

INTRA-PERSONAL VARIABLES AND CHARACTERISTICS OF INTERACTIONS BETWEEN
CHANGE AGENT AND CLIENT: THEIR PREDICTIVE RELATIONSHIP TO ATTITUDES
TOWARD CHANGE AND TOWARD THE CHANGE AGENT

by

Norma K. Clark

Dissertation submitted to the Graduate Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Educational Research and Evaluation

APPROVED:

M. Lichtman, Chairperson

P. W. Carlton

M. Enderlein

J. Fortune

D. Hicks

November, 1977
Blacksburg, Virginia

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	v
CHAPTER I: INTRODUCTION	1
Research Questions	6
Definition of Terms	7
Limitations of the Study	8
CHAPTER II: RELATED LITERATURE	10
Characteristics of Potential Adopters	13
Characteristics of Diffusion Strategies	20
CHAPTER III: METHODOLOGY	25
Subjects	25
Procedure	27
Instruments	30
Data Analyses	39
CHAPTER IV: RESULTS	41
Question 1	41
Question 2	52
CHAPTER V: DISCUSSION	59
APPENDIX A: Initial Program Invitational Letter	69
APPENDIX B: Q1: Confidential Survey of Selected Personnel from Secondary Level Educational Programs for the Hearing Impaired	71
APPENDIX C: Follow-up Cover Letter	83
APPENDIX D: Q2: Confidential Survey of Selected Personnel from Secondary Level Educational Programs for the Hearing Impaired: Follow-up Questionnaire	85
APPENDIX E: Contact Report Form	95
APPENDIX F: Regression Summary Tables	98

REFERENCES

105

VITA

119

ACKNOWLEDGEMENTS

The author expresses her deepest appreciation to all the members of her Committee and the many other individuals who provided assistance, encouragement, and support throughout the project.

Special thanks to:

Dr. Marilyn Lichtman, Advisor and Chairperson of the Dissertation Committee for her unfailing support, understanding, and direction throughout the graduate program;

Dr. Doin Hicks, and for the administrative and financial support provided for the conduct of the study;

for her invaluable editorial work and personal encouragement during frustrating, discouraging moments; and,

for her sustaining support and confidence which made the completion of this project possible.

The research reported here was partially sponsored by the Model Secondary School for the Deaf which is authorized and funded by the United States Department of Health, Education, and Welfare, through Public Law 89-694. Contractors undertaking such sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily reflect official Department of Health, Education, and Welfare position or policy.

LIST OF TABLES

Table		Page
1	Demographic Characteristics of Q1 Respondents	28
2	Summary of A Priori Variable Assignment to Intra-Personal Subsystems	43
3	Intercorrelations of Subsystem Factor Scores and Criterion Measures for Respondents to Q1 Based on Screening Sample (N = 297)	44
4	Summary of Regression Analyses with Subsystem Factor Scores as Predictors for the Screening Sample (N = 297)	45
5	Comparison of R and R ² Estimates on Screening and Calibration Samples	47
6	Comparison of the Multiple Correlation (R) and R ² Estimates Obtained for Intra-Personal Subsystem Variables with Attitude Toward Change and Attitudw Toward the Change Agent	49
7	Correlations Between Individually Reported Contact Variables and Residualized Attitude Toward Change and Attitude Toward the Change Agent Scores for the Screening Sample (N = 209)	53
8	Correlations Between Program Contact Variable and Residualized Attitude Toward Change and Attitude Toward the Change Agent Scores for the Screening Sample (N = 209)	54
9	Summary of Regression Analyses with Contact Variables as Predictors for the Screening Sample (N = 209)	56
10	Comparison of R and R ² Estimates on Screening and Calibration Samples	58
F1	Summary of Regression Analyses with Demographic Subsystem Variables (N = 624)	98
F2	Summary of Regression Analyses with Cognitive Variables (N = 624)	99
F3	Summary of Regression Analyses with Affective Subsystem Variables	100

F4	Summary of Regression Analyses with Motivational/ Subsystem Variables	101
F5	Summary of Regression Analyses with Life-Cycle Subsystem Variables	102
F6	Summary of Regression Analyses with Situational Subsystem Variables	103

CHAPTER I
INTRODUCTION

Educational research has been soundly criticized for its lack of impact on educational programs and practices (Blackman, 1972). One solution strategy which has been proposed by many (e.g. Miles, 1966; Bayan, 1968; Havelock, 1969b; Blackman, 1972; Taylor, 1974) is to establish better linkage between research and dissemination. The traditional means of communicating research findings has been the publication of a technical report in a journal read primarily by other researchers (Havelock, 1969); attendant to this tradition is the failure to translate research and development findings into practice (Schmuck, 1968).

The effective use of research and development products has become a high priority objective in American education (Leary, 1972; Taylor, 1974). The National Institute of Education (NIE) at one time established at least three branches which have as a primary focus the diffusion of knowledge from R&D projects (NIE, 1975). Projections suggest that educational research personnel will be increasingly involved in roles of diffusion of knowledge (Miles, 1966; NIE, 1975).

During 1976 a group of state level educators from seven states studied the problems related to dissemination of educational products, practices, and information. This project, the Interstate Project on Dissemination (IPOD), found as a major obstacle to both their study and the actual conduct of dissemination the ambiguity in the definition of "dissemination." Much of the confusion which the IPOD experienced with the term "dissemination" may be due to the different purposes of the major

educational change models, which are closely associated with the concepts and processes of dissemination. Some models address the problem of educational change at a macro level; others focus on dissemination and diffusion as processes which contribute to change. Some authors differentiate between dissemination and diffusion; however, within the context of this report these terms may be considered synonymous unless otherwise noted. The terms "innovation diffusion process" and "change process" are also treated as synonymous.

To facilitate effective diffusion a more extensive knowledge of the change process is required. Guba (1974) clearly outlines the dilemma facing individuals responsible for diffusion. In this attempt to recommend a diffusion mechanism for a new Center on Vocational and Technical Education, he points to the problem of making sense of what is conglomerate of models, tactics, strategies, products, and audiences which interact in unknown ways.

It is true that important dynamics of the change process have not been empirically determined, yet some aspects of the process have been studied. Rogers and Shoemaker (1971), Carlson (1965), Wolf (1972), and others report research findings which characterize diffusion as a process consisting of major stages. Depending upon the theoretical perspective of the writer, the number of stages varies, though the basic nature of the stages is consistent and seems to be valid. Paisley (1973), in a synthesis of the literature, identifies three phases which are inherent to the successful adoption of innovation: (1) the knowledge or awareness phase; (2) the attitude or persuasion phase; and (3) the behavior or adoption phase (Paisley, 1973). According to Paisley, the outcome of

each of these phases influences subsequent phases and is influenced by a variety of factors, among which are the characteristics of the potential adopter.

Substantial research has been conducted to study the characteristics of "innovators" and early adopters of innovations (Rogers and Shoemaker, 1971). A vast series of individual characteristics has been found to be related to innovative and/or adoption behavior. It is from this body of findings that Paisley condenses the array of variables salient to the change process into six categories, or "intra-personal subsystems," which have major influence over the outcome of the various innovation diffusion phases. The subsystems which she isolates are: (1) demographic characteristics; (2) cognitive characteristics; (3) affective characteristics; (4) motivational characteristics; (5) life-cycle characteristics; and (6) situational (i.e., organizational) characteristics. According to Paisley's model these six intra-personal subsystems theoretically create lines of resistance to the innovation diffusion phases. The lines of resistance which are created are crossed and modified by the potential adopter's either passive or active interaction with innovation diffusion efforts. To the extent that such interaction produces a change which leads to reduction in the strength of resistance, the probability of the success of a particular diffusion phase is increased. Successful diffusion of a particular innovation is not meant to imply that potential adopters necessarily decide to adopt, but rather that they make overt, informed, and maximally rational decisions based on the merits of the innovation relative to existing resources and other relevant forces (Interstate Project on Dissemination, 1976).

Paisley's conceptualization of the effects of intra-personal characteristics on the diffusion process is unique in that it synthesizes numerous discrete findings which have a broad base of empirical support (e.g., Rogers and Shoemaker, 1971; Havelock, 1969), though most of the research derives from areas other than education. Previous research on the innovation diffusion process has been largely univariate in the investigation of characteristics of innovation adopters; the Paisley model provides the framework for a multivariate approach to studying profiles of the audience of change efforts.

Ronald G. Havelock, another theoretician in the area of diffusion of innovation, knowledge utilization, and dissemination, has suggested that attitudes toward change may have significant impact on the success of any diffusion effort:

Attitudes of receivers toward any new knowledge strongly affect their adoption behavior. To succeed in diffusing a new product or practice where resistant attitudes pre-exist, it may often be necessary to diffuse a new attitude toward the innovation prior to the actual innovation diffusion effort; the diffusion of new attitudes and sometimes even new values may be the first step in any sort of technological advance.

The largest potential positive result from attitude change might come about from the successful diffusion not of new attitudes about specific problems, but new orientations and new values concerning knowledge and innovations in general. (Havelock, 1969a, p. 8.30, sic)

While numerous studies have been conducted which investigate the relationship of a variety of variables to attitudes, there have been few, if any, which have investigated factors within the dissemination and diffusion effort itself that might be associated with attitudes toward change. As Havelock suggests, modification of general attitudes toward change, in addition to attitudes toward specific stimuli, may be important products of such efforts.

In a similar analysis, Schmuck (1968) suggests that the most significant barrier to knowledge utilization, and therefore adoption of change, is the low value which educators place on the products of research and development, and their low regard for the producers of such products. Wolf (1975) asserts that the positive or negative prior states of a targeted audience are significant factors in the effectiveness of diffusion strategies. One of the purposes of studies reported here was to examine intra-personal characteristics within each of Paisley's six subsystems as they might relate to attitudes toward change in general and toward a specific stimulus, the change agent. An individual or agency with the mission of diffusing innovations or for promoting change is referred to in the literature as a change agent. The change agent's role is to provide linkage between research and development and practice. It seems likely, based on Schmuck's analysis, that a potential adopter's attitude toward the change agent, in addition to general attitudes toward change, contributes to the receptiveness to innovations.

As noted, the Paisley schema suggests that a potential adopter's resistance to change is modified as a result of interaction with innovation diffusion strategies. Paisley does not address the characteristics of

the interaction between potential adopters and the diffusion effort which might be influential in reducing resistance to change. The model Paisley proposes appears somewhat incomplete because some characteristics of the interaction process may be more influential than others in effecting changes in resistance to the diffusion process. It appears beneficial to attempt in this study to identify relevant characteristics of such interactions. The second purpose of the study reported here was to attempt to identify characteristics of interactions between potential adopters and diffusion efforts of the change agent with affect behaviors during the attitude phase of the change process.

Research Questions

Two general purposes based on untested implications of Paisley's model of the innovation diffusion guided the study reported here. The first purpose was to examine the relative contribution of Paisley's six intra-personal subsystems to the prediction of attitudes toward change and toward the change agent. The second purpose was to examine the effects of various diffusion strategies. These two purposes translate to the following research questions:

1. What are the relative contributions of the six intra-personal subsystems (i.e., demographic, cognitive, affective, motivational, life-cycle and situational) of potential adopters in accounting for attitudes toward change and toward the change agent?
2. What characteristics of interactions between potential adopters and the change agent are associated with modifications of attitudes toward change and toward the change agent?

Definition of Terms

One of the significant problems faced by students of the educational change process is the confusing, sometimes ambiguous terminology encountered in the literature. The following definitions will hopefully clarify the meaning of relevant terms as they are used in this report.

Change Process refers to the sequence of events leading to installation of new methods, materials or processes. Change Process and Innovation Diffusion are synonymous within the context of this study.

Dissemination and Diffusion are employed synonymously in this study to mean a two-way sharing process for (a) communicating needs, problems, solutions and information and (b) facilitating rational consideration and appropriate utilization of the outcomes of research and development, efficient practice, and other knowledge that can be used for improvement of the discipline.

Change Agent refers to any person, group or agency who has an explicitly identified role of facilitating change and innovation. Within the context of the research questions investigated here, change agent refers to personnel of the Model Secondary School for the Deaf.

Potential Adopters refers to the targeted audience of change efforts; the individuals who are involved in adoption and implementation of innovations.

Diffusion Strategy is any activity conducted for the purpose of facilitating the innovation diffusion process and is usually carried out under the direction of a change agent.

Intra-Personal Subsystems refers to six hypothetical categories of characteristics of potential adopters which influence their reactions to

change and innovation. Within the context of this study, the six subsystems are operationalized as follows:

Demographic Subsystem includes age, sex, hearing status, job title, and location;

Cognitive Subsystem includes level of education attainment and educational emphasis;

Affective Subsystem includes attitudes change and toward the change agent plus indices of job satisfaction and alienation;

Motivational Subsystem includes job motivation and four indices of involvement in professional activities; zation of the organization;

Life-cycle Subsystem includes indices of the locus and stability of the individual in a career cycle as indicated by number of years in present position, number of years in present organization, anticipated time in current position, anticipated time in the organization, anticipated time in profession.

Limitations of the Study

Several methodological and pragmatic constraints are inherent in the study reported here. The limitations created by these constraints should be noted so that findings can be appropriately interpreted.

An underlying assumption of this study is that variables selected within each intra-personal subsystem represent relevant characteristics of the subsystem. A limitation related to this assumption is that findings regarding relationships among intra-personal subsystems and the criterion indices of attitudes toward change and toward the change agent cannot be generalized to subsets of characteristics other than those selected for

this study. Independent, veridical replication with additional characteristics or alternative indices of the same characteristics will be necessary before generalizations can be justified.

Programs participating in the study reported here were necessarily limited to the field of education of the hearing impaired adolescent; therefore, findings should not be generalized beyond this special area. While there is no apparent reason to believe that the dynamics of the change process in education of the hearing impaired differs from that of other areas in education, neither is there evidence to suggest that findings can be validly generalized beyond the sample studied.

The interactions between potential adopters and the change agent occurred as an ongoing aspect of the diffusion mission of the change agency involved in this study. The number and scope of strategy characteristics could not be manipulated; therefore, findings relative to strategy characteristics cannot be generalized beyond those which occurred during the course of this particular investigation. It should also be noted that this study focuses on the attitude formation aspects of the innovation diffusion process and findings may not be generalizable to other phases of the process.

CHAPTER II

RELATED LITERATURE

The study reported here focuses on two major sets of variables as they relate to the educational change process; (1) characteristics of potential adopters and (2) characteristics of diffusion strategies. In this chapter an attempt will be made to summarize findings from previous research on these two components of the change process. Preliminary to review of related research, general commentary on the educational change literature will be provided. It is hoped that the introductory commentary will point out the rather diffuse, unsystematic manner in which study of the educational change process has been approached.

Nearly everyone engaged in the education profession is in some way concerned with the process of educational change. School and district administrators are concerned with promoting improved quality of educational programming; teachers are concerned with improved strategies of classroom teaching.

As a result of this pervasive concern with educational change, the literature contains an overwhelming abundance of citations which in some way address the problem. Research clearinghouses contain numerous reports outlining experiences with the implementation of particular changes in specific educational settings (e.g., Katz et al., 1962; Gross, Giacquinta and Bernstein, 1971; Morton, 1975; Schumacher, 1972; Turnbull, Thom and Hutchings, 1974; Widmer, 1975; Pellegrin, 1975). Reports of this type range from descriptions of macro changes in curriculum format, to technological changes such as the use of computer assisted instruction, to

process changes such as implementation of interdisciplinary team teaching. The outcome in terms of applicable information about the educational change process is generally limited to the advice and conclusions of participants in projects based on their anecdotal experiences.

In addition to the large body of case study types of literature, there exists an abundance of literature consisting of one individual's or one group's opinion of the problems or processes of educational change. The validity of the opinion expressed in this aspect of the literature is difficult to judge. Some authors tend to base their observations on analysis of research from education and other fields; others appear not to employ any identifiable empirical observations as the bases for their opinions.

Research on the educational change process has been neither substantive or systematic. Havelock (1972) points out that while several reviews of the research literature have been conducted, "it is fair to say that this is one of the youngest and least researched fields in education." Sieber (1967) likewise expressed concern over the state of knowledge: "The paucity of research in the field of education diffusion and innovation renders anything we might say on the subject highly speculative. It is true that a large literature on diffusion exists in scientific and technical fields, such as agriculture, medicine, the behavioral sciences and industry. But the findings of these fields have limited application to education. . . ."

