A DIFFUSION STUDY: ADOPTION AND COMMUNICATION PRACTICES OF PROFESSIONAL CHANGE AGENTS

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GLORIA NELLEEN BOUTERSE
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Kent L. Gustafson
Major professor

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ABSTRACT

A DIFFUSION STUDY:
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PROFESSIONAL CHANGE AGENTS

By

Gloria Nelleen Bouterse

Past studies on the diffusion of innovations have produced some generalizations about the adoption practices and communication behaviors of those adopting innovations. However, few studies have been directed at the adoption practices and communication behaviors of those at the various levels in the hierarchy of the diffusion process. The purpose of this study was to extend the usefulness of certain of these past findings by comparing a selected number of them with the adoption practices and communication behaviors of professional change agents at one level in the diffusion process.

A field study was conducted among directors, home economists, and 4-H agents in the Cooperative Extension Service's county offices in the northern 26 counties of Michigan's Lower Peninsula. Inquiry through the questionnaire focused on two areas. The first was on identifying adopter categories at four levels: (1) no awareness, (2) awareness, (3) information seeking, and (4) activities

related to implementation (adoption). A majority of the respondents were found to be in the fourth category (adoption). Because no respondents were in category 1, few were in categories 2 and 3, and many could not recall specific "time" information, it was not possible to determine an innovativeness time line on which to categorize respondents into the five adopter categories--Innovator, Early Adopter, Early Majority, Late Majority, and Laggard--as described by Rogers and Shoemaker in their book Communication of Innovations (1971).

The questionnaire also focused on five communication behaviors that had been determined by Rogers and others to be characteristic of early adopters.

Due to the non-normal distribution of the respondents across adopter categories, several of the planned comparisons were not feasible. However, to the extent possible the comparisons were made and reported with the results viewed only as trends.

The first communication behavior, "Earlier adopters have more change agent contact," was examined by location of the person at the time he learned about the innovation, by actual source of information, and by the information source preferred by the respondents.

The data revealed that a majority of the respondents in all adopter categories were in their county office when learning about the innovation. Regarding change agent

contact, across all categories there was a desire for more change agent contact. This was especially noted in adopter category 4 (the highest level), where twice as many "preferred" change agent sources as "actual" change agent sources of information were checked.

The second and third communication behaviors were examined together, since both related to the same communication channels. The communication behaviors were, "Earlier adopters use more impersonal channels" and "Earlier adopters use more mass media." The trend was consistent but evidence on these was inconclusive even though over half in each category responded that they had one or more personal contacts regarding the innovation. No-one in adopter categories 2 or 3 and less than 25 percent of those in adopter category 4 had learned about their innovations through mass media.

The fourth communication behavior examined was, "Earlier adopters seek more information." Those in adopter category 4 checked twice as many information-seeking sources as those in adopter category 3. Because information seeking was the criterion for determining adopter category 3, there were no data from adopter category 2 to be included.

The fifth communication behavior studied was, "Earlier adopters are more knowledgeable." Those in adopter categories 3 and 4 were found to be sought out twice as often as those in adopter category 2.

Conclusions based on the data collected from professional change agents at the county level in the Michigan Cooperative Extension Service and analyzed for the present study were:

1. It was possible to identify varying levels of adopting behavior in a group of change agents through a mailed survey questionnaire that inquired into previous adoption practices.

2. The researcher was unable to establish a normal curve distribution for identifying the five adopter categories--Innovator, Early Adopter, Early Majority, Later Majority, and Laggard--on a scale of innovativeness.

3. It was not possible to elicit from the same group adequate historical information to identify the first 2-1/2 percent to adopt an innovation (innovators) through the use of a mailed survey questionnaire.

The following conclusions are viewed only as trends because of the non-normal distribution of the data.

4. Earlier adopters in the professional change agent group used communications behaviors similar to earlier adopters studied by Rogers and others.

5. Earlier adopters in the professional change agent groups had and/or wanted to have more change agent contact.

6. Earlier adopters in the professional change agent groups were informed more frequently through impersonal/mass

media communication channels than others who had not yet adopted.

7. Earlier adopters in the professional change agent groups sought information regarding the innovation from a greater variety of sources than did other categories of adopters.

8. Earlier adopters in the professional change agent groups received inquiries regarding the innovations from a greater variety of sources than did other categories of adopters.

Further research is needed but there is some evidence from the data collected for this study that change agents are like other homogenous groups in their adoption practices and communication behaviors. The findings of the present study tend to be consistent with the mass of diffusion literature.

A DIFFUSION STUDY:

ADOPTION AND COMMUNICATION PRACTICES OF

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By

Gloria Nelleen Bouterse

A DISSERTATION

Submitted to
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Dedicated to

the memory of our lovely daughter Nelle Marie,

who believed her mom could do anything.

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CHAPTER I

THE RESEARCH PROBLEM

Background

The Cooperative Extension Service at Michigan State University employs over 600 personnel who work in county extension offices throughout the state. These personnel have the dual responsibilities of responding to locally generated requests to meet specific needs, and responding to the university's requests to diffuse innovations. Some of these innovations have been channeled through the university from federal and state sources, whereas others have resulted from research conducted within the university itself.

Personnel in each of the 83 county extension offices can be regarded as a unit or team within the total extension network, sharing a special set of goals and objectives that meet the needs of the respective communities. Although each unit may contain a variety of personnel, the focus of this study is limited to three specific personnel in each unit: the county extension director, the home economist, and the 4-H agent. The study is also limited to 26 county offices in the northern part of Michigan's Lower Peninsula. These

county offices vary from rural to urban, and each offers a unique delivery of service and information.

The diffusion process, from university to county unit to community, is affected significantly by the amount and type of information, or training, provided the county personnel. The introduction of an innovative procedure to a county unit can be accomplished in a variety of ways, such as:

-Memos from the director or other administrators to county directors, home economists, and 4-H agents
-Newsletters that offer the basic facts and encourage requests for further information
-Packages with "how to do it" information
-Workshops directed toward the cooperative extension personnel and group study leaders.

In the past, little effort has been made to assess the degree of readiness of county teams to receive and diffuse specific innovations and to determine which of the variety of information channels are most effective in prompting the diffusion process through the county offices.

Although cooperative extension county staff are change agents at one level, they are learners and adopters at the level at which they receive information from university and other sources. It is in this context, as Gustafson (1974) stressed in his article, "Faculty Are Learners," that we neglect to consider the basic learning principles that

should be applied at any level at which learning is to take place. Assessment of the potential adopter is important to determine which promotional strategies will best nurture the innovation process. Most instructional development models include assessment or analysis of the learner as one of the first steps; for example, the Stowe Indiana Model (1968) is based on four activities necessary for adequate teaching, the first of which is to analyze the learner's needs, prior knowledge, and unique characteristics.

The Gerlach Ely Model (1971) assesses the learner only after defining what, in terms of content and objectives, is to be taught. The innovation, then, is the primary consideration and the strategies of implementation follow.

Instructional developers in the field of education have responded to the challenge of preparing change agents by the use of instructional systems, development models, and media. For example, the Instructional Development Institute (IDI) Model (1970) was designed to train teachers, administrators, policy makers, and specialists to apply instructional systems and development principles to learning and teaching problems. The second step offered in this model is to analyze the setting, or the learning environment, which is considered both a determinant of learner characteristics and an inventory of resources.

The readiness of the county extension team to accept and diffuse a new innovation might also be related to previous behavioral patterns of acceptance and adoption of innovations. In support of that concept, Havelock (1968), following up on studies done by Brandner (1964) with agricultural innovation, found that a knowledge of subjects' past experiences did provide information about their readiness to accept innovation. Everett Rogers (Rogers and Shoemaker, 1971) and others interested in diffusion of innovations and adopter characteristics have focused their studies primarily on those who adopt innovations for their personal use. His adopter categories were determined by comparing different rates, or degrees, of adoptive behavior as defined on a time line; Rogers labeled the categories Innovators, Early Adopters, Early Majority, Late Majority, and Laggards (1971). Characteristics of adopter categories may be found in Appendix A. Although cooperative extension personnel are considered change agents, their separate and collective roles as learners are central to this study and are examined to establish adopter categories.

Rogers (Rogers and Shoemaker, 1971), through his extensive work in diffusion, concluded that research findings on the characteristics of adopter categories can be grouped under three headings: socioeconomic status, personality variables, and communication behavior. Although all three are important, the present study is limited to the

third component, communication behavior, as it relates to the cooperative extension county team members and their adoption of three specific innovations.

Within the category of communication behavior, Rogers and Shoemaker (1971) listed 11 generalizations as characteristics of innovativeness (See Appendix B). These generalizations are referred to throughout the study, and several are important in determining adopter categories for the cooperative extension team members.

Rogers and Shoemaker (1971) stated, "The differences among the categories suggest that those promoting adoption of innovations might utilize somewhat different strategies with each" (p. 190). They expanded on this concept by stating, "There is much practical usefulness for change agents at all levels if they can identify potential innovators and laggards in their client audience and utilize different change strategies with each such sub-audience" (p. 175).

Purpose

Findings from the study regarding adoption rates and the most effective and efficient communication channels might perhaps be employed to assist strategic implementation and promotion of future innovations to the Cooperative Extension Service county teams. If the results do indicate that adopter categories and communication channels as described

by Rogers and Shoemaker (1971) also apply to change agents, further research might be required before these findings can be applied.

In the Cooperative Extension Service, a major thrust has always been to provide the most current knowledge to the state's population through local programming channels. How effectively this knowledge is processed needs to be reevaluated continually, and the techniques for processing and delivery improved.

It is important to examine the county extension office as a basic unit in the process of diffusion of innovation. This basic unit, however, in its extension role, consists of people who are essentially considered change agents, not adopters, within the local communities. The purposes of the study, then, are (1) to determine if, in fact, change agents in the county offices (directors, home economists, or 4-H agents) fit the adopter categories defined by Rogers and Shoemaker; and (2) to determine if their communication behaviors are similar to those described by Rogers and Shoemaker as being common to the adopter categories.

Specifically, the study is addressed to three questions:

1. Is it possible to identify adopter categories within Cooperative Extension Service county offices based on the time of adoption of three

innovations that have been available to all county extension offices?

2. If it is possible to identify the adopter categories in #1, is it also possible to classify the Cooperative Extension Service county teams as units into the same adopter categories?
3. Can selected communication behaviors which have been described by Everett Rogers and others in diffusion research as being characteristic of earlier adopters be identified in those in the earlier adopter categories in this study?

Importance

Little emphasis has been placed on examining receptivity of extension personnel to various communication channels as they relate to diffusion of innovations. Rogers could retrieve for the researcher only four somewhat related studies from over 2500 documents in his Diffusion Center at the University of Michigan. Given the typical flow of information from the university to the county, it is important for Michigan State University to select those media channels that have the greatest impact on county extension personnel. Further knowledge pertaining to the selection of information and the communication channels to be used is especially important for those who promote innovative programming within the Cooperative Extension Service. Russell (1972)

found that CES field staff want more effective communication with university change agents as the communication relates to innovations.

Specifically, the importance of the present study lies in its intended functions, which are:

1. To identify the communication channels most often responded to by individuals and groups. With this knowledge, both the rate and extent of adoption by county personnel might be increased. Identification and reporting of these communication channels might also serve as a framework within which the content related to new ideas and/or innovations can be developed.

2. To identify adopter categories pertaining to like groups within the unit teams (county directors, home economists, and 4-H agents). This knowledge, together with that acquired in #1, can be used to develop appropriate strategies that are effective for the different groups.

3. If it is possible to classify county teams (each as a unit) into adopter categories, unique strategies for presenting innovations to each unit can be developed to further the diffusion process.

By maximizing the effectiveness and efficiency of the innovation procedure as it is channeled to and through the extension units, it is possible that a more effective and efficient diffusion process might be developed to increase receptivity in the communities served.

Generalizability

In theory, the findings from the study may not be generalized beyond the population that was part of the study. However, in practice, there is little reason to believe that the people included in this study are different on any relevant variables from those in other county cooperative extension units in the state. It seems reasonable to assume that the findings will apply to a large proportion of the other county extension directors, home economists, and 4-H agents within Michigan. Similarly, it is felt that the findings of the present study may be applicable to other states having networks of professional change agents operating away from central university diffusion units.

Delimitations

The study was confined to an analysis of five communication behaviors as related to adopter categories within the Michigan Cooperative Extension Service. In addition, the study was confined to the northern region of Michigan's Lower Peninsula. This region geographically included 28 counties, in which there were 26 county offices with 25 county Cooperative Extension Service directors, 13 home economists, and 7 4-H agents.

Definition of Terms

The following terms are defined in the context in which they are used in the present study. Unless otherwise

noted, the definitions were taken from Rogers and Shoemaker (1971).

Adopter categories

Innovator--The first 2.5 percent of a group to adopt an innovation.

Early Adopter) Including the innovators, com-
)--prise the first 50 percent of
Early Majority) the group to adopt the innovation

Late Majority) Comprise the last 50 percent of
)-- the group and includes those
Laggards) who have not adopted

Adoption--A decision to make full use of a new idea as the best course of action.

Innovation--An idea, practice, or object perceived as new by an individual. It is not necessary that the idea be new as measured by the lapse of time since its first use or discovery. If the idea seems new to the individual, it is an innovation. Innovations may have two components: an idea component and an object component.

Change agent--A professional who influences innovation decisions in a direction deemed desirable by a change agency. In most cases he seeks to secure adoption of new ideas, but he may also attempt to slow the diffusion and prevent the adoption of certain innovations. The change agent often fills the following roles: (1) develops a need for change in his clients, (2) establishes a change relationship with them, (3) diagnoses their problems, (4) creates intent to change in his clients, (5) translates this intent into

action, (6) stabilizes change and prevents discontinuances, and (7) achieves a terminal relationship with his clients.

Mass media communication channels--All those means of transmitting messages that involve a mass medium such as radio, television, film, newspapers, magazines--anything that enables a source of one or a few individuals to reach an audience of many. Mass media can reach a large audience rapidly, create knowledge and spread information, and lead to changes in weakly held attitudes.

Impersonal communication channels--Those channels that do not involve a face-to-face or voice exchange between two or more individuals. These are one-way communication channels.

