Earning Category

	High (99-12)		Middle (11-8)		Low (7-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	35	67.3	11	21.2	6	11.5	52	100
Wage Earning	8	61.5	3	23.1	2	15.4	13	100
Total	43	66.2	14	21.5	8	12.3	65	100
Control Group								
No Wage Earning	18	40.9	13	29.5	13	29.5	44	100
Wage Earning	5	25.0	10	50.0	5	25.0	20	100
Total	23	35.9	23	35.9	18	28.1	64	100

Table B.32 Professional Involvement of Experimental and Control Groups By Wage-Earning Category

	High (99-27)		Middle (26-17)		Low (16-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	24	46.2	18	24.6	10	19.2	52	100
Wage Earning	8	61.5	3	23.1	2	15.4	13	100
Total	32	49.2	21	32.3	12	18.5	65	100
Control Group								
No Wage Earning	15	34.1	15	34.1	14	31.8	44	100
Wage Earning	6	30.0	8	40.0	6	30.0	20	100
Total	21	32.8	23	35.9	20	31.3	64	100

Table B.33 Perceptions as Opinion Leaders of Experimental and Control Groups By Wage-Earning Category

	Opinion Leadership Catetory							
	High (6-5)		Middle (4)		Low (3-0)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	13	25.5	17	33.3	21	41.2	51	100
Wage Earning	8	66.7	2	16.7	2	16.7	12	100.1
Total	21	33.3	19	30.2	23	36.5	63	100
Control Group								
No Wage Earning	22	50.0	10	22.7	12	27.3	44	100
Wage Earning	13	65.0	4	20.0	3	15.0	20	100
Total	35	54.7	14	21.9	15	23.4	64	100

Table B.34 Work Orientation of Experimental and Control Group Respondents By Wage-Earning Category

	High (55-35)		Moderate (34-31)		Low (30-11)		Total	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Experimental Group								
No Wage Earning	11	21.6	22	43.1	18	35.3	51	100
Wage Earning	2	15.4	7	53.8	4	30.8	13	100
Total	13	20.3	29	45.3	22	34.4	64	100
Control Group								
No Wage Earning	14	33.3	15	35.7	13	31.0	42	100
Wage Earning	9	45.0	7	35.0	4	20.0	20	100
Total	23	37.1	22	35.0	17	27.4	62	100

Table B.35 Attitudes Toward Vocational Education of Experimental and Control Groups By Wage-Earning Category

	Positive (137-115) N	Per cent	Moderate (114-103) N	Per cent	Negative (102-58) N	Per cent	N	Total Per cent
Experimental Group								
No Wage Earning	12	23.1	17	32.7	23	44.2	52	100
Wage Earning	6	46.2	5	38.5	2	15.4	13	100
Total	18	27.7	22	33.8	25	38.5	65	100
Control Group								
No Wage Earning	13	29.5	17	38.6	14	31.8	44	100
Wage Earning	6	30.0	12	60.0	2	10.0	20	100
Total	19	29.7	29	45.3	16	25.0	64	100

Table B.36 Perceptions of Value Accorded Innovation By Home Economists Generally By Experimental and Control Group Wage-Earning Category

	Positive (5-4) N	Per cent	Uncertain (3) N	Per cent	Negative (2-1) N	Per cent	N	Total Per cent
Experimental Group								
No Wage Earning	34	66.6	12	23.5	5	9.8	51	100
Wage Earning	7	53.9	4	30.8	2	15.4	13	100
Total	41	64.1	16	25.0	7	10.9	64	100
Control Group								
No Wage Earning	24	58.5	11	26.8	6	14.6	41	100
Wage Earning	14	70.0	2	10.0	4	20.0	20	100
Total	38	62.3	13	21.3	10	16.4	61	100

Table 8.37 Perceptions of Value Accorded Innovation
By Home Economists in County
By Experimental and Control Group
Wage-Earning Category

	Positive (5-4) N	Per cent	Uncertain (3) N	Per cent	Negative (2-1) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	30	61.2	12	24.5	7	14.3	49	100
Wage Earning	6	46.2	6	46.2	1	7.7	13	100
Total	36	58.0	18	29.0	8	12.9	62	100
Control Group								
No Wage Earning	22	52.4	15	35.7	5	11.9	42	100
Wage Earning	13	65.0	6	30.0	1	5.0	20	100
Total	35	56.4	21	33.9	6	9.7	62	100

Table B.38 Perceptions of Value Accorded Innovation
By Home Economists in the Same School
By Experimental and Control
Wage-Earning Category

	Positive (5-4) N	Per cent	Uncertain (3) N	Per cent	Negative (2-1) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	34	66.6	5	9.8	12	23.5	51	100
Wage Earning	10	76.9			3	23.1	13	100
Total	44	68.7	5	7.8	15	23.4	64	100
Control Group								
No Wage Earning	28	66.7	5	11.9	9	21.5	42	100
Wage Earning	13	65.0	3	15.0	4	20.0	20	100
Total	41	66.2	8	12.9	13	20.9	62	100

Table B.39 Perceptions of Administrators' View of Innovation By Experimental and Control Wage-Earning Category

	Positive (5-4) N	Per cent	Indifferent (3) N	Per cent	Negative (2-1) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	19	37.3	25	49.0	7	23.8	51	100
Wage Earning	3	23.1	9	69.2	1	7.7	13	100
Total	22	34.4	34	53.1	8	12.5	64	100
Control Group								
No Wage Earning	16	41.0	19	48.7	4	10.3	39	100
Wage Earning	13	65.0	7	35.0			20	100
Total	29	49.2	26	44.1	4	6.8	59	100

Table B.40 Perceptions of Student Views of Innovation By Experimental and Control Wage-Earning Category

	Positive (5-4) N	Per cent	Indifferent (3) N	Per cent	Negative (2-1) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	24	47.	21	41.2	6	11.8	51	100
Wage Earning	10	76.9	2	15.4	1	7.7	13	100
Total	34	53.2	23	35.9	7	10.9	64	100
Control Group								
No Wage Earning	16	41.1	22	56.4	1	2.6	39	100
Wage Earning	11	55.0	9	45.0			20	100
Total	27	45.8	31	52.5	1	1.7	59	100

Table B.41 Perceptions of Community View of Innovation By Experimental and Control Wage-Earning Category

	Positive (5-4) N	Per cent	Indifferent (3) N	Per cent	Negative (2-1) N	Per cent	Total N	Per cent
Experimental Group								
No Wage Earning	17	34.7	28	57.1	4	8.2	49	100
Wage Earning	7	53.9	6	46.2			13	100
Total	24	38.8	34	54.8	4	6.5	62	100
Control Group								
No Wage Earning	11	28.9	26	68.4	1	2.6	38	100
Wage Earning	11	55.0	9	45.0			20	100
Total	22	38.	35	60.3	1	1.7	58	100