A number of extensive reviews of the literature on social change and diffusion of innovation have already been conducted. Rogers and Shoemaker (1971) synthesized over 1500 research studies from the disciplines

of sociology, education, economics, engineering, marketing, psychology, medicine, and other disciplines. Havelock (1972) compiled a comprehensive bibliography on knowledge utilization and dissemination. Mort (1964) wrote an overview of the research on educational innovation. In addition, Leary (1972) reviewed the literature on the change agent and attempted to identify applicable generalizations. Based on the syntheses that these and other authors have attempted, a number of generalizations about the change process have become commonly accepted on the basis of consistent veridical replications in a variety of settings. It should be noted, however, that tests of these generalizations in educational settings have generally not been conducted.

An additional caveat should also be noted. It appears to this researcher that one of the major obstacles to the synthesis of material on educational change is the confusing array of terminology employed. Where one school of writers refers to the "process of change," another refers to "diffusion of innovations," and still another to "knowledge utilization." In the context of this study and the discipline in general these terms will be considered synonymous.

The above comments on the research literature on educational change not only point to the need for systematic research on the process, but also indicate the difficulty of identifying relevant previous research. Despite the existence of several theoretical models of the change process, research study has been largely atheoretical in its approach. As a consequence, findings have generally not contributed to the understanding of the dynamics of the change process.

For the purposes of the remainder of this review, studies which are

included are limited to research on educational change directly related to constructs investigated in this study. Research from disciplines other than education will be excluded unless they are believed to facilitate understanding of some particular aspect of this investigation.

Characteristics of Potential Adopters

Perhaps the single largest area of research on social change has been investigation of characteristics of groups of innovation adopters. Rogers and Shoemaker (1971) in their extensive review and synthesis of the findings from more than 1000 studies on the innovation diffusion process, isolated 103 generalizations which are supported by literature from several disciplines. A substantial proportion of the studies, and thus the derived generalizations, concern characteristics of early versus late adopters. Rogers and Shoemaker isolate more than 30 characteristics which have been associated with adoption behavior. Within Paisley's schema are such cognitive subsystem variables as literacy, educational status, intelligence, degree of specialization and ability to deal with abstractions. Within the affective subsystem are such variables as risk-taking, empathy, dogmatism and attitude toward change, science, and education. Other adopter characteristics fall within the motivational (e.g. achievement motivation, degree of participation, information seeking behavior), demographic (e.g. social status, cosmopolitanness, opinion, leadership) and situational (e.g. type of organizational membership) subsystems.

The 30 or more factors identified by previous research were considered during the selection of intra-personal subsystem characteristics relevant to Paisley's schema during the design of the study reported here. An

important note on the studies reviewed by Rogers and Shoemaker is their largely univariate nature. Most of the characteristics noted above which have been associated with early adoption behavior were identified through significant zero order correlations with some adoption index. Little is known about the interrelationship of these 30 factors. Also, the studies which isolated the above factors were nearly all from disciplines and settings other than education.

Multivariate approaches to the study of adopter characteristics in education have been rare. Three multivariate studies in education, (Zimmerman and Williams, 1971; Loy, 1969; and Stern et al., 1976) investigated similar intra-personal constructs including personality variables, demographic, and other characteristics which previous studies have found related to innovation adoption. The three studies employed different indices of innovation adoption as criterion measures and some of the constructs employed as predictor variables were measured in different ways; thus the lack of consistency among their findings is not surprising.

Zimmerman and Williams (1971) compared selected personality characteristics of innovative and noninnovative teachers in a large public school system. Innovative status was determined by a three item sociometric survey of colleagues. Biographic variables corresponding largely to Paisley's demographic and cognitive subsystem characteristics plus scores on the Sixteen Personality Factors Inventory (16PF) were employed in discriminant analyses. None of the selected demographic or cognitive variables contributed significantly to discrimination. Among the personality variables, Imaginativeness, Assertiveness, Venturesomeness, and Low Tension were associated with innovative teachers.

In the Loy (1969) study, a four group discriminant analysis was conducted with intra-personal variables and 16 PF scores as potential discriminant variables. Teachers were classified as (1) innovators; (2) early adopters; (3) early majority; or (4) laggards (i.e., late adopters) based upon the time of their adoption of a physical education innovation. Independent variables with the most discriminant power were Venturesomeness, Professional Status, Imaginativeness, Educational Status, Dominance, Sociability, Cosmopolitaness, and Self-sufficiency. Thus, unlike the Zimmerman and Williams study, Loy found that characteristics in domains akin to Paisley's demographic (professional status, cosmopolitaness) and cognitive (educational status) subsystems were predicative of innovation adoption.

Stern et al. (1976) found no significant differences among three adopter groups on the basis of sets of variables corresponding to variables within Paisley's demographic, life cycle, and motivation subsystems (cosmopolitaness, age, faculty rank, year holding degree, years at the institution, publications, patents held or papers presented) when studying adoption of use of an innovative service among university professors.

The three studies described above investigated very similar sets of adopter characteristics in relation to adoption of innovations, yet there is no clearly apparent conclusion about characteristics related to adoption. Several characteristics measured by the 16 PF seem to be associated with early adoption--specifically, Imaginativeness, Assertiveness, Venturesomeness. These factors fall most logically within Paisley's affective subsystem. Variables corresponding to the constructs of the other five subsystems have less clear association with adoption rate

based on evidence from these three studies. A possible confounding factor may be the differing characteristics of the innovations studied. Substantial previous research (cf. Rogers and Shoemaker, 1971) has indicated that characteristics of the innovation have significant effect on rate of adoption. One of the difficulties with studying the social change process is the problem of controlling--either statistically or methodologically--the many complex variables which influence adoption decisions. The problem of selecting an outcome or dependent variable is central to this problem. Some index of adoption tendency independent of the characteristics of particular innovations would provide one means of overcoming this problem.

Substantial support is available for the generalization that attitude toward change is related to adoption behavior. Of 57 studies identified by Rogers and Shoemaker (1971), 43, or 75 percent, support the notion that early adopters have a more favorable attitude toward change than do later adopters. Attitude toward change, as noted in Chapter I, has been considered a significant factor in the design and implementation of diffusion strategies. Negative attitudes reflect a resistance to change or a behavioral tendency resistant to adoption of innovations. Positive attitude, on the other hand, would reflect a behavioral tendency in favor of adoption. Of course, as noted previously, many other factors other than attitudes or attitude toward change in particular, influence adoption decisions. The concept of attitude measurement, however, is based on the premise that with all other factors held constant, attitudes will reflect behavior (Allport, 1935; Krech et al., 1948; Halloran, 1967).

A clinical view of the phenomenon of resistance to change is provided by Dyken et al. (1964):

The emotional aspects of change are many. They include general feelings and attitudes about change, wishes to change, resistance to change, acceptance or rejection of change efforts. Identification with change, denial of change and a variety of ego defensive responses to change. These aspects of change, based as they are on present and past experiences and fantasies, require careful and sensitive scanning - strategists and receivers alike.

Commenting on how to improve educational diffusion in the 1970's, Eyler (1972) asserts that change agents have a responsibility to attempt to create a climate more conducive to innovation. "Schools with open climates, where teachers share professional ideas, perceive themselves to have a role in decision making and receive support from others within the system, are more likely to be innovative."

In Educational Testing Services' 1971 Invitational Conference on testing problems, Samuel Messick (1971) addressed the problem of research on educational change. In his address he pointed to the central role which educators' ideologies and attitudes play in determining the aims and actions of education and called for research on how ideological disposition affects judgments and decision making. Other than anecdotal evidence

from the many case studies in which innovations have been implemented in educational settings, the relationship of intra-personal characteristics to attitudes toward change has not been studied.

Of the six intra-personal subsystems within Paisley's conceptualizations, the situational subsystem is unique. The factors comprising this subsystem are less a function of the potential adopter, but rather relate to the environment in which the potential adopter functions. This translates, in an educational setting, to the characteristics of the school or program in which the educator works.

Most of the major contemporary organizational theorists believe that organizational characteristics influence the innovativeness or adaptability of organizations (e.g., Bennis, 1966; Bidwell, 1965; Carlson, 1965; Lippitt, 1969; Katz, 1969). While such theorists hold the belief that organizational factors are important, relatively few empirical investigations have been conducted, and those which have, studied the organization rather than individuals as the unit of analysis. Organizational theories have identified such factors as participativeness, centralization, formalization and organizational climate as significant to the change process. Thompson (1965), for example, provided an analysis of obstacles inherent to bureaucratic organizations which impede innovation based on review of organizational research in sociology. Centralization, hierarchy of power, and dependence on extrinsic rewards as control mechanisms were seen as major impediments to innovation in bureaucracy.

Substantial numbers of studies of the relationship between organizational variables and organizational innovation have been conducted in medical and health care settings (e.g., Rosner, 1968; Mohr, 1969); such

studies are even more numerous in private industry and business settings. These studies generally find that degree of formalization, degree of centralization, participativeness, and organizational climate are positively associated with successful organizational innovation (e.g., Evan and Xocia, 1967; Kohn, 1969; Thompson, 1965). Such variables have not, to this researcher's knowledge, been studied in an educational setting nor have studies generally examined these variables as intra-personal characteristics in which the unit of analysis is the individual rather than an organizational unit.

In summary, the research on the relation of intra-personal characteristics and the educational change process is severely limited. The dynamics of the relationships have not been clarified. The reliance on univariate rather than multivariate approaches is one mitigating factor; another is the problem of selecting criterion measures. Much of the focus previously has been on adoption rate as an index of innovation; however, adoption rate is influenced by so many factors external to the characteristics of the potential adopter that an alternative index, such as attitude toward change, may provide a less contaminable measure.

An area of study which has not yet received much attention in education is examination of the relationship between innovation diffusion and the situational context of potential adopters. The Paisley model provides the basis for study of situational characteristics with the individual as the unit of analysis rather than the social or organizational system, traditionally studied by sociologists.

Characteristics of Diffusion Strategies

The problem of selecting valid, effective diffusion strategies has been the topic of much writing and discussion, yet there is little concrete information about the effects of various strategies. Brickell (1974) identified characteristics of adoption settings which he believed have implications--though unspecified--for diffusion techniques. He listed leadership, power distribution, growth pattern, size, quality of personnel, level of spending, demographic type, reputation regarding innovation, values, curriculum content, instructional practices, schedule, equipment and materials, and availability of facilities as significant factors to consider.

Guba (1974) indentified six generic types of diffusion tactics: telling, showing, helping, involving, training, and intervening. Brickell (1971) listed no fewer than 16 tactics including, for example, legislation, negotiation, utilization of prestige of developers, and provision of additional resources. Brickell's suggested tactics are singular responses to specific situations from which it is difficult to identify generalizable principles of application.

In recommending strategies for the dissemination and utilization efforts of the National Institute of Education (NIE), Paisley (1972) identified three general stances which change agencies have traditionally adopted. Two of these stances, which he termed "product advocacy" and "laissez faire" have the simple rationale of "try it--you'll like it." The third, and the approach Paisley prefers, is "change process advocacy." The latter assumes a skepticism in the merit of any particular alternative solution or product, yet maintains a belief in flexibility and

readiness to change. The change process approach is less concerned with the promotion or diffusion of particular innovations than with improvement over the long term. Clearly Paisley's recommendation was the NIE adopt a change process approach to its dissemination efforts. This approach calls for a knowledge linker who would serve in a consultant role in a multifaceted two-way communication system.

Sieber (1976) reviewed knowledge utilization strategies which have been observed during the design and implementation of new schools. He observed that even in those sites which have been designated through federal funding as "innovative," there was a marked resistance to seeking outside help. Focus during implementation was on internal group processes which diverted attention from external sources of knowledge. He concluded that existing models of the innovation diffusion process traditionally ignore the social and psychological aspects of the process and suggests that more attention be given to the relationship of such factors to the process. Sieber (1968) asserted that this traditionally conceived model of potential adopters or the "Rational Man Model," considers ignorance the chief barrier to innovation. His contention was that the model overlooks the necessity of learning about practitioner's values and organizational circumstances.

Guba's (1967) comments support this notion:

Knowledge is at best only one of a number of input factors in any practical situation. No practical problem can be solved using knowledge alone--a whole host of economic, social, political, motivational, cultural, and other factors must be considered.

Such issues, if valid, have implications for the selection of strategies and selection of the roles which change agents should play in various situations.

The notions expressed by Brickell, Guba, Sieber, and others may be very sound, but they provide little substantive guidance to the change agent faced with selecting strategies for promoting positive change in an educational program. Few writers or researchers have addressed the problem of evaluating strategy effectiveness. As with the study of characteristics of the potential adopter, the explanation may be methodological. Diffusion strategies have generally been examined in relationship to particular innovations whose characteristics have significant effect on the diffusion rate. Thus, strategy effectiveness has been difficult to evaluate independent of other factors.

Some empirical investigation into strategies has been conducted. Griffiths (1964) set forth a series of propositions about the organizational change process based on case study findings. Among his propositions is the assertion that the degree and duration of change is directly proportionate to the intensity of the stimuli from outside. Rogers and Shoemaker identified 135 of 156 studies (87 percent) which support the generalization that early adopters have more change agent contact than later adopters. Change agent success was positively related to the extent of change agent effort in 16 (87 percent) of the 19 relevant studies reviewed by Rogers and Shoemaker.

Niehoff (1964, 1966) analyzed several hundred case studies dealing with change agents' attempts to transfer innovations cross culturally. One of the fundamental factors which he isolated was the extent of

change agent-client contact: the more extensive the contact, the greater and more rapid the diffusion rate. These findings support the notion that strategies which maximize contact with the change agent will tend to be successful.

Rogers and Shoemaker (1971) identified three studies which investigated the relationship between change agent contacts with opinion leaders. In all three studies change agent success was found to be positively related to the extent to which the change agent worked through opinion leaders. In the one study reviewed by Rogers and Shoemaker which investigated change agent success and change agent credibility, change agent success was positively related to the credibility of the agent in the eyes of the potential adopters.

Katz (1969) examined the adoption curves and functional information channels of two innovations--one an agricultural innovation, the other medical. Both were highly recommended by scientific authorities, important to their intended audiences, and could be evaluated for effectiveness by inspection. On the basis of adoption curves, Katz concluded that inter-personal channels play an important part in the diffusion process. Professionally "integrated" doctors, for example, had significantly steeper adoption curves than did colleagues who were identified as isolates. Katz found that lack of adoption was not a function of lack of information about the products. He concluded that while colleagues may not be important sources of first information, they become increasingly influential as attitudes about the innovation begin to develop.

From the above studies, it would appear that strategies which target on opinion leaders may provide the opportunity for internal

inter-personal communication networks to take over and extend the impact of the strategy. It is also important that change strategies maintain the credibility of the change agent in the eyes of potential adopters.

CHAPTER III

METHODOLOGY

Subjects

Subjects for this investigation were drawn from secondary level educational programs for hearing impaired students throughout the United States. Restriction of the study to the field of education of the deaf, specifically at the secondary level, was based on the fortuitous initiation and implementation of an organized dissemination and diffusion effort by the Model Secondary School for the Deaf (MSSD) located in Washington, D.C.

The MSSD was established by Public Law 89-694 and came into being with the signing of an agreement between the Department of Health, Education, and Welfare and Gallaudet College in May of 1969. The MSSD's legislative mandate was two-fold: (a) to serve as a laboratory for educational research and change by developing and validating innovative management and instructional models for secondary level deaf adolescents; and (b) to disseminate such working models throughout the field of education of the deaf in order to have a positive impact on the education of the deaf.

Since its inception in 1969, the MSSD's efforts focused on the growth and development of the organization and physical complex to address its mandates, and on the first of its charges--research and development of models. During fiscal year 1976-1977, the first planned, organized effort in the mandated area of dissemination was undertaken. secondary programs for the deaf. Prior to the 1976-1977 school year, these programs had little, if any, formal contact with the MSSD in its

role as change agent, and were considered ideal samples for the study of the innovation diffusion process.

Programs invited to participate in the study were restricted to those secondary level programs for hearing impaired students which reported a minimum of five high school graduates during the 1974-75 school year, as identified in the American Annals of the Deaf; Directory of Programs and Services (1976). The criterion of five graduates was employed to maximize the probability that interaction would occur with the Change Agent since such programs are the primary audience of products developed by the MSSD.

One hundred and forty-six (146) programs were identified, of which 103 agreed to participate. The total number of respondents to the initial data gathering efforts was 624. Table 1 summarizes this group of respondents on several demographic variables. Forty-one percent of the respondents were male; the modal age category was 20-29 years; 80.3 percent were normal hearing; and 7.16 percent were teachers, 13.8 percent were supervising teachers, 9.3 percent were principals or school superintendents, while the remaining 5.3 percent were in other professional support categories such as counseling or social work.