Information seekers--Those who are eager to try new ideas, which leads them out of their local circle of peers to gain information; communication patterns and friendships are with innovators; they have financial resources to "seek out" information sources. Since others rely on them for knowledge, information seekers have a felt need to be informed.

Adoption Levels--The following levels of adoption were delineated for purposes of the study:

Level 1--No action on the part of the person in relation to adopting the innovation

Level 2--Awareness that the innovation is available

Level 3--Information sought regarding the innovation

Level 4--Action taken to implement the innovation

Communication--The process by which messages are transmitted from a source to a receiver; the transfer of ideas from a source with a viewpoint of modifying the behavior of receivers.

Diffusion--A special type of communication concerned with the spread of messages that are new ideas. The main elements of diffusion are the innovation, which is communicated through certain channels over time among the members of a social system. It is the element of time that distinguishes diffusion from other types of communication.

Communication channel--The means by which the message gets from the source to the receiver.

Innovativeness--The degree to which an individual is relatively earlier in adopting new ideas than other members of his social system. It is a "relative" dimension, in that one has more or less of it than others in a social system. Innovativeness is a continuous variable, and partitioning it into discrete categories is only a conceptual device, much like dividing the continuum of social status into upper, middle, and lower classes.

A more detailed description of the three innovations used in the study is found in Chapter II, but for purposes of introduction a brief description of them follows.

Innovation I--The Comprehensive Employee Training Act (CETA). The CETA is a federally funded program administered by primary units (city, county, etc.) for the purpose of lowering unemployment. Applications to establish positions are made by groups, agencies, or offices to the primary unit and funds are allocated according to criteria meeting the federal regulations. Cooperative extension directors have been encouraged to review their programming needs and to request new positions when appropriate.

Innovation II--Program Board. The Program Board represents a broad clientele; its advisory function lies in the area of program development, program support, and public relations. The concept for this board evolved in 1971. A few counties in the Upper Peninsula adopted it, and in the spring of 1973 the administration of the Michigan State University Cooperative Extension Service encouraged other extension directors to establish a program board for their counties. At the administration retreat in August, 1974, the responsibility for promoting program boards was given to the newly formed regional teams.

Innovation III--Hot Meal Program for the Elderly. The Hot Meal Program for the Elderly is federally funded, managed by the state, and implemented in local communities in a variety of ways. Local groups interested in establishing the program have sought advice and assistance from such sources as the Cooperative Extension Service. County

extension home economists, directors, and 4-H leaders were involved in a variety of ways with the planning, development, and implementing phases of the program.

Overview of the Study

Described in Chapter I were the purposes, importance, limits, and objectives of the study. Included were definitions of terms used in the dissertation.

A combined review of the literature in the fields of diffusion, innovations, and communication as related to change agents--their adoption practices and their communication behaviors--is contained in Chapter II.

Chapter III is a descriptive account of the innovations/practices that were used in this study, the methods and procedures that served as a basis for determining adopter categories and communication behaviors, and data collection and analysis procedures.

The findings and interpretation of the findings are reported in Chapter IV. Chapter V contains a summary, conclusions, implications, and suggestions for further research.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to present and discuss the literature relevant to both the change agent as an adopter of innovations and communications channels as they relate to the adoption of innovations by the change agent. Because of the very limited amount of recorded research on the change agent as an adopter of innovations, some discussion on systems and/or groups in the adoption process is also included.

Diffusion Research

Most of the early published work in diffusion was in the field of agriculture, and focused on the farmer adopting progressive farm practices or newly developed field crops. Included in the adoption process was the county extension agent. His role in the process was to disseminate the latest information from the area of research to the farmer. How effective he was depended on his sources of information, how important he thought it was to pass the information on to others, and in turn how they responded to the information they received. The literature that addresses diffusion research is now presented.

Since as early as 1943, when a pioneer study (Ryan and Gross, 1943) of the diffusion and adoption of hybrid corn was made, diffusion researchers have repeatedly observed that adoption occurs as "a process composed of learning, deciding and acting over a period of time" (Wilkening, 1953). Adoption results not from one single decision. Instead it is an evolutionary process, a continuing series of interrelated actions and mental decisions that proceed from initial knowledge of the innovation to its complete adoption.

Diffusion research conducted in the United States indicates that knowledge about new ideas and practices spreads through various communication channels. The choice of one communication channel over another varies with respect to "adopter categories." The five categories of adopters (innovator, early adopter, early majority, late majority, and laggard) defined by Rogers and Shoemaker (1971) resulted from Rogers' earlier conclusions that members of a social system do not adopt new ideas simultaneously. On the basis of relative time of adoption, the distribution of these adopters was seen as forming a normal bell-shaped curve.

Rogers' five different categories of adopters were found to use different information sources. Early diffusion research within the field of agriculture showed that innovators obtain their knowledge about new ideas and practices primarily from scientists, other innovators, and agricultural

bulletins. Early adopters make the most use of local change agents and farm magazines. Early majority adopters rely on farm magazines and on friends and neighbors. Late majority adopters and laggards depend mainly on personal sources such as family and other farmers for initial as well as validating information.

County Agent as Change Agent

With the present emphasis on diffusion of innovations in all disciplines, research in the area of county extension service has also been expanding. At the present time, however, there is still a very limited amount of documented research information to use as a basis of comparison in the present study, as discussed below.

Everett Rogers and Patricia Thomas, in their most recent Bibliography on the Diffusion of Innovations (April, 1975), included approximately 2700 listings of empirical diffusion studies and nonempirical diffusion publications. The researcher reviewed these studies with Rogers, who indicated that he knew of very little documented research focusing on adoption among professional change agents. He retrieved from the Diffusion Document Center at the University of Michigan one study that concerned the communication behavior of county cooperative extension agents and the role of that agent as an adopter of innovations (Rogers and Yost, 1960). The purpose of that study was to determine

(1) how communication takes place from scientists to county extension agents and (2) how county extension agents then pass these practices along to farm people in their counties.

An attempt was made in the Rogers and Yost study to apply the adoption process to county extension agents, rather than to farmers. It was expected that county extension agents would pass through a similar adoption process. "Adoption" by a county extension agent was defined as the action of recommending the practice to the farmer in his county (Rogers and Yost, p. 18).

The change agents (county extension agents) in the study required an "adoption period" of 2.07 years to pass through the adoption process from awareness to recommendation (Rogers and Yost, p. 25). Although the number of cases in the study was small, the awareness and recommendation curves over time approached the normal cumulative "S" curve.*

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*The "S" curve of learning, as described by Morgan (1956), occurs in instances in which there is learning that requires acquisition of new behavior. The learning can be plotted on a curve representing initial learning, an accumulated number of correct trials with a decreasing number of errors, and finally decreasing gains and stabilization of new behavior.

As stated by Havelock (1971, pp. 10-12): "For the individual receiver, the S-curve is commonly used to represent increasing involvement in behavior concerning the innovation, as the individual progresses from awareness through information seeking and trial to adoption or rejection. For the receiving group, the normal curve is used to describe adopter categories, from the innovators, who are the first to adopt through the early adopters and the early and late majority to the laggards. In terms of the sender, the normal curve has been used to depict the amount of time and involvement

On a frequency basis, the distribution was a bell-shaped normal curve (Rogers and Yost, p. 23). These findings are consistent with earlier conclusions regarding adoption rates of new farm ideas by farmers (Rogers, 1958, p. 24) and new drugs by medical doctors (Menzel and Katz, 1955). In both cases adoption behavior was found to approach normalcy when plotted over time. Other findings in the Rogers and Yost study suggested that lack of awareness of information does not retard the adoption of new farm practices. Rather it was the lack of a persuasion function that extended the time period before actual adoption occurred (Rogers and Yost, p. 28). Rogers and Yost stated that "if the desire is to speed up the process by which new practices are adopted, more attention should be directed to shortening the adoption period than to creating earlier awareness of new practices" (p. 29).

Use of Communication Channels by County Agents

A search into the literature that addresses communication channels and their effective use by county agents as part of the adoption process was undertaken by the researcher. Rogers and Yost's review of the literature at the time of their study (1960) disclosed no studies in which

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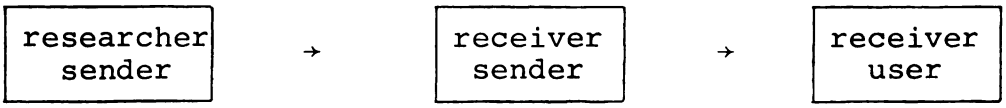
invested by a diffusion agent from the time he becomes aware of a potential innovation until the diffusion process is complete."

the communication behavior of county extension agents had been investigated (p. 3). In reviewing the most recent Bibliography on the Diffusion of Innovations (April, 1975), there were still no such studies listed.

In Rogers and Yost's study a two-step flow of communication" similar to one suggested by sociologists in other communication situations was used. The two-step flow of communication was originally proposed by Paul Lazersfeld and others (Lazersfeld, 1948, p. 151), and is made up of the sender and the receiver:



Use of Communication Within Organizations

Communication and its effects on those involved with organization has been studied in various ways, and certain basic assumptions are now supported by the research. Within the communication framework, however, there are still many gaps and every research endeavor results in recommendations for further, extended, or related research. Selected recommendations are included later in this chapter. A few specific comments regarding communication and its relevance to organizations follow.

In an early study by Barnard (1938, p. 9), communication was said to be pervasive throughout the organization

and affected formal and informal structures within the organization. Welton (1963, p. 46) stated that ". . . the most significant factor accounting for the total behavior of the organization is its communication system, and the dynamics of the organization can be best understood by understanding its system of communications."

Havelock (1969, p. 34) noted that communication among peers is important. This is especially observed among scientists, who have a special motivation to disseminate their own ideas in printed form to the relevant professional audience.

Amend (1971) commented,

> . . . Research on the communication behaviors of scientifically trained specialists in a research dissemination organization is a potentially fruitful area of investigation. Such a study in a real system, existing in its natural settings, could make a significant contribution to the literature. The way their dissemination is received, adopted, and redisseminated is a further extension of the communication process (p. 34).

Common to the literature, according to Amend, is "the assumption that human organization is centered around role designations, hierarchical statutes, and patterned interactions among the persons within organizations" (p. 8).

Mitchell (1970, p. 99) described communication within a university as a down-flow of messages following lines of authority, an up-flow of messages following the reporting system, and a cross-flow of messages untraceable on the formal organizational chart. Mitchell found that the

more important message flow went across organizational lines through what he called cooperative or influence routes.

Sussman (1969, p. 19) believed interpersonal relationships may be studied as systems of linkages bound by reciprocity. Linkage involves a system of exchanges of unequal value, with expectations of reciprocity and continuous bargaining by the individuals involved.

The linkage concept may be applied on the individual or group level, intra- or interorganizationally, according to Beal (1967, p. 23). He discovered an overlapping in the communicative membership of formal and informal leaders of the organizations he studied, and observed that such methods were used for transferring information from one organization to another.

Change Agent in the Communication Network

The change agent in the communication network influences the system/organization in a variety of ways. Although the primary function of the change agent is to provide a "communications link" between two or more social systems, one must consider that the agent might not be personally convinced, thus personally involved, with the innovative process as determined by the change agency. Without such personal conviction about the effectiveness of a proposed innovation, the change agent might instead be detached to such an extent as to be heterophyllous, that is, making

connections without providing the necessary communication flow vital to the diffusion process. Rogers stated, "The change agent is a professional who influences innovation decisions in a direction deemed desirable by a change agency. He is set off from his clients by nature of his professional status" (1971, p. 227).

Russell's study (1972) was directed toward increasing the understanding of the expectations and perceived communication between county and supervisory personnel in the Michigan Cooperative Extension Service. Emphasis in the study was on the linking roles of the change agent. In an extension agency the change agent is presented with a number of responsibilities. According to Kornhauser and Hagstrom (1962), the change agent role has traditionally involved two major functions: (1) interpreting and diffusing new technical information from the agency to the clients in an effort to improve some aspect of their life, and (2) developing and managing informal educational programs, or helping local personnel reach and involve others in educational programs. Emphasis is clearly on communication to the client system. However, there are links with other systems as well. Russell identified three links with which the change agent, to be effective, must maintain adequate linkage: the agency, the client system, and the agent's professional organization.

Russell (p. 11) found that agents generally do not feel cut off from their county agency and that any effort on the part of supervisors to increase communication may be interpreted as undesirable overload. The one major exception involved communication of new ideas (innovations). Two-thirds or more of both supervisors and county staff would encourage more communication about new ideas. Since the primary purpose of the agency is to introduce new ideas, Russell concluded that the generation, discussion, and sharing of new ideas seems to be one area in which increased supervisory communication would increase satisfaction and enhance performance. The study also revealed that discussion of new ideas by county agents and supervisors occurred less than once a month. Russell believed that, for an organization in which change is meant to be the primary focus, the failure to search for and discuss new ideas suggested an unfortunate level of complacency, or misdirected emphasis in professional interaction. He recommended that steps be taken to increase the searching for and sharing of new ideas.

In studies such as the one by Amend (1971, p. 8), the subject matter specialist is assessed in the linker-role between research and the client system. The county cooperative extension personnel were not identified as either linkers or clients in the researcher/linker/client triad.

Since the intent of research is to develop new methods, techniques, and products, the various levels of the linker system--from the area of research to the client--should be thoroughly analyzed to determine areas in which dissemination and adoption can be increased.

Havelock articulated the concept of "gate keeper," a term first introduced by Lewin (1952), which relates to formal leadership, but is used more typically in the area of planned change and diffusion. The "gate keeper" concept is a unique description of the linkage function; it notes the limited access routes, because innovations are channeled by means of the agent to the client-user system (Havelock, 1971, ch. 7, p. 11). Havelock stated further that "the gate keeper is one who stands guard over the entry points to the client system, but there is also a more active role of defender, one who champions the client against innovations" (ch. 7, p. 15). The high-ranking basic scientist is in a real sense the "gate keeper" to the world of science. According to Havelock (1971, ch. 7, p. 18). when we move from basic to applied research the implicit linkage assumption becomes inescapable. An applied researcher is someone with a dual orientation, looking toward "research" on the one hand and application on the other.