Because of the confidential nature of the distribution procedure the precise rate of return of invited participants is not known. Program administrators were asked to return a postcard indicating the total number of questionnaires distributed. Seventy-seven of the 103 programs provided information on the total questionnaires distributed; the return rate for those 77 programs was 77.1 percent. Follow-up phone calls were made to a random sample of five programs which had failed to

Table 1
Demographic Characteristics of Q1 Respondents

	N	%
Sex:		
Male	256	41.0
Female	363	58.2
Unknown	5	0.8
Total	624	100.0
Age:		
20-29	220	35.3
30-39	188	30.1
40-49	108	17.3
50-59	84	13.5
60+	22	3.5
Unknown	2	0.3
Total	624	100.0
Hearing Status:		
Normal	501	80.3
Hard of Hearing	32	5.1
Deaf	83	13.3
Unknown	8	1.3
Total	624	100.0
Job Function:		
Principal or Superintendent	58	9.3
Supervisor	86	13.8
Teacher	447	71.6
Professional Support	33	5.3
Total	624	100.0

return information on distribution. The return rate for those five programs was 71.0 percent.

Procedure

Data collection began in early October, 1976 when an invitational letter (Appendix A) and packet of Q1 questionnaires were sent to the administrative heads of the 146 secondary level educational programs for hearing impaired students which met the program criteria.

The letter to program administrators requested cooperation with the study by sampling faculty and distributing questionnaires to personnel involved in their secondary level program. Of 146 programs contacted, 103 (70.5 percent) agreed to participate by distributing questionnaires.

Comparisons of demographic data on the programs which did and did not agree to participate in the study suggest that programs which declined participation were less likely to have a residential program ($\chi^2 = 4.29$; $p < .05$). None of the other available demographic data (type of funding, number of students, number of graduates, number of educational staff, number of deaf staff or number of certified staff) indicated significant differences between participating and nonparticipating programs.

Program administrators who agreed to participate were asked to obtain a 50 percent random sample of teaching faculty members and to distribute one copy of Q1 to those sampled, plus a copy to every administrative/supervisory staff member. The covering letter to program administrators suggested a simple random sampling procedure. Informal feedback from several program administrators indicated that they did employ the recommended random procedure.

Both teaching and administrative personnel were included because of

their significant, though perhaps different, roles in decisions regarding adoption of changes. It is likely, because of the authority structures of programs, that administrative personnel are most involved in the formal decision making relative to a potential change. As the individuals most likely to use new materials or implement new programs, teaching faculty members also go through a process which yields an individual decision about the change. Should the formal decision be to adopt, the attitudes and decision status of the teacher(s) implementing the change will strongly influence whether the new program or materials become "institutionalized."

Data for the study were obtained in three ways: (1) initial questionnaire (Q1) survey of participants; (2) a follow-up (Q2) survey; and, (3) records of interactions between change agency personnel and staff of participating programs.

The Q1 survey booklet (Appendix B) included a cover letter explaining the general purpose of the study and assured invited participants of the confidentiality of their responses. At no time did the researcher have access to the names of individuals who received questionnaires. Participants were asked to provide the last four digits of their social security numbers in order for Q1 and Q2 responses to be collated. Responses to Q1 were returned directly to the investigator in a stamped, return addressed envelope provided with each questionnaire.

Follow-up questionnaires (Q2) were mailed to chief administrators of participating programs in mid-March, 1977. The accompanying letter (Appendix C) requested that the Q2 booklets (Appendix D) be distributed to the same individuals who received the initial questionnaires. A

sealed list of names of those who initially received Q1 had been sent to the investigator following the Q1 distribution. The lists were returned, unopened, to assure that the same individuals received Q2. Again, a stamped, return addressed envelope was provided for direct return of responses to the investigator.

Data collection relative to interactions between staff of participating programs was maintained on an on-going basis between October, 1976 and May, 1977. Records of mailings, personal contacts, telephone conversations, and correspondence with agencies or individuals from outside the Gallaudet College organizational boundaries were collected on a form (Appendix E) developed by the investigator. All personnel from the MSSD were asked to report such activities. Reminders and report forms were distributed weekly to every MSSD staff member.

During the October to May period, the MSSD had 6,512 recorded contacts with individuals from other programs or agencies. Of the total, 1,057 were the individuals from one of the 103 participating programs.

Instruments

Q1

The initial questionnaire, Q1, (Appendix B), was designed to obtain data on the intra-personal characteristics of participants relevant to the six dimensions outlined by Paisley (1973). The selection of variables was guided by previous research (Rogers and Shoemaker, 1971; Havelock, 1969) on the innovation diffusion process. With the exception of age, sex, and hearing status, all selected variables represent indices of factors which one or more previous studies have found to be related to innovativeness or adoption of innovation. Measurement of characteristics

were obtained in two ways: (a) self-report items and (b) attitude scales.

Self-report items were straightforward, largely multiple choice survey items which are commonly employed in opinion surveys. In addition to self-report data, several attitude scales were employed in Q1 to obtain information on such characteristics as job motivation, job satisfaction, attitude toward change, attitude toward the change agent, and characteristics of the organization. Such scales were selected based on the following considerations:

- (1) Use in previous research;
- (2) Relevance or applicability to an educational setting;
- (3) Adequacy of psychometric characteristics;
- (4) Appropriateness in light of previous research on the innovation diffusion process;
- (5) Simplicity and economy of the measure;
- (6) Applicability to a mail survey approach.

The variables comprising each subsystem and the means by which they are measured are described below. Assignment of variables to the six intra-personal subsystems was guided by examples provided by Paisley (1973). Paisley did not explicitly define the parameters of the six subsystems, though her examples conform to conventional usages for at least four of the subsystems (demographic, affective, cognitive, and motivational).

From her descriptions of several profiles of potential adopters, it is clear that Paisley was largely referring to characteristics of the organization with her use of the situational subsystem category. This implicit focus is supported by diffusion theory and research which has

found organizational setting characteristics to be factors influencing the diffusion and change process (e.g., Lippitt, 1969; Miles, 1967; Rogers and Shoemaker, 1971). Less clear was the life-cycle subsystem category. For purposes of operationalizing selection and assignment of relevant variables to the life-cycle subsystem, the category was restricted to factors characterizing the individual's status in a current career role. This definition is evident from the variables included for study within the life-cycle category and conforms to the few examples provided by Paisley.

The variables and measurement procedures for each characteristic are summarized by intra-personal subsystems.

Demographic Subsystem Characteristics: Five variables were selected for study as demographic characteristics. The five variables, Age, Sex, Hearing Status, Job Title, and Location, are derived from single, self-report survey items (Section I; Items 1, 2, 3, 4 and 6 respectively).

Cognitive Subsystem Characteristics: The two variables selected for study as cognitive subsystem characteristics were: (1) Educational Attainment, measured by a single self-report item, and (2) Education Emphasis, a self-report item.

Affective Subsystem Characteristics: Four attitude scales were selected as measures of variables relevant for study as affective subsystem characteristics. The first, Attitude Toward Change, is measured by a nine-item scale developed by Trumbo (1961) as a generalized measure of attitude toward change; subsequent research with the instruments has provided support for its validity (Kirton and Mulligan, 1973). Trumbo (1961) reports a retest reliability estimate of .79 for the scale. Q1

administration to the 624 respondents yielded an alpha value of .63. When adjusted for 30 item scale size with Spearman Prophecy formula, $r_{xx} = .85$. This scale is the only generalized measure of attitude toward change located. Its psychometric characteristics and its brevity made it an appropriate choice for inclusion in this study.

The second affective subsystem variable selected is Attitude Toward the Change Agent. The scale consists of 11 Likert scaled items designed to assess attitudes toward the MSSD in its role as Change Agent. The items were developed by the investigator for this study. Internal consistency reliability based on Q1 responses of the 624 participants was .88; when adjusted for a scale of 30 items, the reliability estimate increased to .95. Item development was guided by previous research findings related to characteristics of the change agent which are associated with adoption rate (e.g., credibility, responsiveness, and esteem).

Job Satisfaction, the third affective subsystem characteristic, was measured by an 18-item job satisfaction scale developed by Brayfield and Roth (1951). Reliability estimates for the scale range from .77 to .87 and it is recommended by Price (1972) as a reputable measure for use in organizational research. Validation studies have established high construct validity with other job satisfaction measures (Brayfield and Roth, 1951; Brayfield et al., 1957). Internal consistency analysis based on the 624 responses to Q1 yielded an alpha coefficient of .87, which when adjusted for a scale size of 30 items, increased to .91.

Alienation, or the "subjectively experienced powerlessness to control one's own work activities" (Rotter et al., 1962), is the fourth affective subsystem characteristic. Pearlin (1962) developed a four-item scale to

measure alienation as defined above. Reported reliability of the scale is .91 (Price, 1972), and research has established its predictive validity (Seeman and Evans, 1962). Internal consistency reliability based on Q1 responses was .48, but rose to .88 when adjusted for full scale size of 30 items. The Pearlin scale of alienation was selected for this study because of its psychometric characteristics, its brevity and thus ease of incorporation into a lengthy survey instrument, and its potential for describing more than one intra-personal characteristic. When grouped with responses of others within an organization, the scale also serves as an index of organizational climate (Price, 1973).

Motivational Subsystem Characteristics: Five variables were selected as motivational subsystem variables relevant to this study of the innovation diffusion process. The first, Job Motivation, is measured by a four-item job motivation scale defined in terms of "devotion of energy to job tasks" (Price, 1972) and is included in this study because of its adequate reliability, (.80 to .83 as assessed by Patchen, 1965), reported predictive validity (Price, 1973), as well as its brevity and, therefore, ease of incorporation into a lengthy survey instrument. Analysis of internal consistency on the Q1 sample of this study yielded an alpha coefficient of .66; when adjusted to scale length of 30 items, alpha = .93.

The remaining four motivational subsystem variables, Number of Professional Group Memberships, Number of Journal Subscriptions, Number and Professional Meetings Attended, and Number of Papers/Presentations were obtained through self-report of respondents.

Situational Subsystem Characteristics: The five variables selected as situational subsystem variables are those which describe the schools

within which respondents work. Two of the variables, Funding of the Program and Nature of the Program, are self-reported items describing the program. The remaining three variables, Organizational Climate, Formalization, and Centralization, are variables which were employed to describe significant dynamic characteristics of the organizations.

The average score of all respondents from a single program on the items comprising the Alienation Scale was employed as the index of Organizational Climate as suggested by Price (1972). The average score on the Alienation Scale thus describes the organizational situation of individuals within a particular program, while the individual score on the Alienation Scale measures the individual respondent's feelings of powerlessness.

The average score of all respondents from a single program on a 15-item scale developed by Hage and Aiken (1969) was employed as the index of Formalization of Organization in this study. The scale developed by Hage and Aiken defines formalization in terms of the importance of rules in an organization. No reliability data for the scale have been reported (Price, 1972); internal consistency reliability estimates based on the Q1 sample from this study yielded an alpha coefficient of .74 which, when adjusted to scale size of 30 items, increased to .85. The Hage and Aiken scale was included in this investigation because it appears to be the only such measure yet developed which does not rely on subjective judgments of "experts" or inspection of official documents.

Aiken and Hage (1968) developed two scales to measure centralization which they defined in terms of degree of participation in decision making. The two scales which they developed were: (a) Index of Actual Participation and (b) Scale of the Hierarchy of Authority. While no reliability

information is reported by Aiken and Hage, Price (1972), in a review of organizational measures, suggested that the scales, particularly the Index of Actual Participation because of demonstrated predictive validity, represent a refinement over other measures with respect to its conceptualization of centralization. Reliability analysis based on the Q1 sample yielded an alpha coefficient of .87 which, when adjusted for scale size of 30 items rose to .98. The Index of Participation was selected as the measure of centralization over a more commonly employed measure, the Control Graph (Williams et al., 1959), because of its greater applicability to an educational setting. The average score of all respondents from a single program was employed as the measure of Centralization of the Organization, one of the variables characterizing the situational subsystems.

Life-Cycle Subsystem Characteristics: Five self-report items were employed to obtain the five variables selected for study as potentially relevant life-cycle characteristics. The five variables selected were: (1) Number of Years in Present Position; (2) Number of Years with the Organization; (3) Length of Time Expected to Remain in Current Position; (4) Length of Time Expected to Remain with Present Program; (5) Length of Time Expected to Remain in the Professional Area.

Sociometric Items

Three sociometric items selected for inclusion in Q1 were employed by Zimmerman and Williams (1971) to identify "innovative" and "noninnovative" teachers based on colleagues' responses. The three items tap three different "roles" which have been identified as important in diffusion of innovations to established social systems (e.g., schools, companies).

These roles are innovator, opinion leader, and knowledge leader. Each of these roles is important to the innovation diffusion process; however, a single individual within any social system (organization) may or may not perform all three roles. Data from the three sociometric items were used in conjunction with records of contacts between participating programs and change agency personnel to assess the degree of interaction with those in diffusion relevant roles in the organization.

Q2

The follow-up questionnaire, Q2, was administered approximately 7 months after Q1 and included the Attitude Toward Change and Attitude Toward Change Agent scales described previously for Q1, all attitude scales and scales measuring organizational characteristics, and items designed to assess respondents' perceived level of interaction with the Change Agent. These latter items included self-report of the number and types, if any, of contact between the respondent and the MSSD. Nine variables derived from the self-report:

- Number of correspondences
- Number of MSSD course guides received
- Number of MSSD newsletters (Perspectives)
- Number of different MSSD personnel contacted
- Number of occasions contacts occurred
- Was material requested (Yes, No)
- Was material received (Yes, No)
- Were MSSD Public Information spots seen on TV (Yes, No)

Contact Records

Records of contacts between the Change Agent (i.e., MSSD) and all

other programs or agencies were maintained by the investigator between October, 1976 and May, 1977 based on reports submitted by personnel of the MSSD. The contact report form (Appendix E) provided for the identification of the name and program/agency affiliation of individuals contacted, mode of contact, initiator of the contact and purposes, duration and site of the contact. Names of individuals in participating programs were matched with names of individuals in innovation leadership, opinion leadership and knowledge leadership roles as determined in Q1, to obtain indices of contacts with people in these three dissemination relevant roles.

A total of 19 contact variables was computed for each participating program:

1. Number of Mail Circulations
2. Number of Personal Correspondences
3. Number of Telephone Contacts
4. Number of Informal Conversations
5. Number of Workshop Contacts
6. Number of Miscellaneous Contacts
7. Number of Contacts Initiated by the Change Agent
8. Number of Contacts Initiated by Other Than the Change Agent
9. Number of Contacts to Provide Information
10. Number of Contacts to Obtain Information
11. Number of Contacts to Provide Training in Curriculum
12. Number of Contacts to Provide Process Training
13. Number of Contacts for Field Testing
14. Number of Contacts Less Than One Hour Duration

15. Number of Contacts of One Hour to One Day Duration
16. Number of Contacts of More Than One Day Duration
17. Number of Contacts with Innovation Leader
18. Number of Contacts with Opinion Leader
19. Number of Contacts with Knowledge Leader

Data Analyses

Data analysis procedures will be described separately for each of the two research questions addressed by the study.

Question 1

The first research question addressed by this study was: "What are the relative contributions of the six intra-personal subsystems (i.e., demographic, cognitive, affective, motivational, life-cycle and situational) of potential adopters in accounting for attitudes toward change and toward the change agent?" Data from the 624 respondents to Q1 were employed in the analysis of this question.

To obtain indices of the six subsystems, principal components analyses were conducted based on a priori assignment of variables to the six intra-personal subsystems provided by Paisley (1973). The principal components procedure provides the single best summary of linear relationships among variables (Kim, 1975) for data reduction purposes. Factor score coefficients derived from the six principal components analyses were applied to compute an index of each of the subsystems. The derived subsystem indices were employed as predictor variables in two multiple regression analyses with Attitude Toward Change and Attitude Toward the Change Agent as criterion variables.

To facilitate interpretation of the results, six additional multiple

regression analyses for each of the two criterion variables were performed, with the variables comprising each of the six subsystems serving as predictor variables. These additional analyses provided information on the relative predictive power of specific variables within any one subsystem.

Question 2

The second research question addressed by this study was: "What characteristics of interaction between potential adopters and the Change Agent are associated with modifications of attitudes toward change and toward the Change Agent?" Data from the 413 respondents who responded to both Q1 and Q2 were employed in the analysis of this question.

Attitude Toward Change and Attitude Toward Change Agent scores from Q2 were regressed on corresponding scores from Q1; the resulting regression formulae were employed to obtain residualized gain scores from Q1 to Q2 for both attitude scales. The residualized scores were employed as criterion measures in multiple regression analyses with contact variables as potential predictor variables.

CHAPTER IV

RESULTS

Results are summarized separately for each of the two research questions.

Question 1

The first research question addressed by this study was: "What are the relative contributions of the six intra-personal subsystems (i.e., demographic, cognitive, affective, motivational, life-cycle and situational) of potential adopters in accounting for Attitude Toward Change and Attitude Toward the Change Agent?" Subsystem factor scores, based on principal component analyses of variables assigned to subsystems on the a priori basis described in Chapter III, were derived. Table 2 summarizes the assignment of variables to the six subsystems.

Kerlinger (1973) recommends cross-validation as a means of estimating shrinkage of the multiple correlation (R) when variables entering the regression are selected from a pool. The method requires two samples: one which serves as a screening sample and the other as a calibration sample. Regression analysis is performed on the screening sample, the resulting regression equation applied to the calibration sample and a Pearson r computed between the resulting predicted and observed scores in the calibration sample. The resulting correlation coefficient is analogous to the R obtained in the screening sample. The difference between the squares of the two multiple correlation coefficients (i.e., $R^2_{\text{screening}} - R^2_{\text{calibration}}$) is an estimate of shrinkage.

This cross-validation procedure was employed in the regression

analysis of the first research question. The 624 respondents to Q1 were randomly split on the basis of the last digit of their social security number. As a result the screening sample consisted of 297 respondents while for the calibration samples, $N = 327$.

Table 3 presents the intercorrelations among the subsystem factor scores and the two attitude measures for the screening sample. Because each of the two criterion attitude measures (i.e., Attitude Toward Change and Attitude Toward the Change Agent) fell within the affective subsystem, two affective subsystem indices were computed in order to assure that the variables entering regression equations be computationally independent of the criterion measures. Affective subsystem index "A" includes all affective variables except Attitude Toward Change and was the Affective factor score employed in the regression analysis with Attitude Toward Change as the criterion measure. Similarly, index "B" excluded Attitude Toward the Change Agent and was the factor score employed when Attitude Toward the Change Agent was the criterion variable.

Table 4 summarizes the regression results for the two analyses in which subsystem factor scores were employed as predictors. The multiple correlation coefficient obtained when Attitude Toward Change was the criterion was $R = .359$ ($F_{6/290} = 7.155$; $p < .05$). The corresponding multiple correlation was $R = .219$ ($F_{5/290} = 2.913$; $p < .05$) for the similar analysis with Attitude Toward the Change Agent. Clearly the variance in Attitude Toward Change accounted for by the subsystem factor scores ($R^2 = .129$) was greater than that for the similar analysis of Attitude Toward the Change Agent ($R^2 = .048$).

The cross-validation on the calibration sample suggests that the

Table 2

Summary of A Priori Variable Assignment to
Intra-Personal Subsystems

Demographic Subsystem:

Job Title
Hearing Loss
Sex
Age

Cognitive Subsystem:

Discipline
Educational Level

Affective Subsystem:

Attitude Toward Change
Attitude Toward Change Agent
Job Satisfaction
Alienation

Motivation Subsystem:

Job Motivation
No. of Meetings Attended
No. of Subscriptions
No. of Professional Group Affiliations
No. of Publications

Life-Cycle Subsystem:

Actual Years in Position
Actual Years in Organization
Actual Years in Profession
Preferred Years in Position
Preferred Years in Organization
Preferred Years in Profession

Situational Subsystem:

Location
Program Type
Degree of Centralization
Organizational Climate
Locus of Administrative Control
Degree of Formalization

Table 3
 Intercorrelations of Subsystem Factor Scores and
 Criterion Measures for Respondents to Q1
 Based on Screening Sample (N = 297)

	A	B	C	D	E	F	G	H	I
(A) Attitude Toward Change	1.0								
(B) Attitude Toward Change Agent	.037	1.0							
(C) Demographic Subsystem	-.052	-.018	1.0						
(D) Cognitive Subsystem	-.186	.040	.051	1.0					
(E) Affective Subsystem A ^a	.044	c	.157	-.016	1.0				
(F) Affective Subsystem B ^b	c	.193	.175	-.062	c	1.0			
(G) Motivational Subsystem	.087	.027	.389	-.117	.184	.202	1.0		
(H) Life-Cycle Subsystem	-.257	.043	.242	.071	.169	.108	.201	1.0	
(I) Situational Subsystem	-.200	-.086	-.074	.135	-.162	-.707	-.148	.130	1.0

^aComponents include all affective variables except Attitude Toward Change.

^bComponents include all affective variables except Attitude Toward the Change Agent.

^cCoefficient not reported because of computational confounding among variables.

Table 4

Summary of Regression Analyses with Subsystem Factor Scores
as Predictors for the Screening Sample (N = 297)

Criterion Measure									
Attitude Toward Change					Attitude Toward Change Agent				
Step	Factor	R	Beta	R _Δ ²	Step	Factor	R	Beta	R _Δ ²
Entered					Entered				
1	Life-Cycle	.257	-.250	.066	1	Affective "B"	.193	.193	.037
2	Situational	.037	-.128	.028	2	Demographic	.200	-.070	.002
3	Cognitive	.340	-.134	.022	3	Cognitive	.207	.061	.003
4	Motivational	.354	.111	.009	4	Situational	.215	-.065	.003
5	Affective "A"	.357	.050	.002	5	Life-Cycle	.219	.043	.002
6	Demographic	.359	-.045	.002	6	(see below ^a)			

^aThe sixth subsystem factor score (Motivation) did not contribute significantly to the prediction of Attitude Toward the Change Agent and did not enter the equation.

regression analysis with Attitude Toward Change may be spuriously inflated. Table 5 summarizes the cross-validation analysis. For the Attitude Toward Change analysis, the shrinkage in variance accounted for dropped from 12.9 percent to 3.2 percent, thus indicating questionable validity of the regression results across samples. A similar proportional drop in explained variance was obtained in the Attitude Toward the Change Agent analysis: $R_s^2 = 4.7$ percent compared to 3.2 percent for the calibration sample.

In addition to regression analyses with subsystem factor scores, individual regression analyses with the two criterion variables and each set of subsystem variables were conducted. These regression analyses are summarized in Tables F1-F6 in Appendix F.

The three variables comprising the demographic subsystem yielded a multiple correlation coefficient of $R = .261$ ($F_{6/607} = 7.424$; $p < .05$) with Attitude Toward Change and $R = .123$ ($F_{6/607} = 1.542$; $p > .05$) with Attitude Toward the Change Agent. The variance accounted for by the linear combination of demographic variables was 6.8 percent of Attitude Toward Change and 1.5 percent for Attitude Toward the Change Agent.

Table F2 (Appendix F) summarizes the multiple regressions with the two cognitive subsystem variables. The multiple correlation coefficient of the cognitive subsystem variables was $.221$ ($F_{8/615} = 3.93$; $p < .05$) with Attitude Toward Change and $.086$ ($F_{7/614} = .663$; $p > .05$) with Attitude Toward the Change Agent. Cognitive variables accounted for 4.9 percent of the variance in Attitude Toward Change and less than 0.7 percent in Attitude Toward the Change Agent.

Regressions with the three affective subsystem variables yielded

Table 5
 Comparison of R and R² Estimates on
 Screening and Calibration Samples

Criterion Variable			
Attitude Toward Change		Attitude Toward Change Agent	
R _{screening} (R _S)	.359		.219
R _{calibration} (R _C)	.179		.179
R _S ²	.129		.048
R _C ²	.032		.032
R _S ² - R _C ²	.097		.016

multiple correlation coefficients of $R = .103$ ($F_{3/616} = 2.22$; $p < .05$) for Attitude Toward Change; $R = .223$ ($F_{3/616} = 10.706$; $p < .05$) for Attitude Toward the Change Agent. Variance in Attitude Toward Change accounted for by the linear combination of the three attitude measures was 1.1 percent compared to 5.0 percent for Attitude Toward the Change Agent.

The multiple correlation coefficient obtained for motivational subsystem variables with Attitude Toward Change was $R = .149$ ($F_{5/549} = 2.498$; $p < .05$) and with Attitude Toward the Change Agent, $R = .161$ ($F_{4/550} = 3.65$; $p < .05$); variances accounted for were, respectively, 2.2 percent and 2.6 percent for the two criterion variables.

Life-cycle subsystem variables accounted for 10.76 percent of the variance in Attitude Toward Change and yielded a multiple correlation coefficient of $R = .328$ ($F_{6/588} = 11.84$; $p < .05$) compared to 2.5 percent of the variance and $R = .159$ ($F_{5/589} = 3.067$; $p < .05$) with Attitude Toward the Change Agent. The analyses with situational subsystem variables summarized in Table F6 (Appendix F) indicate that the multiple correlation between situational variables and Attitude Toward Change was $R = .182$ ($F_{9/454} = 1.74$; $p > .05$) and $R = .157$ ($F_{9/575} = 1.616$; $p > .05$) with Attitude Toward the Change Agent. The situational variables accounted for 3.31 percent of the variance in Attitude Toward Change and 2.46 percent in Attitude Toward the Change Agent.

Table 6 compares the multiple correlation coefficients R and R^2 estimates obtained for each of the six sets of intra-personal subsystem variables with two criterion attitude measures. Only two sets of subsystem variables (life-cycle and demographic) accounted for more than 5 percent of the variance in Attitude Toward Change; only one of the

Table 6

Comparison of the Multiple Correlation (R) and R² Estimates
 Obtained for Intra-Personal Subsystem Variables with
 Attitude Toward Change and Attitude Toward the Change Agent

Subsystem	Attitude Toward Change		Attitude Toward Change Agent	
	R	R ²	R	R ²
Demographic	.261	.068	.123	.015
Cognitive	.221	.049	.086	.007
Affective	.103	.011	.223	.050
Motivational	.149	.022	.161	.026
Life-Cycle	.328	.108	.159	.025
Situational	.182	.033	.157	.025

sets of subsystem variables (Affective) accounted for 5 percent of the variance in Attitude Toward the Change Agent.

Regression analyses with Intra-Personal Subsystem scores and the two criterion measures, while yielding statistically significant regressions ($F = 7.155$; $p < .05$ and $F = 2.913$; $p < .05$), did not account for large portions of their variance. In addition, the validity of the regressions themselves are of questionable applicability as indicated by the substantial shrinkage in R^2 when the obtained regression weights were applied to the calibration sample.

It would appear that the variables comprising the six subsystems as selected for this study have very low level predictive values with either Attitude Toward Change or Attitude Toward the Change Agent. They are slightly better predictors of the generalized attitude measure, Attitude Toward Change, than of the measure of attitude toward the specific stimulus, the Change Agent.

Of the six subsystems, Life-Cycle, Situational and Cognitive factor scores were the best predictors of Attitude Toward Change. Examination of regression results with the variables comprising the Life-Cycle subsystems suggests that Preferred Time in Position and Actual Number of Years in Position were the two variables most predictive of Attitude Toward Change, accounting for 10.2 percent of the variance, a predictive capability greater than that obtained with all six subsystem factor scores. None of the six individual regression analyses with Attitude Toward Change yielded an R^2 estimate in excess of .050. Zero-order correlations with Attitude Toward Change were, respectively $-.301$ and $-.196$ for Preferred and Actual Time in Position. The six Situational

Subsystem variables selected for study accounted for only 3.8 percent of variance in Attitude Toward Change while the two variables selected as Cognitive subsystem indices accounted for 4.9 percent of the variance.

Question 2

The second research question addressed by this study was: "What characteristics of interactions between potential adopters and the change agent are associated with modifications of attitudes toward change and toward the change agent?" A total of 29 contact variables characterizing interaction between potential adopters and the change agent were available for analysis. Residualized gain scores based on regressions of Q2 scores on corresponding Q1 scores for Attitude Toward Change and Attitude Toward the Change Agent were employed as criterion measures. Multiple regression analyses were conducted to select from the available pool of contact variables, a subset of variables which would account for modification in the two attitude measures as represented by the residualized scores. The criterion for terminating regression analyses was established on the basis of change in R^2 , (R_{Δ}^2); a minimum $R_{\Delta}^2 = .020$ was necessary for entry of a variable into regression equations. Thus, a variable was not considered a meaningful predictor unless its entry accounted for at least 2 percent of the variance in the criterion variable.

The cross-validation procedure described previously for the first research question was again employed. A total of 413 individuals responded to both Q1 and Q2. The sampling procedure previously described for the first research question yielded a screening sample of 209.

Tables 7 and 8 present the correlations of the 29 contact variables with the two criterion measures employed in the analyses with the

screening samples. It should be noted that the nine contact variables reported in Table 7 were derived from self-report of the respondents to items on Q2 the remaining contact variables (Table 8) were obtained from records maintained by the MSSD of contacts with participating programs. Inspection of the coefficients contained in Tables 7 and 8 indicates that, overall, the correlations between contact variables and the residualized attitude scores are of very low magnitude. Only five of the 29 variables yielded coefficients higher than .10 with the Attitude Toward Change residual score. Similarly only eight of the 29 exceed $r_{xy} = .10$ with the Attitude Toward the Change Agent criterion measure.

Table 9 summarizes the results of multiple regression analyses conducted with the screening sample. Three contact variables met the criterion (i.e. $R_{\Delta}^2 \geq .020$) for entry into the regression equation. The three variables [(1) Number of Contacts with Innovation Leader; (2) Number of Change Agent Contacts to Obtain Information; and (3) Number of Different Change Agent Personnel Contacted] yielded an $R = .290$ ($F_{3/163} = 4.98$; $p < .05$) to account for 8.41 percent of the variance in the residualized Attitude Toward Change scores. Only two contact variables met the entry criterion for the regression analysis with Attitude Toward the Change Agent yielding $R = .235$ ($F_{2/162} = 4.76$; $p < .05$). The two variables, Review of Products in Process (semi-annual MSSD publication) and Requests for Material, accounted for 5.52 percent of the variance in the Attitude Toward the Change Agent residual scores.

Regression weights obtained from the screening sample were applied to the calibration sample ($N = 205$) to obtain predicted scores for the two criterion measures, and a Pearson's correlation coefficient was

Table 7

Correlations Between Individually Reported Contact Variables and
Residualized Attitude Toward Change and Attitude Toward the
Change Agent Scores for the Screening Sample (N = 209)

Contact Variable	Attitude Toward Change	Attitude Toward Change Agent
N. Course Guides Received	-.073	.085
N. <u>Perspectives</u> (Newsletters) Received	.035	.166
N. Different Individuals Con- tacted	-.150	-.020
N. Occasions of Contacts	-.082	.071
N. Correspondence Received	-.006	.079
Requests for Material (Yes, No)	-.111	.116
Material Received (Yes, No)	.052	-.154
Viewing of TV Spots (Yes, No)	.132	.044
Review <u>Products in Process</u> (Yes, No)	-.004	-.175

Table 8

Correlations Between Program Contact Variables and
Residualized Attitude Toward Change and Attitude Toward
Change Agent Scores for the Screening Sample (N = 209)

Contact Variable	Attitude Toward Change	Attitude Toward Change Agent
<u>Program Data</u>		
N. Mail Circulations	-.067	.075
N. Letter Contacts	.095	*
N. Telephone Contacts	.016	-.075
N. Informal Conversations (i.e. face-to-face)	*	.060
N. Workshop Contacts	-.045	-.128
N. Contacts Initiated by Change Agent	-.085	.069
N. Contacts Initiated by Audience	.010	.021
N. Contacts to Provide Infor- mation	-.052	-.094
N. Contacts to Obtain Infor- mation	-.093	.103
N. Contacts to Provide Training (re. Processes)	.024	-.109
N. Field Test Contacts	-.003	-.087

Table 8 (cont'd)

Contact Variable	Attitude Toward Change	Attitude Toward Change Agent
N. Contacts of 1-30 Minutes		
Duration	.037	-.043
N. Contacts of 30 Minutes-		
1 Hour Duration	-.012	.017
N. Contacts of 1-2 Hour Duration	.026	-.022
N. Contacts of 3-5 Hour Duration	.026	.088
N. Contacts of 6-8 Hour Duration	-.045	-.124
N. Contacts of 9+ Hour Duration	-.035	-.033
N. Contacts with Innovation Leader	-.177	.092
N. Contacts with Opinion Leader	-.092	.099
N. Contacts with Knowledge Leader	-.152	.108

* $r_{xy} < .001$

Table 9

Summary of Regression Analyses with Contact Variables as
 Predictors for the Screening Sample (N = 209)

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
Entered				Entered			
1	N. Contacts with Innovation Leader	.177	.031	1	<u>Reviewed Products in Process</u>	.175	.031
2	N. Change Agent Contacts to Obtain Information	.236	.025	2	Requested Material	.235	.024
3	N. Different Change Agent Personnel Contacted	.290	.028				

computed between the predicted scores and obtained scores. Table 10 summarizes the results of this cross-validation procedure. The estimated shrinkage in R^2 ($R_s^2 - R_c^2 = .066$ for Attitude Toward Change; $R_s^2 - R_c^2 = .053$ for Attitude Toward Change Agent) was substantial considering the low magnitude of the R^2 values obtained on the screening samples initially. What was an already low level predictive capability must be considered to be even lower based on the cross-validation results. It must, therefore, be concluded that the variables examined in this study as characteristics of interactions between potential adopters and the Change Agent, have no substantial predictive relationship to modifications in either Attitude Toward Change or Attitude Toward the Change Agent.