Stone's (1952) research indicated the most generalized kind of consumer-linker functions have been part of the Cooperative Extension Service county agent's role for many

years. Not only does the county agent provide information on specific agricultural practices, but he serves also as a youth worker, home economics expert and advisor, and organizer and coordinator of multitudinous community events.

Rogers, in his statement that "the change agent is a professional who influences innovation-decisions in a direction deemed desirable by a change agency," seemed to imply that the change agent is in agreement with decisions regarding the innovation from an upper level of administration. As found by Rogers and Yost (1960), the county agents' adoption of accepted farm practices to pass on to their constituents took an average of 2.07 years. Findings like these may indicate a decision to accept, delay, or reject administrative or research findings at various levels of the research/linker/client system discussed earlier.

Several studies in the field of communication related to diffusion of innovations, but only the one by Rogers and Yost directly focused on the change agent as the adopter of innovations. In the hierarchy of administration each level of change agents becomes a client recipient of new practices.

Most studies of adoption and diffusion have focused attention upon instances of "voluntary" adoption, e.g., studies of the adoption of hybrid corn and medical practices mentioned earlier. According to Havelock (1971, ch. 11, p. 10). several studies have also been made of change involving group adoption, e.g., studies of school systems adopting new

practices. In addition, several studies of adoption by means of protest groups have been made, e.g., studies of social movements, pressure groups, and the public opinion process. Generally ignored has been adoption induced by directives from authorities and adoption by coercion.

Couch and Bebermeyer (1964) found that adoption by directive, a major form of social change, has not received extensive attention by students of change. Adoption in these situations depends largely upon acceptance of the directives as legitimate by those who receive them (p. 12). Adoption by directive or coercion implies that there has been prior acceptance or adoption of an innovation through the optional process by those in authority or power positions (p. 13).

Concerning potential areas of study, Couch and Bebermeyer (1964) asked the following questions, which seem to be relevant to the present research: "Are county agents who make extensive use of mass media to acquire information of innovations more effective diffusion agents?" "What is the nature of the relevant communication networks to the diffusion of information?" and "Under what conditions will mass communication lead to adoption?"

Couch and Bebermeyer's (1964, p. 15) position was that communication contacts are the basic relationship among humans, that it is meaningless to discuss human organization or coordinated endeavors without explicitly giving attention

to the communication system, and furthermore, that social change is a form of interrelated human endeavor. The results of their study and general theoretical considerations (p. 5) indicated that any diffusive organization will be effective only to the degree that its personnel are meshed with a communication pattern that maintains close and meaningful communicative contact with both the source of ideas and the potential adopters.

White (1967) found that using a large volume of mass media does not necessarily lead to increased knowledge about one innovation. The specific media used and the type of material consumed should be considered when designing a communication program. White also found that interpersonal communication is important in spreading knowledge about innovations, particularly for adopters. There was a significant correlation between knowledge level and each of four measures of community participation for those who had adopted herbicides, and there was a lack of such a relationship for nonadopters. These findings suggested to White that adoption may be a function of interpersonal contact (p. 125).

A third implication of White's study was based on the finding that attitude toward an innovation is not necessarily related to knowledge about the innovation. A communication program designed to inform does not necessarily persuade, and vice-versa. Consequently, any communication

program should be designed to achieve the specific goal or goals desired.

Systems Effects and Innovations

Saxena's results (1968) documented the existence of systems effects of individual innovativeness and warrant further consideration of systems effects on building a more adequate theory. His study augured the beginning of research designs that consider simultaneously and systematically both individual and systems variables in predicting individual innovativeness (abstract, p. 4). In his implications for actions, Saxena stated that a change agency must pay attention to characteristics of both individuals and social systems when selecting prime targets of change. The agency could then decide what programs of change might best be introduced where, and for what types of individuals, to yield maximum returns with minimum input of resources. In doing so, a change agency can better decide where to emphasize agency contact, where the mass media facilities are most needed, or what types of individuals most deserve educational facilities.

Although most programs of change reach the more progressive members of a society, Saxena's study showed that these programs miss that part of the target population that has the greatest need for change. To ensure a continued, effective program of change, a change agency might do well

to separate systems (or subgroups within a system) that are balanced or imbalanced with respect to systemic and individual orientations toward change. In doing so, Saxena indicated that it is relatively facile for the change agency to decide (1) which systems need more attention, (2) which systems will change more over time, and (3) which specific inputs in their individual and system form will be required for each system (p. 100).

Havelock(1971) stated that some of the possible dynamics at work may be seen in a study of agricultural innovations by Brandner (1960), who observed that "the research strongly suggests that individuals in position to use previously adopted practices to evaluate subsequent innovations will adopt the subsequent innovations much more rapidly than individuals who use other evaluative processes" (ch. 4, p. 10). This concept was reiterated by Havelock, who stated that "past experience provides information about the alternatives under consideration and tends to provide greater weight to those alternatives which are similar to those which have been successful or which have shown the possibility of success" (ch. 4, p. 10).

Havelock noted (ch. 11, p. 10), as Rogers and others have shown in extensive literature reviews, that the same phenomena have been observed using a remarkable diversity of adopter "units" varying in size and complexity from the individual to the small group, to the industrial firm,

the school system, and even larger units. This remarkable consistency of major social interaction findings in widely different settings led Bhola to propose

> . . . a configurational theory of diffusion (1965) which permits comparative analysis of patterns of flow and relationships regardless of size and other differentiating characteristics of the specific adopting units studied. If the configuration is closely similar irrespective of time, circumstances, and unit size the significance of social interaction research findings is enormous because it signifies that generalizations from one set of findings in one setting can be applied, at least tentatively, to the analysis of other settings. Diffusion research in agriculture and technology can then be used at the very least to make shrewd guesses in medicine, social welfare and education (Havelock, ch. 11, p. 10).

According to Havelock (1971, ch. 11, p. 11), notable gaps in the literature include the translation, transformation, and adaptation of innovations that go on as they are diffusing through the system. Social interaction research can be cited (Havelock, ch. 11, p. 11) that bears on flow to the organization and adoption by the organization as a total unit, but little has been written about what happens to knowledge flow <u>within</u> the organization, even with respect to such elementary structural features as the formal organizational chart.

A search of the literature revealed an interesting variety of approaches to studying communication, diffusion of information, and adoption of innovations. Based on the findings and recommendations of others doing research in

the field, the present study evolved as one step toward fulfilling an indicated gap--namely, studying the change agent as an adopter of innovations. To this end the following chapters contain a description of such a study.

CHAPTER III

RESEARCH DESIGN

A field study was conducted to obtain information on the communication behaviors and the level of adoption of three innovations by selected cooperative extension county directors, home economists, and 4-H agents in Michigan.

The population for the study consisted of the 25 county extension directors, 13 home economists, and 7 4-H agents based in the 28 counties of the northern portion of Michigan's Lower Peninsula.

Specific information regarding three innovations that are described further in this chapter was used as subject content for the questionnaire. Communication behaviors were elicited in the response data, reflecting on cooperative extension management procedures and activities.

Included in Chapter III are descriptions of the innovations, information pertaining to development of the questionnaire, and discussion of the return of the questionnaires. Also an outline is included, which describes the information used for coding and developing the programs that were printed by the computer and later used as a guide for the researcher.

The Innovations

Innovation I--The Comprehensive Employment and Training Act (CETA)

The following description of CETA was taken from a memorandum to the Cooperative Extension Service staff from Collette Moser, Public Affairs Specialist:

> The Comprehensive Employment and Training Act (CETA) was enacted by Congress in late 1973 in an effort to decategorize and decentralize manpower programs. Its major thrust was to redirect the manpower program decision-making function from centralized federal sources to the hands of local elected officials. Nationally, CETA funding replaced federal programs of the Manpower Development and Training Act's institutional and on-the-job training, three Neighborhood Youth Corps programs, four separate Public Service Career programs, Operation Mainstream, Concentrated Employment Program, the Emergency Employment Act of 1971 (referred to as the Public Employment Program--PEP), and some developmental programs such as Operation Hitchhike. In a sense all these areas of need are still a concern of CETA. Title I of CETA is focused on the allocation of funds for job creation and comprehensive manpower services for the unemployed and underemployed (recruitment, education, training, work experience, etc.). Title II allocates funds to local areas for job creation through the mechanism of subsidized public employment.

There are two basic methods of administering Title I and II funds: (1) prime sponsorship, in which units of government are designated as prime sponsors by the U.S. Department of Labor to contract directly with the federal organization; and (2) balance-of-state administration, in which the state is the prime sponsor and funds pass through it to be allocated to local areas.

CETA funds had been available in many counties since mid-1974, but on January 17, 1975, the above-quoted memorandum

was sent from the Public Affairs Specialist at Michigan State University to the county extension directors, regional extension supervisors, and resource development leaders. The subject of the memo was the Title VI amendment to the Comprehensive Employment and Training Act, which would provide additional funding for nonprofessional positions. Until that time, the involvement of county cooperative extension agencies in the program had been limited. The sudden availability of additional funds, fewer restrictions compared to those contained in the previous version of the bill, and the assistance from the Cooperative Extension Service to interested local counties brought this program to the attention of every county cooperative extension office in Michigan.

County cooperative extension personnel who participated in the program had to follow local guidelines for applying for funding of positions, and these guidelines varied from county to county. People hired through this funding source were considered employees in the county cooperative extension offices, and generally were hired to supplement program endeavors in the already existing areas of resource development, home economics, and 4-H. Job descriptions and proposals for these positions had to be written, and requests submitted to the local administrative group, which often was comprised of the county commissioners. All personnel in the county cooperative extension office

might be involved at various stages in this process of securing personnel to be paid by CETA funds.

The university, through the public affairs specialist at Michigan State University and others, encouraged local counties to become involved in the CETA program to secure funding, even though such funding covered only a limited period of time.

Innovation II--Program Board

The rationale for a program board evolved primarily from what was considered a need to provide more effective and representative input regarding each of the county-based programs. By formulating a wider understanding of the Cooperative Extension Service programs, it was expected that substantial support and appreciation would result. The program board structure would not necessarily include, duplicate, or eliminate existing advisory groups that related to any particular subject area.

The program board was to be planned and developed by each county staff upon the initiative of the county extension director. The number of people involved and the type of representation was to be determined at the county level, keeping in mind that it should be representative of the clientele in the county as well as each program area. Such flexibility was intended to provide a more responsive and effective structure.

District discussion meetings on county extension program boards were conducted during the spring of 1972. Participating in the discussions were the appropriate district extension resource leaders, a representative from the Department of Resource Development at Michigan State University, and the appropriate field operation director. Before these meetings a packet of background information had been sent to each county director. Included were materials from various sources concerning programming in the Cooperative Extension Service, e.g., process of programming, other states' extension advisory efforts, and some purposes and principles. Also included was a form to be returned when the county had made its first step toward implementation of the program board.

Considerable effort was expended at that time from program leaders on the Michigan State University campus to promote the development of program boards in each county. With a change in the administrative structure in the Michigan Cooperative Extension Service in the summer of 1973, the responsibility for promoting program board development was given to the regional supervisors. There had been moderate to considerable resistance on the part of counties to establishing "another" board, and this innovation came more as a directive than an actual new practice to be evaluated and adopted.

Because the program board concept was general in nature and designed to assist the county extension service with increasing community involvement and support for its programs, the researcher selected the county 4-H agent, whose role is that of diverse programming, as the primary focus for the questionnaire pertaining to program boards. However, the director, who was responsible for establishing the board, and the home economist, who needed group support, were also involved with the program board innovation.

Innovation III--Hot Meal Program for the Elderly

The Hot Meal Program for the Elderly was selected as the third innovation for the study for several reasons, including: (1) It was a federally sponsored program and therefore was available to all communities; (2) the major emphasis of the program was nutrition, through which the home economist's role in the community could be evaluated; and (3) there were several ways in which the home economist, county director, or 4-H agent might be interested or involved in the program.

Title VII (Public Law 92-258) of the Older American Act of 1965, as amended, established the Nutrition Program for the Elderly. The statute, signed by President Nixon on March 22, 1972, authorized allotments on a proportional basis to the 50 states and to the District of Columbia, Puerto Rico, Guam, American Samoa, the Virgin Islands, and

the Trust Territory of the Pacific Islands. These allotments provided for up to 90 percent of the costs of establishing and operating nutrition projects that would furnish low-cost, nutritionally sound meals to people aged 60 and over, and their spouses, regardless of age.

The program was implemented in a variety of ways throughout Michigan. The county cooperative extension service was involved with the program primarily through the county home economists and their resources on the Michigan State University campus (e.g., group feeding specialist). The county directors were often involved in an advisory capacity, providing services and endorsing the home economist's involvement in the program. 4-H agents also had opportunities to be involved in a variety of ways, both through their groups and in a personal way.

At Michigan State University the Hot Meal Program for the Elderly received support through the services of the group feeding specialist, who advised many county home economists and other community people involved with setting up the facilities, planning the menus, and purchasing and serving the food.

Characteristics of the Population

The population consisted of three groups within the Cooperative Extension Service. Included were the 25 county extension directors, 13 county extension home economists,

and 7 county extension 4-H agents representing the northern 28 counties of Michigan's Lower Peninsula. For purposes of the study, it was important to view each person in his extension role from the perspective of adoption category and specific communication behaviors.

Personal characteristics, years of service with the Cooperative Extension Service, demographic information about the county, and general climate for innovativeness were not considered, although the researcher recognized that such factors can influence the adoption of innovations. The study was limited to assessing whether or not one could determine the adoption patterns of change agents in the three roles of director, home economist, and 4-H agent in the Cooperative Extension Service.

The Questionnaire

A separate questionnaire was developed regarding each of the three innovations. The basic format for each questionnaire was retained to facilitate the respondent's ability to focus primarily on the questions rather than procedural directions. Each question was designed with a checklist of possible answers; most questions included an open-ended "other" answer for specifying an option not included on the questionnaire.

Questionnaires for the three groups (directors, home economists, and 4-H agents) differed in only one

respect. For the home economists and 4-H agents, the county director was additionally listed, when relevant, as a possible contact one might choose. For ease of identification by the researcher, the director questionnaires were printed on green paper and the home economist and 4-H agent questionnaires were printed on yellow paper.