Table 10
 Comparison of R and R² Estimates on
 Screening and Calibration Samples

Criterion Variable		
Attitude Toward Change	Attitude Toward Change Agent	
R _{screening} (R _S)	.290	.235
R _{calibration} (R _C)	.133	-.096
R _S ²	.084	.055
R _C ²	.018	.002
R _S ² - R _C ²	.066	.053

CHAPTER V

DISCUSSION

The Paisley (1973) model which hypothesizes six intra-personal subsystems as influential to the innovation diffusion process has great heuristic appeal because it reduces the array and complexity of intra-personal factors to a manageable level. The analyses reported in this study, however, lend very little empirical support to the meaningfulness of Paisley's six subsystems at least as they are defined here. Because of the very low magnitude of relationships (1) between Intra-Personal Subsystem Factor scores and the two criterion measures and (2) between criterion measures and any of the selected intra-personal characteristics, it seems inappropriate to draw conclusions about the relative predictive contributions of the subsystems or individual variables. The high proportionate degree of shrinkage obtained in cross-validation of the regressions makes inferences about the predictive relationships very questionable.

A number of explanations for the lack of substantial predictive relationships are possible--only one of which is the possible inadequacy of Paisley's conceptualization. Among the alternative explanations are inadequate selection of subsystem variables, and inappropriate criterion measures. In terms of the first alternative, the selection of subsystem variables, it should be noted that certain restrictions on selection of variables were necessarily imposed by the methodological constraints inherent in the study. Data gathering relative to intra-personal characteristics was restricted to questionnaire survey and thus variables had

to lend themselves to measurement in this manner. With the population of potential adopters of concern to this study distributed throughout the nation, more sophisticated or intensive measurement procedures were precluded. Despite limitations which were imposed by the survey method, it was possible to examine 26 different intra-personal variables with apparently adequate psychometric characteristics. Previous research had identified the selected variables as being related to the innovation-diffusion process, though not necessarily to the criterion measures employed in this study. The consistent low magnitude correlation of the 26 individual variables and derived subsystem factor scores with both Attitude Toward Change and Attitude Toward the Change Agent was surprising. From an array of 26 such variables at least several substantial correlations might be anticipated; yet the highest zero-order correlation between either criterion variable and the 26 intra-personal variables was $-.301$ for the correlation between Preferred Time in Position, a Life-Cycle Subsystem variable and Attitude Toward Change.

• It should be noted that much of the research which guided selection of the intra-personal variables was from disciplines other than education which studied the process in such areas as medicine, agriculture, and free-enterprise organizations. It is possible that the intra-personal characteristics found to be associated with change in an agricultural setting, for example, are different than those in education. Thus the selection of variables might have been based on an erroneous assumption about the generalizability of the research findings to education.

An additional possible explanation for the low magnitude of the

relationships obtained might be a sampling bias introduced by the administrators of participating programs. It is possible that program administrators failed to use a random sampling procedure and instead self-selected participants to preclude or reduce negative reflections on the school or program. Such a selection bias would be reflected in reduced within site variance relative to between site variance. Secondary analyses of the data might be conducted to investigate this possibility.

A second possible difficulty with the study reported here might be related to the selection of the two criterion measures, Attitude Toward Change and Attitude Toward the Change Agent. Measurement of attitude constructs is a complex issue. The theoretical basis for attitude measurement has perhaps been most highly developed in the writings and research of David Krech and Richard Crutchfield (e.g. Krech et al., 1962). Attitudes are hypothetical constructs which social psychologists have hypothesized as systems of cognitions, feelings and action tendencies which influence behavior. A basic tenet behind attitude measurement is the assumption that, all other factors being equal, overt behavior will reflect the attitude of the individual. Thus, all other factors being equal, a highly positive attitude toward change should be reflected in a high incidence of innovation or innovation-adoption behaviors. Because of the complexity of factors which influence innovation-adoption decisions, it was hoped that relevant attitude measures could be employed in the study of the change process. Thus it was that Attitude Toward Change and Attitude Toward the Change Agent were selected as criterion measures in this study.

It is possible that these two measures are themselves of a multiplex nature. Krech et al. (1962) define multiplex attitudes as those which are a function of a large number and variety of separate cognitive, feeling and action components. If, as it seems reasonable to expect, a generalized attitude toward change is such a multiplex construct, one would not expect that a single subset of variables - such as the intra-personal characteristics related to profession employed here - would necessarily provide substantial predictive capability.

The study reported here provides virtually no evidence to either support or refute the validity of Paisley's conceptualization of the role of intra-personal subsystems in the innovation diffusion process. The critical problem facing examination of this question seems to lie with identifying appropriate criterion measures. Perhaps it is simplistic to analyze the question in terms of a single criterion variable. Perhaps a cluster of indices of innovation adoption behavior treated as multi-variate dependent (criterion) variables with canonical analyses would more accurately take into account the complexity of the process being studied. Additional criterion measures such as information seeking behaviors and risktaking might profitably be included and still be independent of specific situational and innovation characteristics which might be confounding factors.

The purpose of the second research question of this study was to identify diffusion activities or characteristics of the MSSD's diffusion effort which influenced potential adopters' Attitudes Toward Change and Toward the Change Agent. Regression analyses yielded very low level predictive relationships ($R^2 = .084$, $R^2 = .055$) with the two residualized

attitude scores employed as criterion measures. The validity of even these modest results is questioned by the substantial shrinkage in R^2 obtained in cross-validation analyses.

Zero-order correlations between the two criterion measures and the 29 available contact variables were again, as with the first research question, of a consistently low magnitude. For the 20 program level variables employed, the low magnitude of the relationships is not too surprising since the contacts reflected in those variables were not necessarily directly with survey respondents; rather, the cumulative effects of contacts with various individuals in the respondent schools would have to have been diffused through communication networks in the participating programs.

That the respondents' self-reported information on contacts with change agent personnel yielded such consistently low magnitude correlations is somewhat surprising. It might be reasonable to expect that a generalized attitude toward change would be difficult to modify over a seven month period thus accounting for the low magnitude correlations with Attitude Toward Change obtained in this study. Attitude toward a specific stimulus such as that represented by the MSSD in the Attitude Toward Change Agent measure would more reasonably be subject to modification over the relatively short seven month span.

In fact, anecdotal data acquired during the period between administration of Q1 and Q2 suggested improved attitudes toward the MSSD among professionals in the field. A substantial number of unsolicited positive comments on various MSSD diffusion efforts were received. Based on such informal observations, higher magnitude correlations with contact vari-

ables were expected.

Several explanations of the low level relationships are possible, including insensitivity to change in the two attitude measures. The low incidence of involvement between change agent and individual respondents over the 7 month period of the study might also account for the lack of predictive relationships. As previous research reported in Chapter II has suggested, intensity of involvement with the change agent appears to be a critical factor in change agent effectiveness.

Studies which directly manipulate the intensity, duration and mode of contacts may yield information which can be applied to selection and planning of diffusion strategies. Unfortunately, because of administrative and practical constraints of providing services to a constituency, such experimental manipulations were not feasible within the study reported here.

It seems clear that the variables available to define characteristics of interactions between potential adopters and the MSSD (change agent) had no substantive power to predict changes in the selected attitude criteria. The selection of variables, or the measurement of them may have been inappropriate to detect their effects. Based on personal observations it is evident to the researcher that several of the MSSD's diffusion efforts were influential in affecting attitudes toward the MSSD. Of particular note based on informal feedback was distribution of Products in Process, an inventory of materials in development. While this was one of the two variables which entered into the regression analysis of Attitude Toward Change Agent, the level of predictive relationship was very low ($R^2 = .031$). Since only one issue of Products in

Process was published between Q1 and Q2 administrations, it is possible that over a longer time span and more exposure to the inventory, a greater effect might be detected.

Suggestions for Future Research

There are several possible explanations for the lack of predictive relationships obtained in this study. To reiterate: (1) inappropriate selection of variables; (2) use of single criterion measures; (3) short time span of interaction with the change agent; and (4) low incidence of involvement with the change agent. The two questions addressed by this study remain unanswered. Future investigation might profitably address them by taking these four factors into consideration. A longitudinal follow-up of the same sample, as contacts between the MSSD and its dissemination audience increase, might yet yield some answers to the question of strategy effectiveness if appropriate contact variables can be identified and recorded.

As noted previously, study of the educational change process is very rudimentary. Significant areas of investigation have not received attention and the dynamics of the process have not been studied extensively. The Paisley model which served as the basis for one of the questions in this study did provide hypotheses related to the dynamics between intra-personal characteristics and the change process. While the model was a synthesis of previous research, the subsystems themselves were not empirically determined. Future research should examine a broad array of personal characteristics and empirically examine the validity of Paisley's subsystems through factor analytic procedures.

Another area for future research is continued investigation into the

effects of diffusion strategies. Clearly the study reported here does not provide guidance in the selection of diffusion strategies. This indictment of the findings is not meant to suggest that investigations into strategy effectiveness be forgotten. Methodological difficulties in this area of investigation have probably discouraged research, yet it is an area which is critical if diffusion efforts are ever to become functionally effective. An approach similar to that attempted in this study might yet be effective with some methodological changes including (a) limiting the sample to an audience with more intensive involvement with the change agent; (b) increasing time and/or intensity of diffusion variables; and (c) selection of alternative contact characteristics.

The study reported here used residualized scores as the index to examine change in attitudes. The problems of addressing research questions in which change scores are the dependent or criterion variable are complex. Linne and Slinde (1977) have reviewed several procedures which can be employed as measures of change. The decision as to which procedure to employ depends largely on the nature of the research question and the metric characteristics of the dependent variable. The residualized score as a change index reduces the problem of unreliability which is inherent in simple difference scores, yet does not totally overcome the problem. In the study reported here, the dependent measures of interest had modestly high reliabilities. The residualized scores computed on the measures would, however, have lower reliability thus attenuating the ability to obtain predictive relationships in the multiple regression analyses. Secondary analyses of the data obtained in this study, using alternative change indices such as the estimated true

change scoring procedure (Linne and Slinde, 1977), might yield greater predictive capability.

One of the methodological difficulties with research on the change process relates to the extensive time necessary for a single innovation diffusion to occur. In addition, many confounding factors, including politics and economic issues, influence innovation adoption decisions. A possible approach for initial study of aspects of the change process is the use of simulation or gaming techniques. While such approaches are "artificial" in respects, they do provide the researcher the capability to control many factors which would be confounded in the natural setting. Simulation methodologies might yield relationships which could be used to generate hypotheses for field research such as that attempted in the study reported here.

Much of the research on change in fields other than education has focused on organizational factors which influence the adoption of innovations. Since the adoptions of most educational innovations involves more than the independent decision of one individual, it is likely that organizational factors are part of the change dynamic. Organizational studies in the sociological research tradition (e.g., Aiken and Hage, 1968; Evan and Black, 1967; Gruenfeld and Foltman, 1967) if applied to educational settings might help identify critical factors which create climates conducive to positive change.

Existing organizational theories have much to suggest about the effects of various aspects of the organization on the change process. There is a tendency to assume that the principles from organizational theory--derived usually in terms of profit making organizations--can be

generalized to other organizations, such as those in the field of education. It would be of great value to investigate the applicability of the various theories' assumptions about the role of management style and organizational structure in the promotion of change to the field of education.

APPENDIX A

Initial Program Invitational Letter

Model
Secondary School
for the Deaf

Kendall Green
Washington, D.C.
20002

October 8, 1976

Dear

The Model Secondary School for the Deaf (MSSD) is undertaking a nationwide survey of the attitudes, interests and opinions of educators of the deaf. We expect to use data derived from the study as one source of information for planning the dissemination efforts of the MSSD.

We would like your help in identifying staff from your secondary level programs for hearing impaired students to participate in our surveys. The study consists of two questionnaires to be given to supervisory/administrative personnel and teaching staff in secondary level programs for the hearing impaired. In order to identify individuals to respond, we need your help in distributing the questionnaires. The second questionnaire will be mailed to you for distribution in Spring, 1977.

Enclosed with this letter are copies of the first questionnaire. Please distribute one questionnaire to each supervisory/administrative staff member in your organization who has responsibility for aspects of the secondary level educational program provided to hearing impaired students.

The remaining questionnaires are targeted for teaching staff. We are asking that a 50% random sample of staff with teaching responsibilities in the secondary level programs for hearing impaired be given questionnaires. To simplify the process of conducting a random sample, we recommend drawing the names of half of the eligible teachers from a "hat" so that everyone has an equal chance of being selected.

When you have identified the individuals who will receive questionnaires, please list their names on the attached form, seal it in the envelope provided, and write your name across the seal. In the Spring, we will return the envelope unopened so that the second questionnaire can be given to the same individuals who receive the first one.

Respondents will return questionnaires directly to the MSSD in stamped addressed envelopes provided with each questionnaire.

Each participating program will, of course, receive a copy of the final report upon completion of the project. You and other selected participants have our assurance that all responses will be held in the strictest confidence. At no time will responses be traceable to either an individual or to a particular program.

We feel that the information which this study will provide will be very valuable to our future planning for dissemination to programs such as yours. We will greatly appreciate your assistance with the distribution of the questionnaires and your encouragement of your staff's participation.

Should you have any specific questions, please feel free to contact Dr. Leo Y. Min, Director of Office of Research and Evaluation at the MSSD.

Our sincere thanks for your help.

Respectfully,

Director
Model Secondary School for the Deaf

Dean, Pre-College Programs
Callaudet College

APPENDIX B

Q1: Confidential Survey of Selected
Personnel from Secondary Level
Educational Programs for the
Hearing Impaired

Model
Secondary School
For the Deaf

Kendall Green
Washington, D.C.
20002

October 8, 1976

Dear Colleague:

We are asking you, along with several other individuals in your organization, to participate in a nation-wide longitudinal survey of educator attitudes, interests and opinions. This study is being conducted by the Model Secondary School for the Deaf (MSSD) as one means of obtaining information for use in planning and improving the MSSD's dissemination efforts.

The attached questionnaire is the first and longer of two which we are asking you to complete. The second questionnaire will be given to you in April, 1977.

Your candid responses to questions about your interests, opinions and feeling about your profession and related areas, are extremely important to the validity of the study. You have our guarantee of the confidentiality of your answers. It is critical that we be able to match your responses on the first questionnaire with those you give on the second questionnaire. To enable us to do that while also assuring the confidentiality of your responses, we ask that you provide us with the last four digits of your social security number. This will make it virtually impossible for us to identify any respondent by name while making it possible to match responses from the two questionnaires. At no time will we know which individuals in your program received questionnaires; the administrative head of your program will be the only one with that list of names. At no time will responses of individuals be made available.

It is our sincere hope that you will agree to participate, because the more individuals who respond, the more accurate will our information base become and ultimately the more effectively we will be able to serve other educators through dissemination programs. Your participation will require approximately twenty minutes of your time for each questionnaire; we believe the potential benefits to the profession will reward the time you devote to helping us.

When you have completed the questionnaire, please return it directly to the MSSD in the attached, stamped envelope.

Sincerely,

Dean, Pre-College Programs
Gallaudet College

Director
Model Secondary School for the Deaf

PROGRAM IDENTIFICATION CODE 050
--

CONFIDENTIAL SURVEY OF SELECTED
PERSONNEL FROM SECONDARY LEVEL EDUCATIONAL
PROGRAMS FOR THE HEARING IMPAIRED

RESPONDENT CODE

Please provide the last four digits of your social security number in the boxes to the left

I. BACKGROUND INFORMATION

PLEASE PLACE AN "X" IN THE BOX NEXT TO ANSWER(S) WHICH DESCRIBE YOU.