The questionnaires were designed to identify the adopter categories of each respondent, components of communication behaviors that the respondent recalled using, and the components of communication behaviors the respondent would prefer to use.

Adopter categories were identified in the following manner: No awareness of the innovation established a #1 adopter category. Awareness but no further information seeking or action established a #2 adopter category. Seeking further information, but doing nothing more, established adopter category #3. Indication of further involvement in at least one of the ways indicated on the questionnaire or giving an example of some other involved action established adopter category #4.

Within adopter categories three and four were subcategories to indicate the number of information-seeking behaviors and number of actions taken; this kind of information was used later to assist in determining the earlier adopters and degree of involvement in the innovative program.

From the 11 communication behavior generalizations described by Rogers and Shoemaker (1971, p. 189), five were selected for this study, to serve as a basis for developing questions regarding communication behavior:

1. Earlier adopters have more change agent contact
2. Earlier adopters use more mass media
3. Earlier adopters use more impersonal communication channels
4. Earlier adopters seek more information
5. Earlier adopters are more knowledgeable

The checklist indicating change agent contact and information-seeking channels did not consider the number of times a respondent might have contacted the same person, but instead offered only different classifications of change agents. Because the study was based on recall information, it was thought that the number of contacts a person made to a specific person regarding the specific innovations might not be easily recalled, whereas the variety of people contacted might be more accurately remembered. A copy of each of the questionnaires used may be found in Appendix C.

Pretesting the Questionnaires

The questionnaires were pretested in the following manner. The first draft of the questionnaire for each innovation was given to a county extension home economist who was not part of the sample, with instructions to: (1) complete the questionnaire, (2) write comments regarding the

ambiguity of any question, and (3) make suggestions for questions to be added or deleted. The home economist's written comments were then discussed with her, and several recommended changes were incorporated into a revised questionnaire.

The revised questionnaire was then pretested at two cooperative extension state regional conferences. Fifteen home economists, three directors, and one 4-H agent completed two questionnaires each. They were also asked to write comments as described above. The completed questionnaires were reviewed by the researcher for suggested alterations, and were then tabulated to determine if those answering the questionnaires had interpreted the questions as intended and if the answers given would be satisfactory for the study. The changes suggested were incorporated into the final version of the questionnaire.

Sending Out the Questionnaires

A personally addressed cover letter was used to introduce the request for completing the questionnaires. Endorsement of the study by the director of the Michigan Cooperative Extension Service was indicated in this letter, since the researcher believed it would establish additional credibility for the effort. On each letter the researcher hand wrote and signed a one-sentence appeal to return the questionnaire as quickly as possible.

The questionnaires were arranged in the packets so that the primary questionnaire for the position (director, home economist, 4-H agent) was the first one to be viewed by the respondent.

Information and instructions for completing the questionnaires were included on a separate page. Confidentiality of the information was emphasized. An addressed envelope for returning the questionnaire was included to facilitate their return. The packets were mailed to each person at his county-based office address.

Questionnaire Return Information

Twenty-five directors, 13 home economists, and 7 4-H agents were included in the study. Most, if not all, of the respondents had met the researcher and were familiar with the type of request being made. All respondents completed a questionnaire on each of the three innovations; thus a total of 135 questionnaires provided the data for the study. The questionnaires were completed between May 5, 1975, and June 6, 1975. Twenty-nine respondents returned their 87 questionnaires within three weeks. A phone call was then made to each of the 16 persons who had not responded. They were asked if they had received the questionnaires, and if they had any questions regarding them; the importance of receiving their responses was stressed, and an offer was made to send them another set of questionnaires. Additional

sets were sent to five persons. Ten days later a second follow-up phone call was made to the six persons who still had not responded. Four of the six indicated their questionnaires had been mailed, and two said theirs would be in the mail that day. One hundred percent of the questionnaires were returned by June 6, 1975.

Of the original 48 persons to whom the questionnaire was directed, one home economist had retired, and two 4-H agents were no longer working for the Cooperative Extension Service in that capacity. These three persons, therefore, were withdrawn from the study. During the course of the study, a home economist was transferred into the region and was added to the study.

Compilation and Coding

Data from the questionnaires were transferred to coding sheets and programs were determined for computer processing of the data. Questions programmed for the computer were related to adoption practices and communication behaviors of the respondents.

I. Adoption practice questions

A. Adopter categories

1. Could it be determined in what adopter categories the directors, home economists and 4-H agents, individually and collectively, fit for their specific innovations?

2. Could different degrees of adoptiveness be determined among directors, home economists, and 4-H agents regarding their specific innovations? (Is one "group" more adoptive?)

B. Time line for innovativeness

Could a time line be determined for Innovation I (CETA), Innovation II (Program Board) and Innovation III (Hot Meal Program)?

C. Placement on time line

Could placement of directors, home economists and 4-H agents on a time line be determined for their specific innovations?

D. Identification of innovators

Could it be determined from the time line placement which of the directors, home economists and 4-H agents were the earliest adopters within their groups?

II. Communication behavior questions

A. Change agent contact assessment

1. Is there a difference among the 2's, 3's, and 4's* of the directors, home economists and 4-H agents regarding their location at the time they received the information regarding their specific innovations?

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*Refers to adoption level attainment.

2. Is there a difference among the directors, home economists and 4-H agents regarding their location when they received the information for their specific innovations?
3. What difference was there, if any, between from whom 1's, 2's, 3's, and 4's directors, home economists and 4-H agents received information and from whom they prefer to receive information for their specific innovations?
4. What difference was there, if any, between from whom received and from whom preferred to receive information for the directors, home economists and 4-H agents for their specific innovations?
5. What difference, if any, in number of different contacts of the 1's, 2's, 3's, and 4's did directors, home economists and 4-H agents remember having in receiving information for their specific innovations?
6. What difference, if any, in number of different contacts did the directors, home economists and 4-H agents remember having in receiving information for their specific innovations?

B. Personal vs. impersonal and mass media assessment

1. Is there a difference among the 2's, 3's, and 4's of the directors, home economists and 4-H agents concerning personal vs. impersonal contacts for their specific innovations?
2. Is there a difference among the directors, home economists and 4-H agents concerning personal vs. impersonal contacts for their specific innovations?

C. Information-seeking assessment and adoption level 3 criteria

1. Is there a difference between the 3's and 4's of directors, home economists and 4-H agents concerning how many contacts they made regarding more information for their specific innovations?
2. Is there a difference among the directors, home economists and 4-H agents concerning how many contacts they made regarding more information for their specific innovations?

D. Knowledge assessment

1. Is there a difference among the 2's, 3's, and 4's of directors, home economists and 4-H agents concerning <u>how many</u> people contacted

them regarding more information for their specific innovations?

2. Is there a difference among the directors, home economists and 4-H agents concerning how many people contacted them regarding more information for their specific innovations?
3. Is there a difference among the 2's, 3's and 4's of directors, home economists and 4-H agents in the knowledge held of their specific innovations?
4. Is there a difference among the directors, home economists and 4-H agents in the knowledge held of their specific innovations?

E. Knowledge involvement assessment and adoption level 4 criteria

1. Is there a difference among the 4's of directors, home economists and 4-H agents concerning how many actions they took regarding their specific innovations?
2. Is there a difference among the directors, home economists and 4-H agents concerning how many actions they took regarding their specific innovations?

F. Attitude assessment

1. Is there a difference among the 2's, 3's and 4's of the directors, home economists and 4-H agents in their attitude toward continuing their specific innovations?
2. Is there a difference among the directors, home economists and 4-H agents in their attitude toward continuing their specific innovations?
3. Is there a difference in the attitudes of 2's, 3's and 4's of directors, home economists and 4-H agents toward Cooperative Extension's involvement in their specific innovations?
4. Is there a difference in the attitudes of directors, home economists and 4-H agents toward Cooperative Extension's involvement in their specific innovations?

Charts and tables were designed from the computer printouts to display the results in a meaningful way. These tabular presentations, along with a corresponding discussion, are presented in Chapter IV.

CHAPTER IV

FINDINGS

Data from the study are presented in this chapter. The rationale for using the selected innovations is presented first, followed by an account of how adopter categories were determined. A description of the data as it indicates communication behavior, including the tabulated responses and other relevant findings, completes the chapter.

Rationale for the Innovations Used

The questionnaire pertaining to Innovation I (CETA funds) was used primarily to assess the adoptive behavior and communication behaviors of the county extension directors. The emphasis of CETA is on funding for positions; hence the directors could use this opportunity to expand or generate programs from their office. Although the state Cooperative Extension Service encouraged local participation and offered assistance in a variety of ways, the directors were actually charged with pursuing the funding at the community level. Slightly over one year elapsed from the time these funds became available to May, 1975, when the data for the study were collected.

The questionnaire pertaining to Innovation II (Program Board) was directed primarily to the 4-H agents. With the varied programs for youth, young adults, and 4-H leaders, the researcher thought the 4-H agent would have the opportunity to view the usefulness of such a board in a broad perspective and to be significantly involved in its development. Special emphasis on the implementation of the Program Board had occurred over the past two years in the northern region.

The questionnaire pertaining to Innovation III (Hot Meal Program for the Elderly) was directed primarily to the home economists. With the nutritional emphasis of the program, the home economist in the county extension office could participate in a variety of ways with groups managing the program in the community. Approximately two years elapsed from the time these federal funds became available through the state to the time of the study.

Determining Adopter Categories

Four adopter categories were used to classify respondents. Placement in the categories was determined through answers the respondents gave on the questionnaire.

Adopter category 1 indicated the lowest adopter level and designated respondents who were not aware of the Cooperative Extension Service's involvement with a particular innovation. Adopter category 2 was assigned to respondents who indicated awareness of the innovation but who had

neither sought additional information nor been involved in implementing the innovation. Adopter category 3 designated the respondent who had sought additional information from one or more sources regarding the innovation, without becoming actively involved in its implementation. Adopter category 4 labeled those who had participated in one or more ways in the implementation of the innovation. For purposes of the study, those in adopter category 4 were considered to be "earlier adopters."

In assembling the communication behavior data by adopter category, it was discovered that adopter categories 1, 2, 3, and 4 had not all been assigned for each innovation. The following explanations of these results are suggested: (1) The instrument was not sufficiently selective to categorize the respondents; or (2) The innovations selected by the researcher for the study were inappropriate for eliciting that type of information.

Rogers stated (1971, p. 182) that to have a normal curve it is necessary to pool information from several innovations. Since this study was concerned with one innovation per group, it was expected that the distribution approximating a normal curve might not occur. County directors, 4-H agents, and home economists did answer questions regarding all three innovations, but findings and discussion in this study are for the innovation specified for each group.

Determining Time Lines

The time line was to have been used to identify degrees of innovativeness within the group and graphically display the distribution of people within the category. After determining adopter categories for each respondent, time lines were established based on responses indicating both the stated time of awareness and time of actual involvement with the innovation. Because of incomplete responses, it was impossible to develop the time lines in detail for category 4. Although incomplete, Figures 1, 2, and 3 in Appendix D include data that were available.

Determining Communication Behaviors

The ensuing discussion examines the response data using the following format. First, a specific definition by Rogers regarding communication behavior is stated, followed by a presentation of considerations elicited from Rogers' definition. Then the discussion is directed to the specific questionnaire items related to that definition. The data are then presented and related to Rogers' initial statement. Information pooled from the three groups (directors, home economists, and 4-H agents) into adopter categories, and related to each of the communication behaviors, is presented as an overview of the findings before reviewing the data for each group.

Discussion Related to Findings

Adopter Categories for Respondents

As discussed earlier, placement in adopter categories 1, 2, 3, and 4 was based on questionnaire answers designed to reflect awareness, information seeking, and specific actions related to the implementation of the innovations.

None of the respondents fell into adopter category 1 (no awareness of innovation); therefore that category is not included in the discussion nor reflected in the tables. The remaining adopter categories were filled as shown in Table 1.

As can be seen, a majority of the respondents were in adopter category 4, which meant that they were already involved in the implementation phase of their innovation. Across innovations the length of time was considerably less than the 2.07 years from awareness to adoption described in the Rogers and Yost study (1960).

With so few respondents in adopter categories 2 and 3, several of the planned comparisons were not feasible. However, to the extent possible the comparisons were made and are reported. The reader should keep in mind throughout the discussion that due to the non-normal distribution the results should be viewed only as trends.

Table 1.--Adopter categories by change agent groups. n=45

	Directors	Home Economists	4-H Agents	Total
Adopter Category 2 (Awareness only)	0	2	4	6
Adopter Category 3 (Awareness and information seeking	3	0	1	4
Adopter Category 4 (Awareness, information seeking, plus action)	22	11	2	35
Total	25	13	7	45

Adopter Categories for Teams

In counties where a director, a home economist, and a 4-H agent work from the same office, the three constituted a team for purposes of review in the study. As information was compiled it was found that only four counties had such a combination. With so limited a number of teams no generalizations are feasible. Adopter categories of team members within the teams are shown in Table 2, and distribution of team members by position held across adopter categories is shown in Table 3.

Table 2.--County teams with adopter categories of personnel comprising the team.

Team	Directors	Home Economists	4-H Agents
		Adopter Categories	
1	3	4	2
2	4	4	4
3	4	2	4
4	4	4	2

Table 3.--Team members according to adopter categories by position held.

	Adopter Categories			Total
	2	3	4	
Director	0	1	3	4
Home economist	1	0	3	4
4-H agent	2	0	2	4
Total	3	1	8	12

It was interesting, however, that:

1. The adopter category combinations within each of the four teams were different.
2. One of the three directors in adopter category 3 was on one of the teams and
3. One of the persons on his team was from adopter category 4 and one was from adopter category 2.
4. The two 4-H agents who were in adopter category 4 were on teams.
5. One of the two home economists in adopter category 2 was on a team.

Further discussion of these data is included in Chapter V.

Communication Behaviors for Respondents

Upon closer examination of the five communication behaviors, it was decided that since impersonal and mass

media communication behaviors examined the same basic channels of information flow, they would be combined for purposes of the discussion. The specific channels were newsletter, newspaper, professional journal, television and radio.

Communication Behavior 1

The first communication behavior to be presented, as defined by Rogers, is:

"Earlier adopters have more change agent contact."

In this study change agent contact was assessed in two ways. The first was to establish the location of the respondent at the time he learned of the innovation, and the second was to determine the source of the information. Location at the time of contact might reflect the mobility of the respondent, which in turn could relate to contacts with change agents. Two questions were suggested by Rogers' statement quoted above. The first question was, Is there a difference among the adopter categories for the pool of respondents or within the groups concerning their location when receiving the information for Innovation I? The questionnaire asked, "Where were you at the time? County office, regional meeting, annual conference, county commissioner meeting, other (please specify)." Following location the second question asked from whom the respondents learned about the innovation. In addition, it sought to determine if there was a difference among adopter categories concerning

actual source of the information and the preferred source of information regarding innovations of the type in this study.

Table 4.--Location when learning of innovations by adopter category.

		County Office	Regional Mtg.	Annual Conf.	County Comm.	Other	Did Not Answer
Adopter Category 2							
Director	0						
Home economist	2					1	1
4-H agent	4	2	2				
Total	6	2	2			1	1
Adopter Category 3							
Director	3	2		1			
Home economist	0						
4-H agent	1	1					
Total	4	3		1			
Adopter Category 4							
Director	22	14	6	1	1		
Home economist	11	10					1
4-H agent	2	1	1				
Total	35	25	7	1	1		1
Total in adopter categories	45	30	9	2	1	1	2

As may be noted in Table 4, there were six subjects in adopter category 2. When they learned of the innovation, two were in their county office, two were attending a regional meeting, one was in some other location, and one did not respond to the question.

Three of the four respondents in adopter category 3 indicated that they were in their county office when they heard of the innovation. The fourth person was at the annual conference.

Of the 35 subjects in adopter category 4, 25 were in their county office, 7 were attending a regional meeting, 1 an annual conference, and 1 a county commissioner's meeting; 1 did not reply.

A majority (30) of the respondents from all categories were located in their county offices when they learned of the innovation, with the remaining 15 persons indicating other locations as described. By adopter category, 33.5 percent of adopter category 2, 75 percent of adopter category 3, and 71 percent of adopter category 4 were in their county office. With such small numbers in adopter categories 2 and 3, the researcher was unable to analyze the data further by adopter category.

Within groups the data revealed that 16 of 25 directors, 4 of 7 4-H agents, and 10 of 13 home economists were at their offices when they learned of the innovation.

The other dimension of change agent contact was tabulated from information regarding sources of information. Respondents were requested to check as many actual and preferred sources as they believed necessary to answer the question accurately. Many checked more than one source, which accounts for the total being greater than the number of subjects in the study. Comparison of the remembered actual information source with the information source preferred is shown in Table 5.

By adopter category, the six respondents in adopter category 2 checked three different change agent categories as actual sources of information and five categories as preferred sources. Adopter category 2 was composed of two home economists and four 4-H agents; no directors were in this category. Two of the six respondents indicated the state director was an actual source of information, and one person checked him as a preferred source. Four chose their director as both actual and preferred source. One checked program leader as an actual and preferred source. Two checked regional supervisor and specialist as preferred sources, whereas two checked the "other" category as an actual source.

The four respondents in adopter category 3 checked four different categories as actual sources; they chose six categories as preferred sources. Although there were no home economists in adopter category 3, there were two

Table 5.--Actual and preferred sources of information by adopter category.

		Actual and Preferred Sources of Information													
		Director		Your Director		Program Leader		Regional Super.		Specialist		County Comm.		Other	
		A	P	A	P	A	P	A	P	A	P	A	P	A	P
Adopter Category 2															
Director	0														
Home economist	2										2				2
4-H agent	4	2	1	4	4	1	1		2						
Total	6	2	1	4	4	1	1		2		2				2
Adopter Category 3															
Director	3		2			1	1	1	2		1	1	1		
Home economist	0														
4-H agent	1		1	1	1										
Total	4		3	1	1	1	1	1	2		1	1	1		
Adopter Category 4															
Director	22	4	9				11	5	12	5	5	5	5	9	2
Home economist	11		1	1	2		5	1	2		3			10	4
4-H agent	2	1		1	1	1		2	1						
Total	35	5	10	2	3	1	16	8	15	5	8	5	5	19	6
Total		7	14	7	8	3	18	9	19	5	11	6	6	21	6

directors and one 4-H agent in that group. Of the four subjects in the category, three checked the C.E.S. director as a preferred source of information, although no one had actually received information pertaining to his innovation from that source. County director, program leader, and county commissioners were each checked once as actual and preferred sources of information. One checked regional supervisor as an actual source, and two checked him as a preferred source. One person checked specialist as a preferred source.

The 35 respondents in adopter category 4 checked seven different actual sources; the same seven sources were also chosen as preferred.

Twenty-two directors, 11 home economists, and 2 4-H agents were in adopter category 4. Of the 35, 5 checked the state director as an actual source of information and 10 checked him as a preferred source. One subject checked program leader as an actual source, and 16 checked him as a preferred source. Regional supervisor was chosen by 8 subjects as an actual source, and 15 checked him as a preferred source. Five respondents chose specialist as an actual source of information; 8 checked him as a preferred source. Finally, 19 received information from other sources, but only 6 checked "other" as a preference.

As can be seen from the totals in Table 5, respondents from all adopter categories indicated a desire for a broader range of contact with change agents. The actual and

preferred source total for the change agents were director 7-14; program leader 3-18; regional supervisor 9-19; specialist 5-11; and county commissioners 6-6. The total for "other," which was interpreted as not representing a change agent, were reversed; 21 had received information from other sources but only 6 expressed a preference for these other sources.

Within groups, the data indicated that of the three directors in adopter category 3, two had not received information but preferred to receive it from the state director. One preferred and had received information from the program leader. Two preferred but only one had received the information from regional supervisors. None of the directors in adopter category 3 received information from specialists, but one checked that category as a preference. One director preferred and had received the information from the county commissioners. None of the directors in adopter category 3 received or preferred to receive information from other sources.

Of the 22 directors in adopter category 4, the cross-tabulation indicated that whereas 4 received information from the state director, 9 checked that source as a preference. Although none received the information from program leaders, 11 checked that category as a preference. Five received information from their regional supervisors, but 12 indicated them as a preferred source. Five respondents received the

information from the specialists; five indicated this preference. Five received information from the county commissioners and five checked them as a preferred source. Nine of the directors had received information from other sources, and two checked them as a preference.

From the preceding data pertaining to Innovation I, several large discrepancies between actual and preferred sources of information were revealed.

Within the group of 4-H agents, the cross-tabulation of actual and preferred sources of information for Innovation II revealed that one of the four 4-H agents in adopter category 2 indicated a preference for and two had received information from the state director. Four checked their county directors as actual and preferred sources. One checked as actual and preferred source the program leader. Two in adopter category 2 also checked regional supervisor as a preferred source, although none had received the information from him.

The one person in adopter category 3 indicated the county director had been his source of information; he listed this source as a preference, and also checked the state director as a preferred source.

One of the two 4-H agents in adopter category 4 had received information from the state director, but did not check him as a preferred source. One listed county director as actual and preferred source. One checked program leader

as an actual but not a preferred source. Two checked regional supervisor as an actual source, and one chose him as a preferred source.

The results of the cross-tabulation of actual and preferred sources of information for Innovation III within the group of home economists revealed that the two home economists in adopter category 2 received their information from sources other than those listed, but preferred to receive it from specialists.

Of the 11 home economists in adopter category 4, 10 had learned of the innovation through sources other than those listed, with 4 indicating "other" as a preference. Most of the "other" sources were related to the Hot Meal Program but were not change agents from the university. Although no respondents received information from these sources, one checked state director, five checked program leader, and three checked specialist as preferred sources. One checked regional supervisor as an actual source, and two checked him as a preferred source. One checked county director as an actual source, whereas two checked him as a preference.

As with the directors, the home economists exhibited several discrepancies between actual and preferred sources of information. The data seemed to reflect their preference for receiving information on new innovations through more change agent contact than they had experienced relative to Innovation III.

In relation to Rogers' statement, "Earlier adopters have more change agent contact," the data indicated that there was little difference among adopter categories concerning their location at the time of learning of the innovation. Most respondents were in their county offices, which by typical definition would not constitute change agent environments. Change agent environments are usually defined as being away from the person's normal working environment. Nonetheless, it is evident that respondents received the majority of new information while in their offices. Early adopters used a wider range of sources of information regarding the innovations than did those in other adopter categories. Those in adopter categories 2 and 3 reported less change agent contact than those in adopter category 4. However, all respondents, regardless of adopter category, indicated a desire for additional and/or different change agent contact.

Communication Behaviors 2 and 3

The second and third communication behaviors defined by Rogers are examined together, as explained earlier in the chapter. They are:

"Earlier adopters use more impersonal channels."

"Earlier adopters use more mass media."

The question formulated from the first of these statements was: Is there a difference among adopter categories 2, 3, and 4 in regard to personal vs. impersonal channels of communication? The second statement elicited the following

consideration: Is there a difference among adopter categories 2, 3, and 4 in their use of mass media? The questions formulated on the questionnaire were: "How were you informed?" with a checklist under writing (memorandum, personal letter, newsletter, professional journal, newspaper) and another checklist under verbal (telephone call, personal visit, radio, television, taped presentation, film). The categories were rearranged by the researcher to gather information on personal channels of communication (memorandum, personal letter, telephone call, and personal visit), with all other choices making up the impersonal category. A second arrangement of categories provided information on mass media channels.

Table 6 shows a comparison of personal vs. impersonal/mass media communication channels.

Not one of the ten subjects in adopter categories 2 or 3 responded that he had heard about his designated innovation through impersonal/mass media channels. Eight of the 35 respondents in adopter category 4 had been informed through impersonal mass media channels--newsletter, newspaper, professional journal, or radio.

One might be tempted to conclude that in this case the eight subjects who had become informed through impersonal/mass media sources would be earlier adopters. They were in adopter category 4, which indicates they were involved in activities related to the innovation. The eight represented

23 percent of those in adopter category 4, and 19 percent of the total group. However, with the limited number in adopter categories 2 and 3, the data related thereto are reported without comment.

Table 6.--Personal vs. impersonal/mass media communication channels by adopter category.

		Personal			Impersonal			
		Memo	Phone Call	Pers. Visit	Newsletter	Newspaper	Prof. Jour.	Radio
Adopter Category 2								
Director	0							
Home economist	2		1					
4-H agent	4			3				
Total	6		1	3				
Adopter Category 3								
Director	3		1	1				
Home economist	0							
4-H agent	1	1		1				
Total	4	1	1	2				
Adopter Category 4								
Director	22	5	2	6	5		1	1
Home economist	11		5	4		1		
4-H agent	2							
Total	35	5	7	10	5	1	1	1
Total of all adopter categories		6	9	15	5	1	1	1

Within groups the data indicated that two of the three directors in adopter category 3 had had a personal contact through which they had been informed about the innovation, one by a telephone call and the other a personal visit. In adopter category 4, 13 of the 22 directors had had a personal contact, 5 through a memorandum, 2 by a telephone call, and 6 through a personal visit.

From an impersonal perspective, none of the three directors in adopter category 3 remembered having been informed that way. Seven of the 22 directors in adopter category 4 had been informed through impersonal sources; 5 checked newsletter, 1 professional journal, and 1 radio.

The responses from the seven 4-H agents were as follows: Three of the four 4-H agents in adopter category 2 had had a personal visit. The one 4-H agent in adopter category 3 checked memorandum and personal visit as sources of information, whereas the two 4-H agents in adopter category 4 checked nothing. None of the 4-H agents in categories 2, 3, and 4 checked responses in impersonal mass media channels.

The responses from the home economists indicated the following: 1 of the 2 in adopter category 2 had received a telephone call, and 9 of the 11 in adopter category 4 had had personal contact--5 by a telephone call and 4 through a personal visit.

Regarding impersonal channels of communication, one home economist in adopter category 4 had learned of the innovation through the newspaper. The remaining home economists in adopter categories 2 and 4 had learned about the innovation from sources other than those listed.

Regarding mass media as a source of information, it was noted that no one in adopter categories 2 and 3 checked this as a source, and in adopter category 4 neither of the 4-H agents listed it. Only 1 of the home economists and 7 of the 22 directors said they had learned of the innovation through mass media.

In relation to Rogers' statements, "Earlier adopters use more impersonal communication channels" and "Earlier adopters use more mass media," the data indicated that there was a difference between adopter categories. There was no indication of impersonal or mass media involvement in adopter categories 2 and 3, whereas there was 22 percent response in adopter category 4. However, because of the distribution of subjects and not knowing how much information was actually available through the above-mentioned mass media channels, the researcher is unable to draw conclusions.

Communication Behavior 4

The fourth communication behavior defined by Rogers is:

"Earlier adopters seek more information."

Information seeking was the criterion for attaining adopter category 3, and therefore no one below that adopter category level is reflected in the data.

The question formulated was: Is there a difference between adopter categories 3 and 4 in terms of how many contacts they made seeking more information about their innovation? The questionnaire asked: "Did you contact any of the following people regarding [innovation name]?" The checklist included the state director, county director (not included on questionnaire for directors), program leaders, regional supervisors, specialists, other county extension personnel in Michigan, other extension personnel in the United States, professionals in the field, county commissioners, and anyone else.

As with change agent contact, respondents were encouraged to check more than one source if indeed they had contacted more than one person. Quality and quantity of contacts with the same person are not reflected in the data, since this study was not concerned with the actual information received.

Table 7 records from whom information was sought and number of different sources from which information was sought.

The four subjects in adopter category 3 made four contacts, or an average of one per person. The 35 subjects in adopter category 4 indicated they had made 76 contacts--an average of 2.17 contacts per person. The number of

different contacts per person ranged from one to five for a particular innovation.

Table 7.--Information-seeking behavior by adopter category.