- | | | |
|--|--|--|
| <p>1. Your age:</p> <p><input type="checkbox"/> 20 - 29</p> <p><input type="checkbox"/> 30 - 39</p> <p><input type="checkbox"/> 40 - 49</p> <p><input type="checkbox"/> 50 - 59</p> <p><input type="checkbox"/> 60 +</p> | <p>2. Your sex:</p> <p><input type="checkbox"/> Male</p> <p><input type="checkbox"/> Female</p> | <p>3. Your hearing status:</p> <p><input type="checkbox"/> Normal Hearing</p> <p><input type="checkbox"/> Hard of Hearing</p> <p><input type="checkbox"/> Deaf</p> |
| <p>4. Your current position (please select the option which most closely describes your current job title and function):</p> <p><input type="checkbox"/> Principal or superintendent</p> <p><input type="checkbox"/> Supervisor</p> <p><input type="checkbox"/> Teacher</p> <p><input type="checkbox"/> Professional Support (e.g., counselor, social worker, audiologist)</p> | <p>5. The PRIMARY locus of administrative control for your educational program?</p> <p><input type="checkbox"/> local government</p> <p><input type="checkbox"/> state government</p> <p><input type="checkbox"/> federal government</p> | |
| <p>6. What is the location of your educational program?</p> <p><input type="checkbox"/> metropolitan area (population = 100,000 +)</p> <p><input type="checkbox"/> urban area (population = 20,000 - 100,000)</p> <p><input type="checkbox"/> rural area (population less than 20,000)</p> | <p>7. What is the nature of your secondary level educational program for the hearing impaired?</p> <p><input type="checkbox"/> residential (primarily) day only</p> <p><input type="checkbox"/> combination day and residential</p> <p><input type="checkbox"/> special class(es) in public school program</p> | |
| <p>8. Number of years in your current position:</p> <p><input type="checkbox"/> Less than one year</p> <p><input type="checkbox"/> 1 - 2 years</p> <p><input type="checkbox"/> 3 - 5 years</p> <p><input type="checkbox"/> 6 - 9 years</p> <p><input type="checkbox"/> 10 + years</p> | <p>9. Number of years you have been associated with education of the deaf:</p> <p><input type="checkbox"/> Less than one year</p> <p><input type="checkbox"/> 1 - 2 years</p> <p><input type="checkbox"/> 3 - 5 years</p> <p><input type="checkbox"/> 6 - 9 years</p> <p><input type="checkbox"/> 10 + years</p> | |

10. Number of years you have been with your present school or organization:
- Less than one year
 1 - 2 years
 3 - 5 years
 6 - 9 years
 10 + years
11. How long would you prefer to remain in your current position?
- Less than one year
 1 - 2 years
 3 - 5 years
 6 - 9 years
 10 + or until retirement
12. How long would you prefer to remain with your current school or organization?
- Less than one year
 1 - 2 years
 3 - 5 years
 6 - 9 years
 10 + or until retirement
13. How long do you currently expect (plan) to remain in the area of education of the deaf?
- Less than one year
 1 - 2 years
 3 - 5 years
 6 - 9 years
 10 + or until retirement
14. Your highest educational attainment to date:
- High school graduate
 1 - 2 years of college
 3 - 4 years of college
- Bachelor's degree
 Master's degree
 Doctorate
15. What do you consider to have been the PRIMARY emphasis of your educational background?
- general education
 special education (general)
 special education (deafness)
 academic area (e.g. science, math, English)
- counseling
 psychology
 administration
 other (please specify) _____
16. Professional group affiliations (please check all groups listed below to which you hold a current membership and add others, specifying the name or acronym, as necessary):
- | | | | |
|--------------------------------|-------------------------------|--------------------------------|--------------------------|
| <input type="checkbox"/> NEA | <input type="checkbox"/> RID | <input type="checkbox"/> NASSP | <input type="checkbox"/> |
| <input type="checkbox"/> AFT | <input type="checkbox"/> CEC | <input type="checkbox"/> APA | <input type="checkbox"/> |
| <input type="checkbox"/> CAID | <input type="checkbox"/> NAD | <input type="checkbox"/> AASA | <input type="checkbox"/> |
| <input type="checkbox"/> CEASD | <input type="checkbox"/> ASHA | <input type="checkbox"/> PRWAD | <input type="checkbox"/> |
| <input type="checkbox"/> AGB | <input type="checkbox"/> AERA | <input type="checkbox"/> | <input type="checkbox"/> |
17. Number of national or regional professional meetings you have attended in the last two years:
- 0
 1
 2
 3 - 4
 5 - 6
 7 +
18. Number of journal publications and/or presentations at regional or national professional meetings you have had in the last two years:
- 0
 1
 2
 3 - 4
 5 - 6
 7 +

19. Number of subscriptions to professional publications and journals which you currently maintain:

<input type="checkbox"/>	0	<input type="checkbox"/>	3 - 4
<input type="checkbox"/>	1	<input type="checkbox"/>	5 - 6
<input type="checkbox"/>	2	<input type="checkbox"/>	7 +

II. PERCEPTIONS OF OTHERS:

THE FOLLOWING THREE QUESTIONS ASK FOR NAMES OF COLLEAGUES IN YOUR SECONDARY LEVEL EDUCATIONAL PROGRAM. IT MAY BE DIFFICULT TO SELECT AMONG SEVERAL OF YOUR COLLEAGUES WHO ARE HIGHLY QUALIFIED IN THE AREA SPECIFIED. YOU ARE, HOWEVER, ASKED TO CONFINE YOUR RESPONSE TO ONE NAME FOR EACH QUESTION, SO PLEASE CONSIDER CAREFULLY BEFORE YOUR ANSWER. YOU MAY FIND THAT ONE PERSON FITS THE DESCRIPTION FOR ALL THREE QUESTIONS, OR IT MAY BE THAT YOU WILL NAME TWO OR THREE DIFFERENT INDIVIDUALS.

1. Who (other than yourself) in your secondary level educational program for the hearing impaired do you think would be the first to utilize new methods, techniques, or materials?

NAME: _____
(please print)

2. Who would be the first person in your secondary level educational program for the hearing impaired you would "check with" for advice on a school or student related problem?

NAME: _____
(please print)

3. Who (other than yourself) in your secondary level educational program for the hearing impaired would you consider as the most knowledgeable about current issues and trends in education of the deaf?

NAME: _____
(please print)

III. JOB INTERESTS AND ATTITUDES

FOR THE FOLLOWING ITEMS, PLEASE PLACE AN "X" IN THE BOX ALONG THE INDICATED CONTINUUM WHICH MOST CLEARLY REFLECTS YOUR OPINION.

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
1. I like a job where I know that I will be doing my work about the same way from one week to the next:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Each day of work seems like it will never end:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. My job is like a hobby to me: . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I feel that I am happier in my work than most other people: . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am disappointed that I ever took this job:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I like my job better than the average worker does:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If I could do as I please, I would change the kind of work I do every few months:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. My job is pretty uninteresting: . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. It would take a sizeable raise in pay to get me to voluntarily transfer to another job:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. It seems that my friends are more interested in their jobs than I am:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I definitely dislike my work: . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I would prefer to stay with a job that I know I can handle, than to change to one where most things would be new to me: . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I consider my job rather un-pleasant:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
14. The trouble with most jobs is that you just get used to doing something one way and then they want to do it differently:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The trouble with many people is that, when they find a job they can do well, they don't stick with it:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I feel that my job is no more interesting than others I could get:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. When I get used to doing things in one way, it is disturbing to me to have to change to a new method:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. One can never feel at ease on a job where the ways of doing things are always being changed: .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. For the time being, I am satisfied with my job:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I enjoy my work more than my leisure time:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. My job is usually interesting enough to keep me from getting bored:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I am often bored with my job: . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Most of the time I have to force myself to go to work:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I feel fairly well satisfied with my present job:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I find real enjoyment in my work: .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Most days I am enthusiastic about my work:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. The job you would consider ideal for you would be one where the way you do your work:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IS ALWAYS THE SAME
 CHANGES VERY LITTLE FROM DAY TO DAY
 RELATIVELY CONSTANT WITH PREDICTABLE VARIATIONS
 CHANGES FREQUENTLY
 CHANGES A GREAT DEAL FROM DAY TO DAY

- | | DEFINITELY
TRUE | MORE TRUE
THAN FALSE | MORE FALSE
THAN TRUE | DEFINITELY
FALSE |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 28. On the job, I feel that I am my own boss in most matters: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. A person can make his own decisions here without checking with anybody else: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. How things are done around here is left pretty much up to the person doing the work: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. People here are allowed to do almost as they please: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Most people here make their own rules on the job: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. The employees here are constantly being checked on for rule violations: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. People here feel as though they are constantly being watched to see that they obey all the rules: . | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. There is no rules manual which outlines all the rules for employees: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. There is a very comprehensive written job description for my job: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. Whatever situation arises, we have procedures to follow in dealing with it: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. Everyone has a specific job to do: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. Going through the proper channels is constantly stressed: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. The organization always maintains a written record of everyone's job performance: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. We are expected to follow strict operating procedures at all times: . | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. Whenever we have a problem, we are supposed to go to the same person for the answer: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- | | NEVER | SELDOM | SOMETIMES | OFTEN | ALWAYS |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 43. How frequently do you usually participate in the decision to hire new staff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. How frequently do you usually participate in the decisions on the promotion of any of the professional staff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. How frequently do you participate in decisions on the adoption of new policies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. How frequently do you participate in the decisions on the adoption of new programs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

FOR THE REMAINING ITEMS, PLEASE PLACE AN "X" IN THE BOX OF THE ANSWER OPTION WHICH BEST EXPRESSES YOUR OPINION:

47. How often do you do things in your work that you wouldn't otherwise do if it were up to you?
- Never
- Once in a while
- Fairly often
- Very often
48. Around here, it is not important how much you know, it's who you know that really counts.
- Agree Disagree
49. How much say or influence do people like you have on the way the school is run?
- A lot
- Some
- Very little
- None
50. How often do you tell your immediate superior your own ideas about things you might do in your work?
- Never
- Once in a while
- Fairly often
- Very often

51. On most days on your job, how often does time seem to drag for you?
- About half the day or more
 - About one-third of the day
 - About one-quarter of the day
 - About one-eighth of the day
 - Time never seems to drag
52. Some people are completely involved in their job - they are absorbed in it night and day. For other people, their job is simply one of several interests. How involved do you feel in your job?
- Very little involved; my other interests are more absorbing
 - Slightly involved
 - Moderately involved; my job and my other interests are about equally absorbing
 - Strongly involved
 - Very strongly involved; my work is the most absorbing interest in my life
53. How often do you do some extra work for your job which isn't really required for it?
- Almost every day
 - Several times a week
 - About once a week
 - Once every few weeks
 - About once a month or less
54. Would you say you work harder, less hard, or about the same as other people doing your type of work in your organization?
- Much harder than most others
 - A little harder than most others
 - About the same as most others
 - A little less hard than most others
 - Much less hard than most others

IV. PERCEPTIONS OF THE MSSD

THE MODEL SECONDARY SCHOOL FOR THE DEAF (MSSD) WAS ESTABLISHED BY CONGRESS TO (A) SERVE AS A LABORATORY FOR EDUCATIONAL EXPERIMENTATION AND CHANGE BY DEVELOPING AND VALIDATING INNOVATIVE MANAGEMENT AND INSTRUCTIONAL MODELS FOR SECONDARY LEVEL DEAF ADOLESCENTS: AND (B) TO DISSEMINATE SUCH WORKING MODELS THROUGHOUT THE FIELD OF EDUCATION OF THE DEAF IN ORDER TO HAVE A POSITIVE IMPACT ON THE EDUCATION OF THE DEAF.

IN THE FOLLOWING ITEMS OF THIS SECTION, PLEASE SHARE YOUR PERCEPTIONS OF THE MSSD BY INDICATING THE EXTENT OF YOUR AGREEMENT OR DISAGREEMENT WITH EACH STATEMENT. PLEASE PLACE AN "X" IN THE BOX ALONG THE CONTINUUM FROM "I STRONGLY AGREE" TO "I STRONGLY DISAGREE" WHICH MOST CLOSELY REFLECTS YOUR OPINION.

	STRONGLY AGREE	AGREE	TEND TO AGREE	NO OPINION	TEND TO DISAGREE	DISAGREE	STRONGLY DISAGREE
1. Staff of the MSSD are well trained:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I would feel uneasy about contacting the MSSD for help with a new project or idea:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There is very little evidence that the MSSD will ever meet the goals set for it:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The MSSD promises to be an influential factor in promoting growth in the area of deaf education:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I don't think the MSSD is responsive to the real needs in deaf education:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I think my program should adopt some of the techniques or materials developed at the MSSD:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The MSSD really is doing nothing new or different from other secondary level programs for the deaf:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | STRONGLY
AGREE | AGREE | TEND TO
AGREE | NO
OPINION | TEND TO
DISAGREE | DISAGREE | STRONGLY
DISAGREE |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 8. I would be interested in trying MSSD developed techniques or materials in my own work: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. I would probably benefit a great deal from observing the MSSD program: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. The MSSD has a great deal to offer the profession in the way of help and resources: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Staff of the MSSD are highly competent professionals: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

APPENDIX C

Follow-up Cover Letter

Model Secondary School for the Deaf

Gallaudet College

March 14, 1977

In October, 1976 we sent questionnaires to you requesting participation of personnel from your secondary level education program in a two-part survey of educator attitudes, interests and opinions. We thank you for arranging for a sample of people to receive those questionnaires and we are very pleased by the number who responded.

It is now time to distribute the second part of the survey--and again we ask your help. We are enclosing the sealed envelope with the list of names of those to whom you distributed the first questionnaire. We would appreciate your help in distributing the second questionnaires, which are enclosed, to the people on this list. To assure that participating schools respond within a similar time frame we ask that you distribute the questionnaires on April 4 and encourage people to return their questionnaires to the MSSD by May 2, 1977.

Because of the distribution procedure employed for this study, we at this time have no idea of the number of people in your program who actually received questionnaires. Attached to this letter is a return addressed, stamped postcard. To help us determine our response rate, please insert the number of people to whom you distributed questionnaires and return the card to us.

Again, please accept our thanks for your generous cooperation with this project. We expect to complete a full report of our findings during the Fall of 1977 and you will, of course, receive a complimentary copy. Should you have any specific questions related to the project, please feel free to contact Dr. Leo Y. Min, Director of the Division of Research and Evaluation at the MSSD. He can be reached by phone or TTY at:

Our sincere thanks for your help.

Cordially,

Director
Model Secondary School for the Deaf

Dean, Pre-College Programs
Gallaudet College

APPENDIX D

Q2: Confidential Survey of Selected
Personnel from Secondary Level
Educational Programs for the
Hearing Impaired: Follow-up
Questionnaire

Model Secondary School for the Deaf

Gallaudet College

April 4, 1977

Dear Colleague:

In October, 1976 we sent questionnaires to the head of your program asking that a sample of individuals be asked to participate in a survey of educator attitudes, interests and opinions. You were one of those asked to participate. At that time we explained to you that a second questionnaire would be sent in the spring of 1977. You will find it attached to this letter.

The purpose of this questionnaire is two-fold: (1) to examine the extent of the MSSD's outreach to professionals in the field and (2) to investigate the stability of educator attitudes and opinions. You will notice that part II of the questionnaire duplicates portions of the first questionnaire. Please try to answer the questions in this section as you feel NOW-- not as you may have felt when you answered the first questionnaire.

We were pleased and encouraged by the good returns we received from the initial questionnaire in this survey. In order to obtain valid and reliable information, it is critical that you who so generously cooperated with the first questionnaire also answer and return this follow-up. If you did not return the first questionnaire, we would appreciate your response to this one. As before, all answers will be held in strict confidence, though we do ask that you provide the last four digits of your social security number to enable us to match your initial responses with this second questionnaire.

Realizing that spring is a busy time in the school year, we particularly appreciate the time you take to complete and return the questionnaire. We ask that you return the questionnaire in the stamped, return addressed envelope by May 2, or as soon thereafter as possible.

Again, our sincere thanks for your help.

Sincerely,

Director
Model Secondary School for the Deaf

Dean, Pre-College Programs
Gallaudet College

PROGRAM IDENTIFICATION CODE

CONFIDENTIAL SURVEY OF SELECTED
PERSONNEL FROM SECONDARY LEVEL EDUCATIONAL
PROGRAMS FOR THE HEARING IMPAIRED:
FOLLOW-UP QUESTIONNAIRE

RESPONDENT CODE

Please provide the last four digits of your social security number in the boxes to the left

I CONTACTS WITH THE MSSD:

In the items in this section of the Questionnaire, we are interested in knowing the approximate number of times you have had contact with MSSD materials, personnel, or newsletters since completing the first Questionnaire approximately seven months ago. Please answer in the spaces provided to the left of each question.