		Director	Your Director	Prog. Leader	Regional Sup.	Specialist	Ext. Michigan	County Comm.	Prof. Field	Other
Adopter Category 3										
Director	3		..	1	1			1	..	
Home economist	0									
4-H agent	1		1							
Total	4		1	1	1			1		
Adopter Category 4										
Director	22		..	2	7	7	10	18	..	7
Home economist	11		4	2		3	5	1	5	3
4-H agent	2		1		1					
Total	35		5	4	8	10	15	19	5	10
Total from both adopter categories			6	5	9	10	15	20	5	10

Within groups, the data revealed that of the three directors in adopter category 3, each made one contact seeking information. In the group of 22 directors in adopter category 4, six made one contact, seven made two contacts, six made

three contacts, two made four contacts, and one made five contacts.

The one 4-H agent in adopter category 3 made one contact, as did the two 4-H agents in adopter category 4.

There were no home economists in adopter category 3. Of the 11 in adopter category 4, 5 made 1 contact, 2 made 2 contacts, 3 made 3 contacts, and 1 made 5 contacts.

In relation to Rogers' statement, "Earlier adopters seek more information," the data indicated that there was a difference between adopter categories. Respondents in adopter category 4 recalled over twice as many (2.17 per person) information-seeking contacts as those in adopter category 3 (one per person).

It would appear that those in the study who were either more involved in the innovation or further along in the adoption process had been more assertive in seeking information regarding the innovation. However, with the distribution across adopter categories described earlier the data reported must be regarded only as a trend, which supports Rogers' generalizations.

Communication Behavior 5

The fifth and final communication behavior to be reviewed in this study was defined by Rogers as follows:

"Earlier adopters are more knowledgeable."

For purposes of the study, a person was considered knowledgeable if others in the extension network and/or

residents of one's community contacted him for information regarding the innovation. The assumption was made that the extension person had established a credible knowledge level on previous occasions if he received one or more inquiries regarding the present innovation. Again, the actual number of contacts was not recorded, since only the number of different contacts was requested.

The question formulated was: Is there a difference in the knowledge behavior among adopter categories 2, 3, and 4? The questionnaire asked the respondents: "Did any of the following people contact you regarding more information or your views regarding [innovation name] and its being available in your community?"

Identification and distribution of those who contacted the directors, 4-H agents, and home economists are found in Table 8.

Data reflected an average of .7 inquiries of the six subjects in adopter category 2, an average of 1.2 inquiries of the four subjects in adopter category 3, and an average of 1.7 contacts of the 35 subjects in adopter category 4.

Within groups, one of the three directors in adopter category 3 had been contacted once, one had been contacted three times, and one had received no requests for information. In adopter category 4, 6 of the 22 directors had been contacted once, 5 twice, 3 had been contacted 3 times, 2

directors 4 times, another 2 had been contacted 5 times, and 4 had received no requests.

Table 8.--Identification of knowledgeable persons by adopter category and those who sought information from them.

Knowledgeable Persons		Those Who Sought Information									
		Residents of Community	Potential App.	Ext. Per. in Office	Ext. Per. not in Office	Specialist	Reg. Super.	Prog. Leader	State Director	Anyone Else	Total
Adopter Category 2											
Director	0										
Home economist	2	1								2	
4-H agent	4			1							
Total contacts = .7		1		1						2	4
Adopter Category 3											
Director	3		1	1			2				
Home economist	0										
4-H agent	1						1				
Total contacts = 1.2			1	1			3				5
Adopter Category 4											
Director	22	4	4	7	5	3	11	4	3	2	
Home economist	11	4		1	2	1	1	1	1	3	
4-H agent	2			1							
Total contacts = 1.7		8	4	9	7	4	12	5	4	5	58
Total of all adoption categories		10	5	11	7	4	15	5	4	9	70

Of the seven 4-H agents, one each in adopter categories 2, 3, and 4 were contacted for more information; the remaining four received no such requests.

Of the two home economists in adopter category 2, one had been contacted once and one had been contacted twice. Four of the 11 home economists in adopter category 4 had been contacted once, one had been contacted twice, one had been contacted eight times, and five had had no contact of this nature.

Also included to assist in determining knowledge level were factual questions pertaining to some aspect of the innovations. Since the researcher asked different kinds of questions for each of the innovations, the data are not comparable.

It was not possible to assess the accuracy of answers given by the respondents to the factual questions (e.g., How many people are served through the Hot Meal Program?) If the question was answered by means of the checklist, it was assumed the respondent was answering correctly. However, for purposes of making comparisons among adopter categories and within groups, that set of data proved to be inadequate.

In relation to Rogers' statement, "Earlier adopters are more knowledgeable," the data indicated that there was a difference, though slight, between adopter categories. Respondents in adopter category 2 reported less than one request each from others (.7); those in adopter category 3 reported

slightly over one request each (1.2); and those in adopter category 4 reported slightly over one and one-half requests each (1.7). Most of the subjects in adopter categories 3 and 4 received at least twice as many requests for information as those in adopter category 2, which is consistent with Rogers' general statement.

The researcher was also interested in determining attitudes of the respondents toward the innovations. The data related to the respondents' personal attitudes toward the innovation and their attitudes toward the Cooperative Extension Service's involvement with the innovations are reported in Table 9.

Regarding personal attitudes toward the innovation assigned to their respective role, four of the six subjects in adopter category 2 favored it and two did not; two of the four people in adopter category 3 were positive, one was negative, and one was unsure. Of the 35 respondents in adopter category 4, 26 were positive, none were negative, and 8 were unsure.

The total groups' attitude toward the Cooperative Extension Service's involvement in the three specific innovations was a little less positive, although generally similar to the responses just indicated. In adopter category 2, three of the six favored Cooperative Extension Service involvement, whereas one did not and two were unsure. In adopter category 3, three of the four were positive and one

was negative. Twenty-two of the 35 respondents in adopter category 4 were positive, 2 were negative, and 11 were unsure.

Table 9.--Attitudes of respondents regarding their innovation and the Cooperative Extension Service's involvement with it.

		Personal Attitude			Attitude Toward CES Involvement		
		1	2	3	1	2	3
Adopter Category 2							
Director	0						
Home economist	2	2			1		1
4-H agent	4	2	2		2	1	1
Total	6	4	2		3	1	2
Adopter Category 3							
Director	3	1	1	1	2	1	
Home economist	0						
4-H agent	1	1			1		
Total	4	2	1	1	3	1	
Adopter Category 4							
Director	22	16		6	12	2	8
Home economist	11	9		2	8		3
4-H agent	2[a]	1			2		
Total	35	26		8	22	2	11
Total of all categories		32	3	9	28	4	13

[a]One 4-H agent did not respond.

Key: 1 = yes
2 = no
3 = don't know

Although there appeared to be a slight shift away from a supportive attitude toward the Cooperative Extension Service's involvement in the areas of programming, as implied by the three innovations, it appears that there was still strong support for the CES.

Within the groups, the responses to the attitude questions were as follows:

Directors were asked if, considering the unknown "long-term" status of the CETA funds, they felt it was worth the effort to seek such funds for staffing in their county office. One of the three directors in adopter category 3 responded yes, one replied no, and one was unsure. Of the 22 directors in adopter category 4, 16 responded yes and 6 were unsure.

The second question for directors focused on their attitude toward the Cooperative Extension Service being involved in extending their programming efforts through the specific innovation. Of the three directors in adopter category 3, two replied yes and one replied no. In adopter category 4, 12 of the 22 replied in the affirmative, 2 were negative, and 8 were unsure.

4-H agents also were asked about their plans to participate in Innovation II in the coming year. Two of the four in adopter category 2 replied positively and two negatively. The one 4-H agent in adopter category 3

replied positively, as did one of the two in adopter category 4. The second agent did not answer the question.

The 4-H agents were questioned about Cooperative Extension Service involvement in their innovation. In adopter category 2, the data revealed that two of the 4-H agents were positive, one was negative, and one was unsure. The one 4-H agent in adopter category 3 supported CES involvement, as did the two in adopter category 4.

The personal attitude question directed to home economists inquired about their possible participation in Innovation III during the coming year. From adopter category 2, both respondents answered that they intended to participate. In adopter category 4, 9 of the 11 expressed a positive response, whereas 2 did not know whether they would participate further.

Their second attitudinal question asked if the respondent thought involvement with Innovation III was an effective way for the Cooperative Extension Service to extend its programming efforts. One of the two home economists in adopter category 2 was positive; the other was unsure. Of the 11 home economists in adopter category 4, 8 were positive and 3 were uncertain.

The response data for attitude toward the innovation and toward the Cooperative Extension Service's involvement with it showed that: Adopter category 2 reflected a positive personal attitude of 66 percent with a positive

attitude toward CES involvement of 50 percent, leaving a minus 16 percent discrepancy. Adopter category 3 presented a positive personal attitude of 50 percent with a positive attitude toward CES involvement of 75 percent, giving a plus 25 percent discrepancy. Adopter category 4 responses were positive personal attitude of 74 percent with a positive attitude toward CES involvement of 62 percent, leaving a minus 12 percent. Both dimensions of the attitude question (personal and CES involvement) were 50 percent or more positive for all adopter categories. Adopter categories 2 and 4 reflected stronger positive personal attitudes whereas adopter category 3 reflected a stronger positive CES involvement attitude. Although small differences in attitude scores exist, their interpretation is unclear.

Thus far, the characteristics of the population have been described by relating the data from the 45 respondents to the 5 communication behaviors. This was done by first focusing on those in adopter categories and second by analyzing the data within the context of the separate groups--directors, 4-H agents, and home economists.

In summary, respondents were distributed across three of the four adopter categories. Because categories 2 and 3 had few persons and there was no one in adopter category 1, some of the comparisons planned were not possible. Several of the findings exhibited trends and may

be of interest to those in cooperative extension programming. The findings are discussed in the implications section of Chapter V.

CHAPTER V

DISCUSSION

In this study, selected communication behaviors and adoption practices defined and used by Rogers and Shoemaker (1971) were applied to the responses of a group of professional change agents consisting of county directors, home economists, and 4-H agents within the Michigan Cooperative Extension Service. In this concluding chapter the findings are summarized and discussed and their educational implications within the Cooperative Extension Service are presented.

It was expected that the professional change agents would have communication behaviors similar to those of the groups with whom they work, but to a higher degree and complexity. It was also expected that the degree of involvement in the specific communication behavior would correspond directly to the adopter category level of the person. In other words, the earlier the adopter, the greater the use of the five communication behaviors reviewed in the study.

Three questions were addressed in the study and tested by use of a field study involving a mailed questionnaire, which required a maximum of a two-year recall.

The three questions were:

1. Is it possible to identify adopter categories within Cooperative Extension Service county offices based on the time of adoption of three innovations that have been available to all county extension offices?
2. If it is possible to identify the adopter categories in #1, is it also possible to classify the Cooperative Extension Service county teams as units into the same adopter categories?
3. Can selected communication behaviors which have been described by Rogers and others in diffusion research as being characteristic of earlier adopters be identified in those in the earlier adopter categories in this study?

It was expected that a questionnaire that focused on a particular innovation for each of three groups would provide sufficient response data for determining adopter categories for all respondents and data related to communication behaviors.

Limitations of the Study

Data collected through the survey questionnaire were inadequate for constructing a time line because respondents were unable to recall specific dates (months) for several key pieces of information. The time line would

have been used to identify the innovators within the early adopter category, as used by others in the field of diffusion. As stated earlier, according to Rogers the innovators represent approximately the first 2.5 percent of those adopting an innovation. Because data for the study were based on recall, there is a possibility that a respondent might be unable to remember accurately when or with whom he communicated regarding each of the specific innovations. The subject may have listed the usual source of information and not the actual source. There may have been more or fewer persons involved than those checked. To the degree this is true, the data used would be inaccurate. Even if the number of different persons indicated was accurate, there is no reason to believe that quality or extent of information was greater because it came from several sources. However, with the several levels of professional change agents in the Cooperative Extension Service, one assumes the adoption process moves through the levels. Reinforcement of an innovation's value coming from several of these levels could be interpreted in a positive way by the county-level change agent.

Data from the three-member teams were inadequate to gain any insight into the strengths, weaknesses, or needs of such a unit at the county level of Cooperative Extension. Each of the four teams displayed a different profile of adopter categories. Possibly if the team

concept were examined by including all the existing three-person teams in the state, a clearer pattern would be present and information could be collected and analyzed.

Conclusions

Regarding the first question of identifying adopter categories within county extension offices--using only one innovation for each specific group (directors, home economists, 4-H agents), it was found that two of the three groups were actively participating in the innovations selected for study. As a result of the adoption information examined, it appeared that most of the directors (22 of 25) and home economists (11 of 13) in the study had a high-level adoption practice, and that the 4-H agents did not (2 of 7). However, the researcher does not wish to endorse that apparent finding. The choice of Innovation II (Program Board) from which to gather data regarding 4-H agents may not have offered the same level of general interest and major programming emphasis as an innovation directed more to young people. This is consistent with Rogers' statement concerning the desirability of looking across many innovations.

Innovations that hold high interest for a specific group (Hot Meal Program for the Elderly--home economists), or are a source of funds (CETA--directors) and have specific deadlines for participation may be adopted more readily than other innovations. Had a program with one or

more of those components been directed to the 4-H agents, greater participation might have been observed.

With such a large proportion of subjects in adopter category 4 and their inability to recall exactly when they had done certain activities, it was not possible to develop an accurate and complete time line for all subjects on: (1) time of awareness of the innovation and (2) adoption activities (Graphs 1, 2, and 3 in Appendix C). The recall period of the three innovations ranged from one to two years. It was not possible for many of the subjects to recall specific months within that span of time for: (1) the time when they first became aware of the innovation, (2) when they contacted other persons regarding it, or (3) when others contacted them regarding the innovation. Several possible factors worked against accuracy, even for those who did give specific dates. One of those factors involves recall being associated with other activities that happened about the same time and hence the possibility of confusion regarding dates, people, places, and times. If it had been possible to follow the questionnaire with a personal interview for purposes of clarification and expanding the data base, more specific information might have been collected. However, this is a limitation of historical data collection regardless of procedure used.

Because more specific data were needed with which to construct the time lines, it was not possible to make

a further determination of innovativeness within adopter category 4.

If it had been possible to construct a time line with data from all respondents, the following concepts would have been examined for each of the three groups (directors, home economists, and 4-H agents) and for the combined group: (1) the time span required for awareness of the innovations to take place, and then, superimposed on this, (2) the time span from time of awareness to the time of specific actions related to implementing the innovation. The respondents with the shortest over-all time span from awareness to specific actions would have been considered innovators, whom Rogers and Shoemaker (1971) defined as the first 2.5 percent of the individuals to adopt an innovation (p. 181).

With so many respondents in adopter category 4, it is uncertain whether that group's behavior reflects the actual adopter level of the professional change agents in the study or if the criteria for adopter category placement were not sufficiently selective.

If all groups had been evaluated on the three innovations, a broader span across adopter categories would have occurred. However, the 4-H agents still would have been assessed on the lower levels of innovativeness, and again it must be emphasized that a bias regarding degree of 4-H

agent innovativeness might have resulted from the researcher's choice of which innovation to study.

The second question addressed by the study was to determine if it was possible to classify county teams into adopter categories, as was done with individuals. Four county offices qualified as having three-person teams. Since there were only four teams and each displayed different profiles of adopter categories, it was concluded that there were inadequate data from which to determine adopter categories for teams.

The third question related to five selected communication behaviors previously identified in earlier adopters and their identification in the earlier adopters in this study.

The adopter categories and the communication channels were examined as they related to the five communication behaviors described by Rogers. By adopter category, the pool of respondents and each group (directors, home economists, and 4-H agents) were assessed concerning the degree of their involvement with the five communication behaviors.

In examining the five communication behaviors by adopter category, the researcher was handicapped by the small number of subjects in adopter categories 2 and 3. For example, a single response in adopter category 2 or 3

represented 20 to 50 percent of the subjects in that adopter category. Thus several of the planned comparisons were not feasible, as indicated earlier.

Specifically for communication behavior #1--"Earlier adopters have more change agent contact"--it was found that most respondents were in their county office when they learned of the innovation. The county office would not be considered a change agent environment for them. Most heard about the innovations from change agents, but, significantly, not necessarily from the ones of their choice. In many instances the preferred sources would serve to expand the number of contacts the person had with new information. Several of the home economists learned of their innovation through local sources, but indicated a source preference of change agents from the university.

The second and third communication behaviors were examined at the same time, since the communication channels were the same for both. The two were: "Earlier adopters use more impersonal communication channels" and "Earlier adopters use more mass media."

It was found that of the ten people in adopter categories 2 and 3, no one learned of the innovation through impersonal or mass media communication, whereas eight persons or 27.2 percent of those in adopter category 4 recalled learning of the innovation through those channels. Although this was not a majority, in any sense, it was evident that

impersonal/mass media involvement by those in adopter category 4 was higher than for those in adopter categories 2 and 3.

For communication behavior #4--"Earlier adopters seek more information"--the data revealed that information-seeking behavior increased with the higher adopter category. Because information seeking was a criterion for eligibility for adopter category 3, no one in a lower adopter category was included in this analysis. There was an average of one information-seeking behavior per person of those in adopter category 3, whereas in adopter category 4 there was an average of 2.17 information-seeking behaviors per person, with a range of 1-5 for the adopter category. Thus, those in the study who were in the implementation phase of the innovation exhibited over twice as much information-seeking behavior as those in adopter category 3.

The fifth and final communication behavior was: "Earlier adopters are more knowledgeable." To assess the knowledge of respondents, an attempt was made to determine if: (1) others thought the respondent was a knowledgeable person, and (2) if he was aware of basic information about the innovation being examined.

The data reflected that those in adopter category 2 received less than one request each for information,

whereas those in adopter categories 3 and 4 received nearly two requests per person.

Specific knowledge requested through the questionnaire about the innovations varied among the three innovations, and it was not possible to meaningfully compare the results among groups and adopter categories on that item.

Because of the limited number of subjects in adopter categories 2 and 3, the researcher has interpreted the data from the study as a trend in the direction of supporting the five communication behaviors identified in earlier adopters. Overall, those in adopter category 4 appeared to demonstrate or exhibit a higher level of activity within each communication behavior but an increased number of respondents in adopter categories 2 and 3 might have changed the findings.

Believing that attitude toward a practice or innovation does affect one's behavior as associated with accepting or working toward adopting a new idea or practice, the researcher was interested in assessing the respondents' personal attitudes toward the innovation and also their attitudes toward the Cooperative Extension Service's involvement with its implementation.

The respondents' personal attitudes toward the innovations were positive, as were their attitudes about the Cooperative Extension Service's involvement in

implementing each of the innovations. In adopter category 2, although there was an element of uncertainty concerning Cooperative Extension Service involvement, the respondents indicated a definite positive or negative personal attitude. In adopter category 3 the reverse was true, with an unsureness of personal attitude (25 percent) but a positive attitude (75 percent) toward Cooperative Extension Service involvement. In adopter category 4, 76 percent personally favored the innovation, no one was against it, and 24 percent were unsure. In adopter category 4, 62 percent supported Cooperative Extension Service involvement, 5 percent were against, and 31 percent were unsure.

Conclusions based on the data collected from professional change agents at the county level in the Michigan Cooperative Extension Service and analyzed for the present study were:

1. It was possible to identify varying levels of adopting behavior in a group of change agents through a mailed survey questionnaire that inquired into previous adoption practices. However, in the current study the distribution was not normal.

2. It was not possible to elicit from the same group adequate historical information to identify the first 2-1/2 percent to adopt an innovation (innovators) through the use of a mailed survey questionnaire which required up to 18 months of recall.

3. To determine adopter categories for teams it is necessary to have a greater number than four as was available in this study or a different procedure for classifying them.

4. Because of the small number of respondents in adopter categories 2 and 3 it was not possible to meaningfully compare adopter categories. Trends in one direction may seem to exist but any interpretation must be done in a cautious manner.

5. Earlier adopters in the professional change agent group used the communication behaviors in a similar manner to earlier adopters studied by Rogers and others.

6. Earlier adopters in the professional change agent groups had or wanted to have more change agent contact than did other categories of adopters.

7. Earlier adopters in the professional change agent groups were informed more frequently through impersonal/mass media communication channels than were the later adopters.

8. Earlier adopters in the professional change agent groups sought information regarding the innovations from a greater variety of sources than did other categories of adopters.

9. Earlier adopters in the professional change agent groups received inquiries across the innovations from a greater variety of sources than did other categories of adopters.

10. To determine if a normal curve distribution exists for identifying the five adopter categories of Innovator, Early Adopter, Early Majority, Late Majority, and Laggard on a scale of innovativeness, it is necessary to have a larger number of subjects than in this study, or data from several innovations, or a different method of collecting the specific time data.

Implications From the Study

Implications for Educational Programs Within the Cooperative Extension Service at Michigan State University

Although the sample of professional change agents in the study was limited, the data appear to support the idea that inservice educational programs designed to speed up adoption at all levels in the diffusion process would have an audience within the Cooperative Extension Service. Respondents indicated a desire for more contact with change agents; they are information seekers and are sought out by others giving them the impetus for acquiring more knowledge. (To shorten the time from the research level to the consumer level would increase the benefit of research at an earlier time and could contribute to a more progressive/innovative society.)

County directors, home economists, and 4-H agents were found to be at different stages in the adoption process within their groups. Each stage presents a different

set of needs for those in that category. These needs might be met in more effective ways through specific inservice educational approaches such as:

1. Workshops designed for those at different stages of the adoption process as specific innovations are monitored. These workshops would have the effect of an individual approach focusing on the specific needs of homogenous groups.

2. Workshops designed for those who, from past records, have adopted new practices relatively early. These people could then promote the practice among their peers.

3. Workshops designed for those who are known to have a high interest in a specific area. Such workshops might address the range of needs within all adopter categories in that specific area. Included could be: (1) the latest information on the topic (legislation, research, etc.), (2) tools for assessing the current status at the local/state/national level, (3) methods of designing programs from the assessment information, (4) specific strategies for implementing such programs, and (5) research techniques for evaluating them.

4. Workshops designed for those with different styles of learning. Workshop participants would be matched with diffusion methods which enhance their desire and/or ability to receive and use the information given.

Implications for Diffusion Research

1. The fact that respondents in the study used the five communication behaviors in a similar manner to those studied by Rogers and others tends to support existing research in the field of diffusion.

2. The normal distribution curve may or may not exist in groups of professional change agents. Although a high proportion of the subjects were in the early adopter category and the normal distribution curve did not exist, professional change agents should not be regarded as different from other homogeneous groups in terms of innovativeness without further study.

Implications for County Structure

The fact that each of the four teams had a different composition of members across adopter categories suggests that no one combination has been identified as offering a desired mix of adopter categories to carry out Cooperative Extension Service programming. There may well be advantages for each combination. The CES administration might also study the two-member professional change agent team since many counties have only a director/home economist or a director/4-H agent.

Implications for Future Research

1. A longitudinal study conducted concurrently to the innovation being introduced and implemented would alleviate the recall problem that occurred in the present study. The adopter categories and other data would probably be more accurate. However, other considerations for the researcher would include: the Hawthorne effect (Borg and Gall, 1974, pp. 105-106), having three innovations for the three professional change agent groups, gathering the data at frequent intervals, and a commitment of one to two years of time.

2. The respondents were very cooperative about quickly completing and returning the questionnaire. Russell (1972) also noted a great degree of cooperation by county extension personnel. With this type of response (100 percent), it is suggested that similar studies done in the other four regions of the Michigan Cooperative Extension Service would contribute a broad base of information to those responsible for overall program planning.

3. Professional change agents at other levels within the Cooperative Extension Service might also be surveyed to determine if they can be identified according to adopter categories and in what ways their communication behavior compares with those of agents at the county level.

4. An expansion of the present study to include at least three innovations for each respondent should serve to establish a normal curve from which the five categories of innovativeness could then be determined. Such a study might focus on (1) a larger sample of mixed groups or (2) one group at a time, such as all the county directors or home economists or 4-H agents in the state. By following the recommendation of Rogers and Shoemaker (1971, p. 182) to establish a composite innovativeness scale, the problem of incomplete adoption or nonadoption is eliminated and the five-fold classification is possible (Innovator, Early Adopter, Early Majority, Late Majority, and Laggard).

5. There is considerable potential value in examining in greater depth than was possible in the present study the effects of the team on diffusion of innovations. The present study was directed in part to three-member teams at the county level. Since there were so few teams in the geographical region of the study, one might consider examining all the three-member teams in the state. Also, with many counties having only the director and home economist as professional change agents, one might consider examining this two-member team to determine if a pattern evolves for adoption practices and/or communication behavior.

In recapitulation, the findings focused on the possibilities that professional change agents at the county level do exhibit adoption practices and communication behaviors similar to those reported in other research. The findings do indicate trends consistent with results of other diffusion studies. However, because of the limited number of subjects in the study, the lack of distribution across adopter categories, and the historical nature of the study, the findings and conclusions should be considered tentative and subject to further research.

APPENDICES

APPENDIX A

CHARACTERISTICS OF ADOPTER CATEGORIES

APPENDIX A

CHARACTERISTICS OF ADOPTER CATEGORIES
from Communication of Innovations
by Rogers and Shoemaker (1971)

Innovators: Venturesome

1. Have almost an obsession with venturesomeness
2. Are eager to try new ideas
3. Interest leads them out of a local circle of peers and into more cosmopolite social relationships
4. Have communication patterns and friendships among a clique of innovators even though geographical distance between them may be great
5. Have control of substantial financial resources
6. Are able to understand and apply complex technical knowledge
7. Desire the hazardous, the rash, the daring and the risky
8. Must be willing to accept an occasional setback when an idea proves unsuccessful

Early Adopters: Respectable

1. Are a more integrated part of the local social system than the innovators
2. Are localites
3. Have the greatest degree of opinion leadership
4. Are looked to by potential adopters for advice and information about the innovation

5. Are generally sought out by change agents to be a local missionary for speeding the diffusion process
6. Serve as role models for many other members of a social system
7. Are respected by their peers
8. Are the embodiment of successful and discrete use of new ideas.
9. Know they must continue to earn this esteem of their colleagues if their position in the social structure is to be maintained

Early Majority: Deliberate

1. Adopt new ideas just before the average member of a social system
2. Interact frequently with their peers
3. Seldom hold leadership positions
4. Are positioned between very early and relatively late to adopt, which makes them an important link in the diffusion process
5. May deliberate for some time before completely adopting a new idea
6. Take longer to make the "innovation decision"
7. Follow with deliberate willingness in adopting innovations

Late Majority: Skeptical

1. Adopt ideas just after the average member of a social system
2. Adopt innovations from an economic necessity and the answer to increasing social pressures
3. Approach innovations with a skeptical and cautious air
4. Wait for system norms to definitely favor the innovation before they are convinced
5. Can be persuaded of the utility of new ideas, but the pressure of peers is necessary to motivate adoption

Laggards: Traditional

1. Are the last to adopt
2. Possess almost no opinion leadership
3. Are most localite in their outlook
4. Many are near isolates
5. Point of reference is the past
6. Decisions are usually made in terms of what has been done in previous generations
7. Interact primarily with others who have traditional values
8. By the time they adopt an innovation, it may already have been superseded by another more recent idea which the innovators are using
9. Tend to be suspicious of innovations, innovators and change agents

10. Have traditional direction, which slows the innovation-decision process to a crawl
11. Adoption lags far behind knowledge of the idea
12. Alienation from a too-fast-moving world is apparent in much of their outlook
13. Are looking back, while most are looking ahead

APPENDIX B

COMMUNICATION BEHAVIOR GENERALIZATIONS

APPENDIX B

COMMUNICATION BEHAVIOR GENERALIZATIONS from Communication of Innovations by Rogers and Shoemaker (1971)

1. Earlier adopters have more social participation than later adopters
2. Earlier adopters are more highly integrated with the social system than later adopters
3. Earlier adopters are more cosmopolite than later adopters
*4. Earlier adopters have more change agent contact than later adopters
*5. Earlier adopters have greater exposure to mass media communication channels than later adopters
*6. Earlier adopters have greater exposure to impersonal communication channels than later adopters
*7. Earlier adopters seek information about innovations more than later adopters
*8. Earlier adopters have greater knowledge of innovations than later adopters
9. Earlier adopters have a higher degree of opinion leadership than later adopters
10. Earlier adopters are more likely to belong to systems with modern rather than traditional norms than are later adopters

*Communication behaviors selected by this researcher for use in this study.