- _____ 1. Approximately how many MSSD course guides have you seen or reviewed since answering our first questionnaire about seven months ago?
- _____ 2. Approximately how many issues of PCP Perspectives (a newsletter about the MSSD and Kendall Demonstration Elementary School) have you read since answering our first questionnaire?
- _____ 3. Approximately how many MSSD personnel have you had contact with, either in person or by telephone (or TTY) since the first questionnaire?
- _____ 4. Approximately how many different occasions have you spoken with people from the MSSD, either in person or by telephone (or TTY) since the first Questionnaire?
- _____ 5. Approximately how many times since our first Questionnaire have you corresponded with people from the MSSD?
- Yes No 6. Have you requested any material or information from the MSSD since October, 1976?
- Yes No 7. Have you received any material or information from the MSSD since October, 1976?
- Yes No 8. Have you seen any television spots about the MSSD since October, 1976?
- Yes No 9. Have you see Products in Process, which is an inventory of MSSD developed instructional material and educational system?

II. JOB INTERESTS AND ATTITUDES

FOR THE FOLLOWING ITEMS, PLEASE PLACE AN "X" IN THE BOX ALONG THE INDICATED CONTINUUM WHICH MOST CLEARLY REFLECTS YOUR OPINION.

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
1. I like a job where I know that I will be doing my work about the same way from one week to the next:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Each day of work seems like it will never end:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. My job is like a hobby to me:..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I feel that I am happier in my work than most other people:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am disappointed that I ever took this job:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I like my job better than the average worker does:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If I could do as I please, I would change the kind of work I do every few months:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. My job is pretty uninteresting:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. It would take a sizeable raise in pay to get me to voluntarily transfer to another job:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. It seems that my friends are more interested in their jobs than I am:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I definitely dislike my work..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I would prefer to stay with a job that I know I can handle, than to change to one where most things would be new to me:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I consider my job rather unpleasant:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE
14. The trouble with most jobs is that you just get used to doing something one way and then they want to do it differently:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The trouble with many people is that, when they find a job they can do well, they don't stick with it:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I feel that my job is no more interesting than others I could get:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. When I get used to doing things in one way, it is disturbing to me to have to change to a new method:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. One can never feel at ease on a job where the ways of doing things are always being changed:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. For the time being, I am satisfied with my job:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I enjoy my work more than my leisure time:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. My job is usually interesting enough to keep me from getting bored:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I am often bored with my job:...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Most of the time I have to force myself to go to work:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I feel fairly well satisfied with my present job:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. I find real enjoyment in my work:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Most days I am enthusiastic about my work:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. The job you would consider ideal for you would be one where the way you do your work:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IS ALWAYS THE SAME
 CHANGES VERY LITTLE FROM DAY TO DAY
 RELATIVELY CONSTANT WITH PREDICTABLE VARIATIONS
 CHANGES FREQUENTLY
 CHANGES A GREAT DEAL FROM DAY TO DAY

	<i>DEFINITELY TRUE</i>	<i>MORE TRUE THAN FALSE</i>	<i>MORE FALSE THAN TRUE</i>	<i>DEFINITELY FALSE</i>
28. On the job, I feel that I am my own boss in most matters:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. A person can make his own decisions here without checking with anybody else:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. How things are done around here is left pretty much up to the person doing the work:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. People here are allowed to do almost as they please:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Most people here make their own rules on the job:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. The employees here are constantly being checked on for rule violations:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. People here feel as though they are constantly being watched to see that they obey all the rules:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. There is no rules manual which outlines all the rules for employees:...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. There is a very comprehensive written job description for my job:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Whatever situation arises, we have procedures to follow in dealing with it:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Everyone has a specific job to do:...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Going through the proper channels is constantly stressed:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. The organization always maintains a written record of everyone's job performance:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. We are expected to follow strict operating procedures at all times:...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Whenever we have a problem, we are supposed to go to the same person for the answer:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	NEVER	SELDOM	SOMETIMES	OFTEN	ALWAYS
43. How frequently do you usually participate in the decision to hire new staff?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. How frequently do you usually participate in the decisions on the promotion of any of the professional staff?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. How frequently do you participate in decisions on the adoption of new policies?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. How frequently do you participate in the decisions on the adoption of new programs?.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FOR THE REMAINING ITEMS, PLEASE PLACE AN "X" IN THE BOX OF THE ANSWER OPTION WHICH BEST EXPRESSES YOUR OPINION:

47. How often do you do things in your work that you wouldn't otherwise do if it were up to you?

- Never
- Once in a while
- Fairly often
- Very often

48. Around here, it is not important how much you know, it's who you know that really counts.

- Agree Disagree

49. How much say or influence do people like you have on the way the school is run?

- A lot
- Some
- Very little
- None

50. How often do you tell your immediate superior your own ideas about things you might do in your work?

- Never
- Once in a while
- Fairly often
- Very often

51. On most days on your job, how often does time seem to drag for you?
- About half the day or more
 - About one-third of the day
 - About one-quarter of the day
 - About one-eighth of the day
 - Time never seems to drag
52. Some people are completely involved in their job - they are absorbed in it night and day. For other people, their job is simply one of several interests. How involved do you feel in your job?
- Very little involved; my other interests are more absorbing
 - Slightly involved
 - Moderately involved; my job and my other interests are about equally absorbing
 - Strongly involved
 - Very strongly involved; my work is the most absorbing interest in my life
53. How often do you do some extra work for your job which isn't really required for it?
- Almost every day
 - Several times a week
 - About once a week
 - Once every few weeks
 - About once a month or less
54. Would you say you work harder, less hard, or about the same as other people doing your type of work in your organization?
- Much harder than most others
 - A little harder than most others
 - About the same as most others
 - A little less hard than most others
 - Much less hard than most others

III. PERCEPTIONS OF THE MSSD

THE MODEL SECONDARY SCHOOL FOR THE DEAF (MSSD) WAS ESTABLISHED BY CONGRESS TO (A) SERVE AS A LABORATORY FOR EDUCATIONAL EXPERIMENTATION AND CHANGE BY DEVELOPING AND VALIDATING INNOVATIVE MANAGEMENT AND INSTRUCTIONAL MODELS FOR SECONDARY LEVEL DEAF ADOLESCENTS: AND (B) TO DISSEMINATE SUCH WORKING MODELS THROUGHOUT THE FIELD OF EDUCATION OF THE DEAF IN ORDER TO HAVE A POSITIVE IMPACT ON THE EDUCATION OF THE DEAF.

IN THE FOLLOWING ITEMS OF THIS SECTION, PLEASE SHARE YOUR PERCEPTIONS OF THE MSSD BY INDICATING THE EXTENT OF YOUR AGREEMENT OR DISAGREEMENT WITH EACH STATEMENT. PLEASE PLACE AN "X" IN THE BOX ALONG THE CONTINUUM FROM "I STRONGLY AGREE" TO "I STRONGLY DISAGREE" WHICH MOST CLOSELY REFLECTS YOUR OPINION.

	STRONGLY AGREE	AGREE	TEND TO AGREE	NO OPINION	TEND TO DISAGREE	DISAGREE	STRONGLY DISAGREE
1. Staff of the MSSD are well trained:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I would feel uneasy about contacting the MSSD for help with a new project or idea:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There is a very little evidence that the MSSD will ever meet the goals set for it:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The MSSD promises to be an influential factor in promoting growth in the area of deaf education:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I don't think the MSSD is responsive to the real needs in deaf education:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I think my program should adopt some of the techniques or materials developed at the MSSD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The MSSD really is doing nothing new or different from other secondary level programs for the deaf:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	STRONGLY AGREE	AGREE	TEND TO AGREE	NO OPINION	TEND TO DISAGREE	DISAGREE	STRONGLY DISAGREE
8. I would be interested in trying MSSD developed techniques or materials in my own work:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I would probably benefit a great deal from observing the MSSD program:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The MSSD has a great deal to offer the profession in the way of help and resources:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Staff of the MSSD are highly competent professionals:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX E

Contact Report Form

PRE-COLLEGE PROGRAMS

Contact Report Form

A. Name(s), title(s), and affiliation(s) of PCP personnel involved in the contact:

NAME	TITLE	KDES	MSSD	OTHER
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B. Name(s) and affiliation of individuals contacted:

NAME	AGENCY OR SCHOOL AFFILIATION
_____	_____
_____	_____
_____	_____
_____	_____

****USE ADDITIONAL SHEETS TO LIST CONTACTS IF NECESSARY****

C. Mode of Contact

- Circulation of print or nonprint materials (e.g. course guides, films, brochures)
- Letter: Who initiated the interaction? _____

- Telephone: Who initiated the interaction? _____

Face-To-Face: Further designate as to:

- informal conversation
- workshop or seminar presentation
- other (please specify) _____

D. Purpose of Contact

- To provide information
- To obtain information
- To provide training re curriculum materials developed by PCP
(please specify) _____
- To provide training re skills or processes
(please specify) _____
- To obtain training
- To provide consultative assistance
(please specify type) _____
- To conduct field testing
- Other (please specify) _____

E. Duration of face-to-face or telephone contact

- 1 - 30 minutes
- 30 minutes to 1 hour
- 1 - 2 hours
- 3 - 5 hours
- 6 - 8 hours
- 9 - 16 hours
- 17 - 24 hours
- 25 or more hours

F. Date(s) of contact _____

G. Site of contact

- KDES
- MSSD
- Other Gallaudet location
- Agency or locale of those contacted
- Convention or professional meeting
- Other (please specify) _____

APPENDIX F

Regression Summary Tables

Table F1
 Summary of Regression Analyses with
 Demographic Subsystem Variables (N = 624)

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
1	Job Title	.059	.004	1	Job Title	.052	.003
2	Hearing Loss	.228	.048	2	Sex	.103	.007
3	Sex	.259	.015	3	Hearing Loss	.120	.004
4	Age	.261	.001	4	Age	.123	.001

Table F2
 Summary of Regression Analyses with
 Cognitive Variables (N = 624)

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
1	Discipline	.138	.019	1	Discipline	.086	.008
2	Educational Level	.221	.030	2	(see below ^a)		

^aEducational Level did not contribute significantly to the prediction of Attitude Toward the Change Agent and did not enter the regression equation.

Table F3

Summary of Regression Analyses with Affective Subsystem Variables

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
1	Attitude Toward Change Agent	.087	.007	1	Job Satisfaction	.200	.040
2	Job Satisfaction	.101	.003	2	Attitude Toward Change	.213	.005
3	Alienation	.103	.001	3	Alienation	.223	.004

Table F4

Summary of Regression Analyses with Motivational Subsystem Variables

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
1	Job Motivation	.104	.011	1	Job Motivation	.144	.021
2	N. Meetings Attended	.121	.004	2	N. Meetings Attended	.155	.003
3	N. Subscriptions	.144	.005	3	N. Subscriptions	.161	.001
4	N. Professional Group Affiliations	.149	.001	4	N. Publications	.161	.000 ^a
5	N. Publications	.149	.000 ^a	5	(see below ^b)		

^a $R_{\Delta}^2 < .001$

^bThe fifth variable, Number of Professional Group Affiliations, did not contribute significantly to the prediction of the criterion variable and did not enter the regression equation.

Table F5

Summary of Regression Analyses with Life-Cycle Subsystem Variables

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
1	Preferred Time in Position	.301	.091	1	Actual Years in Position	.099	.010
2	Actual Number of Years in Position	.320	.012	2	Preferred Time with Organization	.154	.014
3	Preferred Time in Organization	.327	.004	3	Preferred Time in Profession	.157	.001
4	Expected Time in Profession	.328	.001	4	Actual Years in Position	.159	.001
5	Actual Years in Organization	.328	.000	5	Actual Years in Profession	.159	.000 ^a
6	Actual Years in Profession	.328	.000	6	(see below ^b)		

^aless than .001

^bThe sixth potential predictor variable, Preferred Number of Years in Current Position, did not contribute significantly to the prediction of the criterion.

Table F6

Summary of Regression Analyses with Situational Subsystem Variables

Criterion Variable							
Attitude Toward Change				Attitude Toward Change Agent			
Step	Variable	R	R_{Δ}^2	Step	Variable	R	R_{Δ}^2
1	Location	.078	.005	1	Location	.051	.003
2	Program Type	.171	.023	2	Program Type	.120	.011
3	Degree of Centralization	.181	.004	3	Organizational Climate	.152	.008
4	Organizational Climate	.182	*	4	Locus of Administrative Control	.154	.001
5	Locus of Administrative Control	.182	*	5	Degree of Formalization	.156	.001
6	Degree of Formalization	.182	*	6	Degree of Centralization	.157	*

*less than .001.

REFERENCES

- Aiken, M. & Hage, J. Organizational interdependence and organizational structure. American Sociological Review, 1968, 33, 912-930.
- American annals of the deaf: directory of programs and services, 1976, 121(2).
- Baehr, M. E., & Renck, R. The definition and measurement of employee morale. Administrative Science Quarterly, 1958, 3, 157-184.
- Bennis, W. G. Changing organizations. New: McGraw Hill, 1966.
- Bernhardt, I. & Mackenzie, K. D. Some problems in using diffusion models for new products. Management Science, 1972, 19, 187-200.
- Betz, E. L. Need-reinforcer correspondence as a predictor of job satisfaction. Personnel and Guidance Journal, 1969, 18, 12-28.
- Bidwell, C. G. The school as a formal organization. In J. G. March (Ed.). The Handbook of Organizations. Chicago: Rand McNally, 1965.
- Blackman, L. S. Research and the classroom: Mahomet and the mountain revisited. Exceptional Children, 1972, 34(3), 181-191.
- Boyan, N. F. Problems and issues of knowledge production and utilization. In T. L. Eidell & J. M. Kitchel (Eds.), Knowledge production and utilization in educational administration. Portland, Oregon: University of Oregon, Center for the Advanced Study of Educational Administration, 1968.
- Brayfield, A. H. & Rothe, H. F. An index of job satisfaction. Journal of Applied Psychology, 1951, 35, 307-311.

- Brayfield, A. H., Wells, R. V., & Strate, M. W. Interrelationships among measures of job satisfaction and general satisfaction. Journal of Applied Psychology, 1957, 41, 201-205.
- Brickell, H. M. Conceptual strategies for utilizing research and development products in education. Columbus, Ohio: Ohio State University Center for Vocational and Technical Education, 1974.
- Carlson, R. O. School superintendents and adoption of modern math: a social structure profile. In M. B. Miles (Ed.), Innovation in education. New York: Teachers College Press, 1964.
- Carlson, R. O. Adoption of educational innovations. Eugene, Oregon: University of Oregon, 1965. (a)
- Carlson, R. O. Barriers to change in public schools. In change processes in public schools. Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965. (b)
- Carter, L. F. Knowledge production and utilization in contemporary organizations. In T. L. Eidell & J. M. Kitchel, Knowledge production and utilization in educational administration. Portland, Oregon: University of Oregon, Center for the Advanced Study of Educational Administration, 1968. (ERIC Document Reproduction Service No. ED 024 112)
- Clark, J. P. Measuring alienation within a social system. American Sociological Review, 1969, 24, 849-852.
- Clark, T. N. Institutionalization of innovations in higher education: four models. Administrative Science Quarterly, 1968, 13, 1-25.