11. Earlier adopters are more likely to belong to well integrated systems than are later adopters

Communication Behaviors Selected by Researcher for Use in This Study

1. Earlier adopters have more change agent contact than later adopters

   Questionnaire Questions #3, 5, 6, 7, 8 relate to this communication behavior

2. Earlier adopters have greater exposure to mass media communication channels than later adopters

   Questionnaire Questions #4-7 relate to this communication behavior

3. Earlier adopters have greater exposure to impersonal communication channels than later adopters

   Questionnaire Questions #4-7 relate to this communication behavior

4. Earlier adopters seek information about innovations more than later adopters

   Questionnaire Questions #6, 7, 8 relate to this communication behavior

5. Earlier adopters have greater knowledge of innovations than later adopters

   Questionnaire Questions #9-13 relate to this communication behavior

APPENDIX C

QUESTIONNAIRES

APPENDIX C

C.E.T.A. FUNDS
Comprehensive Employment and Training Act

_____ _____
Your name County

1. Has it been possible for your county to participate in the C.E.T.A. program?

_____yes _____no _____don't know

2. Are you aware that the university has been encouraging counties to seek D.E.T.A. funded positions? _____yes _____no

3. If yes, when do you recall first hearing about C.E.T.A. funds?

_____ mo. _____ yr.

4. Where were you at the time?

_____ Your county office
_____ Regional meeting for directors
_____ Annual conference
_____ County commissioners meeting
_____ Other (please specify)

5. How were you informed about C.E.T.A. funds?

a. _____ In writing
_____ Memo
_____ Personal letter
_____ Newsletter
_____ Professional journal
_____ Other (please specify)

b. _____ Verbally
_____ Phone call
_____ Personal visit
_____ Through radio announcements
_____ Through television announcements
_____ A taped presentation
_____ Through a film
_____ Other (Please specify)

6. From whom did you receive the information about C.E.T.A. funds? (You may check more than one.)

_____ The director
_____ Program leader
_____ Regional supervisor
_____ Specialists
_____ County commissioners
_____ Other (please specify)

7. From whom would you prefer to receive information regarding this type of practice/idea/innovation? (You may check more than one.)

_____ The director
_____ Program leader
_____ Regional Supervisor
_____ Specialists
_____ County commissioners
_____ Other (please specify)

8. How do you prefer to receive information regarding new practices/ideas such as C.E.T.A. funds? (You may check more than one.)

a. _____ In writing from
_____ The director
_____ Program leader
_____ Regional supervisor
_____ Specialists
_____ County commissioners or other appropriate local agencies
_____ Other (please specify)

b. Interpersonal contact with
_____ The director
_____ Program leaders
_____ Regional supervisors
_____ Specialists
_____ County commissioners or other appropriate local agencies
_____ Other (please specify)

9. Did you contact any of the following people regarding C.E.T.A. funds or its uses? Please indicate approximate date if at all possible. (You may check more than one.)

_____ mo.	_____ yr.	_____ The director
_____ mo.	_____ yr.	_____ Program leaders
_____ mo.	_____ yr.	_____ Regional supervisors
_____ mo.	_____ yr.	_____ Specialists
_____ mo.	_____ yr.	_____ Other county extension director in Michigan
_____ mo.	_____ yr.	_____ Other extension directors in U.S.A.
_____ mo.	_____ yr.	_____ County commissioners
_____ mo.	_____ yr.	_____ Anyone else (please specify)

10. Did any of the following people contact you regarding more information or your views regarding the C.E.T.A. funds and its being available for cooperative extension use? (You may check more than one.)

_____ Residents of your community
_____ Potential applicants
_____ Extension personnel in your county office
_____ Extension personnel not in your office
_____ Specialists
_____ Regional supervisors
_____ Program leaders
_____ The director
_____ Anyone else (please specify)

11. Did you take any of the following actions? Please indicate approximate date if at all possible. (You may check more than one.)

_____ mo. _____ yr. _____ Wrote or had someone write a proposal to submit to the county commissioners for C.E.T.A. funded position
_____ mo. _____ yr. _____ Submitted proposal to county commissioners
_____ mo. _____ yr. _____ Submitted a second proposal if first one was not accepted

12. Do you intend to apply for these funds next year if they are available?

_____ yes _____ no _____ don't know

13. Regarding C.E.T.A. funding--

a. Does your county/county commissioners have specific guidelines for you to follow in submitting requests for positions?

_____ yes _____ no _____ don't know

b. Considering the unknown "long-term" status of these funds, is it worth the effort (in your opinion) for you to seek them for staffing in your office?

_____ yes _____ no _____ don't know

c. Do you believe this is an effective way for cooperative extension to extend their programming efforts?

_____ yes _____ no _____ don't know

PROGRAM BOARD

YOUR NAME _____ COUNTY _____

1. Are you aware that the university has been encouraging counties to establish Program Boards? ____ yes ____ no

2. If yes, when do you recall first hearing about them? If not sure, please answer with approximate date.

_____ mo. ____ yr.

3. Where were you at the time?

____ Your county office
____ Regional meeting
____ Annual conference
____ Other (please specify)

4. How were you informed about Program Boards?

a. ____ In writing
____ Memo
____ Personal letter
____ Newsletter
____ Professional journal
____ Other (please specify)

b. ____ Verbally
____ Phone call
____ By personal visit
____ Radio
____ Taped presentation
____ Other (please specify)

5. From whom did you receive the information about Program Boards? (You may check more than one.)

____ The director
____ Your county director
____ Program leader
____ Regional supervisor
____ Specialist
____ Other (please specify)

6. From whom would you prefer to receive information regarding the use of Program Boards? (You may check more than one.)

____ The director
____ Your county director
____ Program leader
____ Regional supervisor
____ Specialist
____ Professional groups/organizations
____ Other (please specify)

7. How do you prefer to receive information regarding new practices/ideas such as Program Boards? (You may check more than one.)

a. ____ In writing from
____ The director
____ Your county director
____ Program leaders
____ Regional supervisors
____ Specialists
____ Professional organization newsletters/magazines/journals
____ Other (please specify)

b. ____ Interpersonal contact with
____ The director
____ Your county director
____ Program leaders
____ Regional supervisors
____ Specialists
____ Other (please specify)

8. Did you contact any of the following people regarding Program Boards (their uses, advantages, disadvantages)? Please indicate approximate date if at all possible. (You may check more than one.)

_____ mo.	____ yr.	____ The director
_____ mo.	____ yr.	____ Your county director
_____ mo.	____ yr.	____ Program leaders
_____ mo.	____ yr.	____ Regional supervisors
_____ mo.	____ yr.	____ Specialists
_____ mo.	____ yr.	____ Other extension personnel in Michigan
_____ mo.	____ yr.	____ Other extension personnel in U.S.A.
_____ mo.	____ yr.	____ Anyone else (please specify)

9. Did any of the following people contact you regarding more information or your views regarding the Program Board and its being implemented? (You may check more than one.)

____ Other extension personnel in your office
____ Other extension personnel in your profession/speciality
____ Specialists
____ Regional supervisors
____ Program leaders
____ The director
____ Other (please specify)

10. Did you take any of the following actions? Please indicate approximate date if at all possible. (You may check more than one.)

_____ mo. ____ yr. ____ Submitted in writing to your county director pros and cons of having a Program Board
_____ mo. ____ yr. ____ Served on a local committee to consider having a Program Board
_____ mo. ____ yr. ____ Submitted a list of potential members of such a board to your county director
_____ mo. ____ yr. ____ Other (please specify)

11. If your county has a Program Board, are you presently working with it?
____ yes ____ no

12. Do you plan to expand your present functioning with the Program Board?
____ yes ____ no

13. Regarding Program Boards--

a. Do you believe the Program Board would serve a different purpose from the advisory groups which are attached to 4-H, Family Living, etc.?

____ yes ____ no ____ don't know

b. Do you believe its function would be primarily in the area of gaining financial support for local programming?

____ yes ____ no ____ don't know

HOT MEAL PROGRAM FOR THE ELDERLY

_____ _____
YOUR NAME COUNTY

1. Has it been possible for your county to participate in the hot meal program for the elderly?

   ____ yes ____ no ____ don't know

2. Are you aware that there is federal legislation relating to this program and its implementation?

   ____ yes ____ no

3. If yes, when do you recall first hearing about it? (If not sure, please answer with approximate date.)

   _____ mo. ____ yr.

4. Where were you at the time?

   ____ Your county office
   ____ Regional meeting
   ____ Annual conference
   ____ County commissioners meeting
   ____ County office staff meeting
   ____ Other (please specify)

5. How were you informed about the hot meal program for the elderly?

   a. ____ In writing
      ____ Memo
      ____ Personal letter
      ____ Newsletter
      ____ Professional journal
      ____ Newspaper
      ____ Other (please specify)

   b. ____ Verbally
      ____ Phone call
      ____ By personal visit
      ____ Radio
      ____ Television
      ____ Taped presentation
      ____ Film
      ____ Other (please specify)

6. From whom did you receive the information about the hot meal program for the elderly? (You may check more than one.)

____ The director (Gordon Guyer)
____ Your county director
____ Program leader
____ Regional supervisor
____ Specialist
____ County commissioners
____ Other (please specify)

7. From whom would you prefer to receive information regarding this type of information? (You may check more than one.)

____ The director (Gordon Guyer)
____ Your county director
____ Program leader
____ Regional supervisors
____ Specialists
____ County commissioners
____ Other (please specify)

8. How do you prefer to receive information regarding new practices/ideas such as the hot meal program for the elderly? (You may check more than one.)

a. ____ In writing from
____ The director (Gordon Guyer)
____ Your county director
____ Program leaders
____ Regional supervisors
____ Specialists
____ County commissioners or other appropriate local agencies
____ Professional organizations
____ Other (please specify)

b. ____ Interpersonal contact with
____ The director (Gordon Guyer)
____ Your county director
____ Program leaders
____ Regional supervisors
____ Specialists
____ County commissioners or other appropriate local agencies
____ Professionals in the related field
____ Other (please specify)

9. Did you contact any of the following people regarding the hot meal program for the elderly? Please indicate approximate date if al all possible. (You may check more than one.)

_____ mo.	____ yr.	____ The director (Gordon Guyer)
_____ mo.	____ yr.	____ Your county director
_____ mo.	____ yr.	____ Program leaders
_____ mo.	____ yr.	____ Regional supervisors
_____ mo.	____ yr.	____ Specialists
_____ mo.	____ yr.	____ Other county extension personnel in Michigan
_____ mo.	____ yr.	____ Other extension personnel in the U.S.A.
_____ mo.	____ yr.	____ County commissioners
_____ mo.	____ yr.	____ Professionals in that field
_____ mo.	____ yr.	____ Anyone else (please specify)

10. Did any of the following people contact you regarding more information on your views regarding the hot meal program for the elderly and its being available for your county? (You may check more than one.)

____ Residents of your community
____ Other extension personnel in your office
____ Extension personnel not in your office
____ Specialists
____ Regional supervisors
____ Program leaders
____ The director (Gordon Guyer)
____ Anyone else (please specify)

11. If there is a hot meal program for the elderly in your county, have you been involved with it? ____ yes ____ no

12. If yes, how have you been involved?

____ Arranged with county officials to be a part of it
____ Submitted proposal to some group or agency to participate
____ Assisted another group in an advisory capacity
____ Worked with the people putting on the program

13. Do you intend to continue your participation next year if the program is continued?

____ yes ____ no ____ don't know

14. Regarding the hot meal program for the elderly--

a. How many older people participate in this program in your county? (Please circle)

0-24, 25-49, 50-74, 75-99, 100-above

b. How many centers are in operation in your county? (Please circle)

0, 1, 2, 3, 4, 5, more than 5

c. Do you believe this is an effective way for cooperative extension to extend their programming efforts?

____ yes ____ no ____ don't know

Thank you for taking the time to
honestly answer this questionnaire.

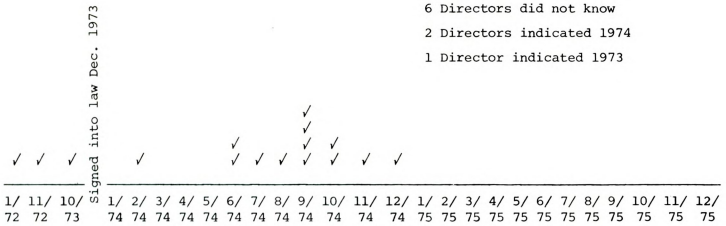
Gloria N. Bouterse
Health Specialist
Cooperative Extension Service

APPENDIX D

TIME LINES

APPENDIX D

TIME LINES



CETA Funds--Directors

1 4-H agent indicated 1974
2 4-H agents indicated 1973

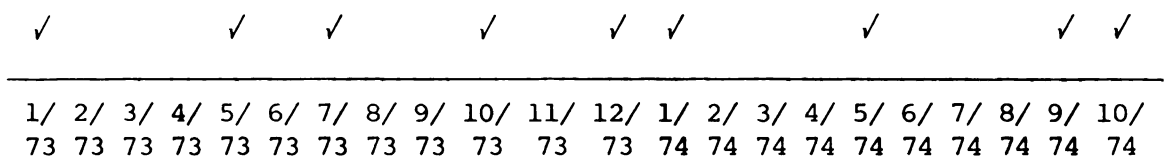
✓								✓				✓					✓						
5/ 72	1/ 73	2/ 73	3/ 73	4/ 73	5/ 73	6/ 73	7/ 73	8/ 73	9/ 73	10/ 73	11/ 73	12/ 73	1/ 74	2/ 74	3/ 74	4/ 74	5/ 74	6/ 74	7/ 74	8/ 74	9/ 74	10/ 74	11/ 74	12/ 74	1/ 75

Program Board--4-H Agents

March 22, 1972
Signed by President Ford

2 listed "1973"

2 did not know



Hot Meal Program for Elderly--Home Economists

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