- Dean, D. G. Meaning and measurement of alienation. American Sociological Review, 1961, 26, 753-758.
- Deutscher, I. What we say what we do: sentiments and acts. San Francisco: Scott, Foreman & Co., 1973.
- Dykens, J. W., Hyde, R. W., Orzark, L. H. & York, R. H. Strategies of mental health change. Boston: Massachusetts Department of Mental Health, 1964.
- Evan, W. M., & Black, G. Innovation in business organizations: some factors associated with success or failure of staff proposals. The Journal of Business, 1967, 40, 519-530.
- Ewen, R. B. Weighting components of job satisfaction. Journal of Applied Psychology, 1967, 51, 68-73.
- Fantini, M. D. Participation, decentralization, community control and quality education. Teachers College Record, 1969, 71, 93-106
- Farr, R. S. Knowledge linkers and the flow of educational information. An occasional paper from ERIC at Stanford, September 1969.
- Gallaudet College, Pre-college Programs. Educational change: the role of the pre-college program. Washington, D.C.: Author, 1976.
- Giacquinta, J. B. Status, risk and receptivity in complex organizations: a study of the responses of four groups of educators to the proposed introduction of sex education in elementary school. Sociology of education, 1975, 48, 35-58. (a)
- Giacquinta, J. B. Status risk-taking: a central issue in the implementation of public school innovation. Journal of Research and Development in Education, 1975, 9(1), 103-116. (b)

- Glaser, E. M., & Taylor, S. H. Factors influencing the success of applied research. American Psychologist, 1973, 28, 140-146.
- Goldhammer, K. Implications for change in training programs. In T. L. Eidell & J. M. Kitchel (Eds.), Knowledge production and utilization in educational administration. Portland, Oregon: University of Oregon, Center for the Advanced Study of Educational Administration, 1968.
- Graen, G. B., Dawis, R. V., & Weiss, D. J. Need type and job satisfaction among industrial scientists. Journal of Applied Psychology, 1968, 52, 286-289.
- Griffiths, D. E. Administrative theory and change in organizations. In M. B. Miles (Ed.), Innovation in education. New York: Teachers College Press, 1973.
- Gross, N., Giacquinta, J. B., & Berstein, M. Implementing organizational innovations. New York: Basic Book, Inc., 1971.
- Gruenfeld, L. W., & Foltman, E. F. Relationships among supervisors' integration, satisfaction and acceptance of technological change. Journal of Applied Psychology, 1967, 51(1), 74-77.
- Guba, E. G. Development, diffusion and evaluation. In T. L. Eidell & J. M. Kitchel (Eds.), Knowledge production and utilization in educational administration. Portland, Oregon: University of Oregon, Center for the Advanced Study of Educational Administration, 1968.
- Guba, E. G., & Brickell, H. M. Conceptual strategies for utilizing research and development products in education. Columbus, Ohio: Ohio State University, Center for Vocational and Technical Education, 1974. (ERIC Document Reproduction Service No. ED 098 435)

- Hage, J., & Aiken, M. Program change and organizational properties: a comparative analysis. The American Journal of Sociology, 1967, 72, 503-519. (a)
- Hage J., & Aiken, M. Relationship of centralization to other structural properties. Administrative Science Quarterly, 1967, 12, 72-92. (b)
- Hage, J., & Aiken, M. Routine technology, social structure and organizational goals. Administrative Science Quarterly, 1969, 14, 366-376.
- Hage J., & Aiken, M. Social change in complex organizations. New York: Random House, 1970.
- Halloran, J. D. Attitude formation and change. Leicester, England: Leicester University Press, 1967.
- Halpin, A. W. Theory and research in administration. New York: The MacMillan Co., 1966.
- Havelock, R. G. Knowledge utilization and dissemination: a bibliography. Ann Arbor: The University of Michigan, Institute of Social Research, 1968. (a)
- Havelock R. G. Dissemination and translation roles. In T. L. Eidell and J. M. Kitchel, Knowledge Production and Utilization in Educational Administration. Portland, Oregon: Center for the Advanced Study of Educational Administration, 1968. (b)
- Havelock, R. G. A comparative study of the literature on the dissemination and utilization of scientific knowledge. Ann Arbor: The University of Michigan, Institute for Social Research, 1969. (ERIC Document Reproduction Service No. ED 029 171) (a)
- Havelock, R. G. Planning for innovation through dissemination and

- utilization of knowledge. Ann Arbor, Michigan: Center for Utilization of Scientific Knowledge of the Institute for Social Research, 1969. (b)
- Havelock, R. G. Translating theory into practice. Rehabilitation Record, 1969, November-December, 24-27. (c)
- Havelock, R. G. The utilization of educational research and development. British Journal of Educational Technology, 1971, 2, 84-98.
- Havelock, R. G. The change agent's guide to innovation in education. Englewood Cliffs, N. J.: Educational Technology Publications, 1973.
- Havelock, R., & Paisley, W. J. Recommendations for the dissemination program of the National Institute of Education concerning (1) needed research on the dissemination process, (2) strategies for NIE's own dissemination and utilization effort. Washington, D.C.: National Institute of Education, 1972. (ERIC Document Reproduction Service No. ED 088 413).
- Hess, R. J., & Rogers, A. M. Teacher variation in program implementation and student achievement of program objectives. Paper presented at AERA Annual Meeting, New York, 1977.
- Katz, E. The social itinerary of technical change: two studies on the diffusion of innovation. In W. G. Bennis, K. D. Benne, & R. Chin (Eds.), The planning of change. New York: Hold, Rhinehart & Winston, 1969.
- Kelman, H. C. Processes of opinion change. In W. G. Bennis, K. D. Benne, & R. Chin (Eds.), The planning of change. New York: Holt, Rinehart, & Winston, 1969.

- Kerlinger, F. N., & Pedhazur, E. J. Multiple regression in behavioral research. New York: Holt, Rhinehart & Winston, 1973.
- Kim, Jae-On. Factor analysis in statistical package for the social sciences. New York: McGraw-Hill, 1975, 468-508.
- Kirst, M. W. Governance of elementary and secondary education: a research synthesis. Paper presented at AERA annual meeting. San Francisco, 1976.
- Krech, D., & Crutchfield, R. S. Theory and problems of social psychology. New York: McGraw-Hill, 1948.
- Krech, D., Crutchfield, R. S., & Ballachey, E. L. Individual in society. New York: McGraw-Hill, 1962.
- Lawler, M. R. Guidelines for developing strategies for introducing planned curricular innovations. In M. R. Lawler (Ed.), Strategies for planned curricular innovation. New York: Teachers College Press, 1970.
- Leary, P. A. The change agent. Journal of Rehabilitation, January-February, 1972, 30-33.
- Lionberger, H. F. Strategy implications for planned curricular changes in education: inferences from diffusion research. In M. R. Lawler (Ed.), Strategies for planned curricular innovation. New York: Teachers College Press, 1970.
- Lippitt, G. L. Organizational renewal. New York: Appleton-Century-Crofts, 1969.
- Loy, J. W. Social psychological characteristics of innovators. American Sociological Review, 1969, 34(1), 73-82.

- McCutcheon, J. R., & Sanders, J. R. Diffusion strategy guide.
Washington, D.C.: Office of Education, DHEW, 1973. (ERIC Document
Reproduction Service No. ED 090 919).
- Messick, S. Research methodology for educational change. Educational
change: implications for measurement. Princeton, N. J.: Educational
Testing Service, 1971.
- Miles, M. B. Educational innovation: the nature of the problem. In
M. B. Miles, (Ed.), Innovation in education. New York: Columbia
University Press, 1964.
- Miles, M. B. Planned change and organizational health: figure and
ground. In Change processes in public schools. Eugene, Oregon:
University of Oregon, Center for the Advanced Study of Educational
Administration, 1965.
- Miles, M. B. Training for research utilization. New York: Teachers
College Press, 1966. (ERIC Document Reproduction Service, No.
ED 012 103).
- Miles, M. B. Some properties of schools as social systems. In G. Watson
(Ed.), Change in school systems. National Training Laboratory,
1967, 1-29.
- Mohr, L. B. Determinants of innovation in organization. American
Political Science Review, 1969, 63, 111-126.
- Mort, P. R. Studies in educational innovation from the Institute of
Administrative Research: an overview. In M. B. Miles (Ed.),
Innovation in education. New York: Teachers College Press, 1973.
- Morton, A. K. Provoking educational change within existing academic
structures. AEDS Journal, 1975, 8, 79-89.

- National Institute of Education. Program plan, FY 1977: dissemination and resources group. Washington, D.C.: Author, 1975.
- Neal, A. G., & Rettig, S. Dimensions of alienation among manual and non-manual workers. American Sociological Review, 1963, 28, 599-608.
- Neal, A. G., & Seeman, M. Organizations and powerlessness: a test of the mediation hypothesis. American Sociological Review 1964, 29, 216-226.
- Nettler, G. A measure of alienation. American Sociological Review, 1957, 22, 670-677.
- Niehoff, A. The primary variables in directed cross-cultural change. Alexandria, Virginia: George Washington University, 1964.
- Paisley, M. B., & Paisley, W. J. Two papers on educational innovation and dissemination. (1) Educational innovation: substance and process. (2) "Post Sputnik" trends in educational dissemination systems. Stanford: California Institute for Communications Research, 1973. (ERIC Document Reproduction Service No. ED 088 496)
- Patchen, M. Some questionnaire measures of employee motivation and morale. Ann Arbor: Survey Research Center, University of Michigan, 1965.
- Paul, D. A. The diffusion of an innovation through inter-organizational linkages. Educational Administration Quarterly, 1976, 12(2), 18-37.
- Pearlin, L. L. Alienation from work; a study of nursing personnel. American Sociological Review, 1962, 27, 314-326.
- Pellegrin, R. J. Problems and assumptions in the implementation of innovation. Journal of Research and Development in Education, 1975, 9,

93-102.

- Pelz, D. C., & Andrews, F. M. Scientists in organizations: climates for research and development. New York: Wiley & Sons, 1966.
- Piele, P. K. Review of recent literature on educational diffusion research. New Mexico: National Federation for the Improvement of Rural Education, 1970. (ERIC Document Reproduction Service No. ED 050 486)
- Pincus, J. Incentives for innovation in the public schools. Review of Educational Research, 1974, 44(1), 113-144.
- Price, J. L. Handbook of organizational measurement. New York: D.C. Heath Co., 1972.
- Pug, D. S., Hickson, D. G., Hinings, C. R., MacDonald, K. M., Turner, C., & Lupton, T. A conceptual scheme for organizational analysis. Administrative Science Quarterly, 1963, 8, 289-315.
- Pugh, D. S., Hickson, D. J., Hinings, C. R., & Turner, C. Dimensions of organization structure. Administrative Science Quarterly, 1968, 13, 65-105.
- Pulliam, W. At Jericho, the walls came tumbling down. Social Education, 1973, 37, 196-200.
- Rogers, E. M., & Jain, N. C. Needed research on diffusion within educational organizations. Paper presented at National Conference on the Diffusion of Educational Ideas, East Lansing, Michigan, 1968.
- Rogers, E. M. with Shoemaker, F. F. Communication of innovations: a cross-cultural approach (2nd ed.). New York: The Free Press, 1971.
- Rosher, M. M. Administrative controls and innovation. Behavioral Science, 1968, 13, 36-43.

- Schmuck, R. Social psychological factors in knowledge utilization. In T. L. Eidell & J. M. Kitchel (Eds.). Knowledge production and utilization in educational administration. Portland: University of Oregon, Center for the Advanced Study of Educational Administration, 1968.
- Schumacher, S. Limitations of a research, development and diffusion strategy in diffusion: a case study of nine local implementations of a state-adopted curriculum. St. Ann, Mo.: Central Midwestern Regional Educational Laboratory, 1972. (ERIC Document Reproduction Service No. ED 076 464).
- Seeman, M. On the meaning of alienation. American Sociological Review, 1959, 24, 783-791.
- Seeman, M. Alienation and social learning in a reformatory. The American Journal of Sociology, 1963, 69, 270-284.
- Seeman, M. On the personal consequences of alienation in work. American Sociological Review, 1967, 32, 273-285.
- Seeman, M., & Evans, J. W. Alienation and learning in a hospital setting. American Sociological Review, 1962, 27, 772-782.
- Sheppard, H. A. Innovation resisting and innovation producing organizations. Journal of Business, 1967, 40, 470-477.
- Sieber, S. D. Organizational influences on innovative roles. In T. L. Eidell & J. M. Kitchel (Eds.), Knowledge production and utilization in educational administration. Portland: University of Oregon, Center for the Advanced Study of Educational Administration, 1968.
- Sieber, S. D. Trends in diffusion research: knowledge utilization. Viewpoint, 1974, 50(3), 61-81.

Sieber, S. D. Knowledge utilization strategies in the design and implementation of new schools - symbolic functions. Paper presented at AERA annual meeting, San Francisco, 1976.

Social Science Education Consortium, Inc. National seminar on the diffusion of new instructional materials and practices. 1.0 are there characteristics of particular subject matters that make products which are based on them more or less likely to be adopted? and 2.0 are there characteristics of developers that tend to inhibit or encourage use of their ideas and products? Boulder, Co.: Author, 1973. (ERIC Document Reproduction Service No. ED 083 113).

Social Science Education Consortium, Inc. National Seminar on the diffusion of new instructional materials and practices. 3.0 Product characteristics: what are the characteristics of educational products that make them more or less likely to be diffused? Boulder, Co.: Author, 1973. (ERIC Document Reproduction Service No. ED 083 114)

Social Science Educational Consortium, Inc. National seminar on the diffusion of new instructional materials and practices: characteristics of the communications network: what are the communication mechanisms within the diffusion system that encourage or discourage the diffusion of innovation? Boulder, Co.: Author, 1973. (ERIC Document Reproduction Service No. ED 083 116).

Spivey, R., Madey, D., Baker, J., Chien, N. H., & Lohmueller, M. Report and recommendations of the interstate project on dissemination: executive brief. Washington, D.C.: National Institute of Education, 1976.

- Stern, L. W., Craig, C. S., LaGreca, A. J., & Salem, R. G. The effect of sociometric location on the adoption of an innovation within a university faculty. Sociology of Education, 1976, 49, 90-96.
- Talacchi, S. Organization size, individual attitudes and behavior: an empirical study. Administrative Science Quarterly, 1960, 5, 398-420.
- Taylor, R. E. In E. G. Guba & H. M. Brickell (Eds.), Forward to conceptual strategies for utilizing research and development products in education. Columbus: Ohio State University, 1974.
- Thompson, V. A. Bureaucracy and innovation. Administrative Science Quarterly, 1965, 10, 1-20.
- Trumbo, D. A. Individual and group attitudes toward work-related change. Journal of Applied Psychology, 1961, 45, 338-344.
- Tucker, M. S. Program plan: group on school capacity for problem solving. Washington, D.C.: National Institute of Education, 1975.
- Turnbill, B. J. Promoting change in schools: a diffusion casebook. San Francisco: Far West Laboratory for Educational Research and Development, 1974. (ERIC Document Reproduction Service No. ED 090 679).
- Wayland, S. R. The context of innovations: some organization attributes of schools. In M. R. Lawler (Ed.), Strategies for planned curricular innovation. New York: Teachers College Press, 1970.
- Wayland, S. R. Structural features of American educations as basic factors in innovation. In M. B. Miles (Ed.), Innovation in education. New York: Teachers College Press, 1973.
- Widmer, J. M. What makes innovation work in Massachusetts: strategies for state and local systems. Paper presented at AERA annual meeting.

Washington, D.C., 1975. (ERIC Document Reproduction Service No. ED 103 960).

Wilensky, H. L. Work as a social problem. In H. S. Becker, Social problems: a modern approach. New York: Wiley, 1966.

Wolf, W. C. Utilizing effective diffusion strategies. Presented at AERA annual meeting, Washington, D.C., 1975. (ERIC Document Reproduction Service No. ED 102 671)

Wolf, W. C., Jr., & Fiorino, A. J. A study of educational knowledge diffusion and utilization. New York: MacMillan Information, 1973. (ERIC Document Reproduction Service No. ED 061 772).

Zimmerman, R. E., & Williams, J. D. Personality characteristics of innovative and non-innovative teachers. Psychological Reports, 1971, 29, 343-346.

**The two page vita has been
removed from the scanned
document. Page 1 of 2**

**The two page vita has been
removed from the scanned
document. Page 2 of 2**

INTRA-PERSONAL VARIABLES AND CHARACTERISTICS OF INTERACTIONS BETWEEN
CHANGE AGENT AND CLIENT: THEIR PREDICTIVE RELATIONSHIP TO ATTITUDES
TOWARD CHANGE AND TOWARD THE CHANGE AGENT

by

Norma K. Clark

(ABSTRACT)

The study examined: (1) the relative contributions of six intra-personal subsystems of potential adopters of innovations in accounting for attitudes toward change and toward the change agent; and, (2) the characteristics of diffusion strategies associated with modifications in attitudes toward change and toward the change agent.

Administrators and teaching faculty (N = 624) from 103 secondary level programs for the hearing impaired participated in the study. Data for the study were obtained in three ways: (1) initial questionnaire to obtain indices of intra-personal characteristics; (2) a similar follow-up questionnaire seven months after the initial questionnaire; and, (3) records of interactions between change agency personnel and staff in the 103 participating programs.

Six intra-personal subsystem scores were derived from the 26 intra-personal characteristics using a priori subsystem assignment based on Paisley's (1973) model of the change process. Multiple regression analyses yielded no substantial predictive relationships for either of the two research questions. Cross validation analyses on the regression analyses indicated substantial shrinkage in already inconsequential predictive power.

Possible explanations for the lack of predictive relationships are discussed. Suggestions for future research include: (1) refinements in procedures to continue investigation into the research questions attempted in this study; (2) use of multiple criterion variables; (3) use of simulation or gaming techniques to overcome methodological difficulties; and (4) investigation into organizational and administrative factors which are related to innovation and change within educational settings.