THE ATTITUDES EXPRESSED TOWARD INSTRUCTIONAL DEVELOPMENT BY THREE GROUPS AS A FUNCTION OF SELECTED PROFESSIONAL VARIABLES

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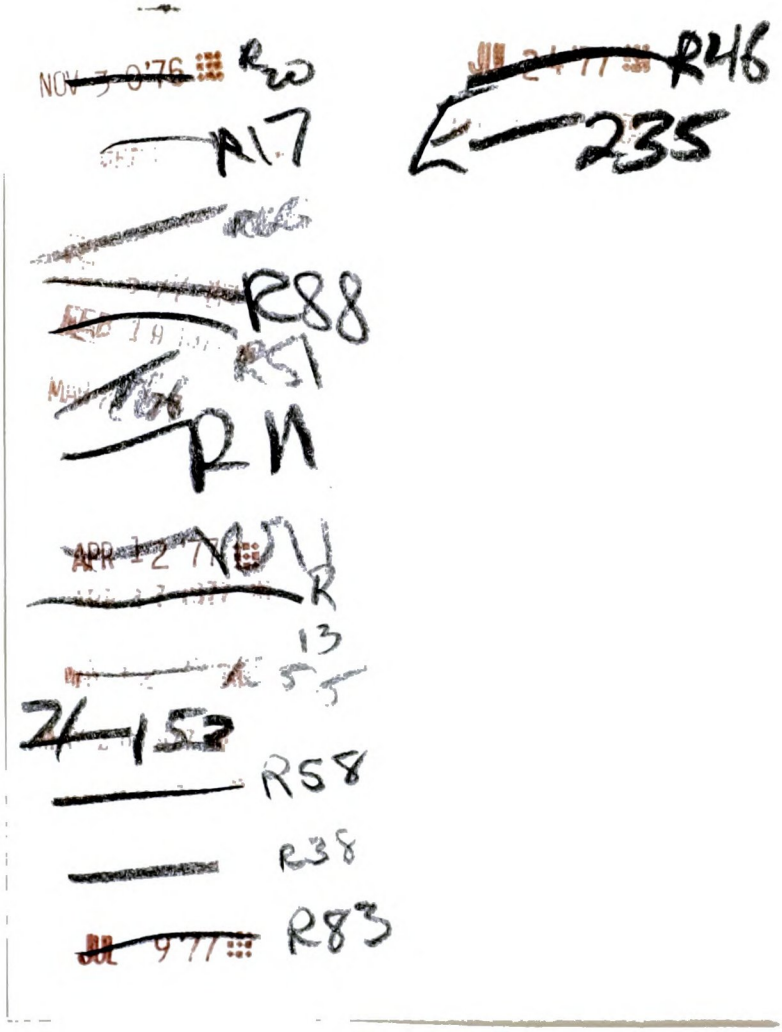
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ABSTRACT

THE ATTITUDES EXPRESSED TOWARD INSTRUCTIONAL DEVELOPMENT BY THREE GROUPS AS A FUNCTION OF SELECTED PROFESSIONAL VARIABLES

By

Richard Joseph Boutelle

The purpose of this study was to determine the degree of difference in expressed attitudes toward instructional development which existed across three groups as a function of their: (1) professional responsibility; (2) curricular responsibility; and (3) highest degree earned.

The population for this study consisted of 31 participants in an Instructional Development Institute conducted in Toledo, Ohio, 46 graduate students enrolled in Education 831A at Michigan State University, and 33 professional educators from the East Lansing Public School System.

A fifty-item Likert-type questionnaire, Attitude Toward Instructional Development and a demographic sheet developed specifically for use in the study, were administered to gather data. Each of the fifty items in the original attitude instrument contained 5 response categories.

Prior to its use in the data gathering capacity, the attitude instrument was administered to 43 graduate students

enrolled in Education 831A during the 1972 winter quarter at Michigan State University. The instrument was then subjected to Guttman Scalogram Analysis in order to determine its unidimensionality. The analysis resulted in the elimination of 26 items from the original instrument and the resultant modified version contained 24 items which yielded an acceptable reproducibility coefficient of .85.

Univariate analyses of variance were utilized to test the hypotheses at the .05 level. The analyses support the following conclusions:

1. The level of professional responsibility (teacher, administrator, policy maker, and specialist) has no significant effect upon the attitudes which are expressed toward instructional development.

2. No significant differences in attitude toward instructional development were found to exist when teachers were classified as having an academic or non-academic curricular responsibility.

3. No significant differences in attitude toward instructional development were found when teachers were grouped according to the degree held.

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By

Richard Joseph Boutelle

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CHAPTER I

THE PROBLEM

Introduction

Instructional development (ID), still in the early stages of growth, is a more familiar concept in the military and industrial training context than it is in the public school and higher education settings. The relative newness and unfamiliarity of the concept in education are reflected in the professional media and ID literature. One encounters numerous articles which define, describe, and clarify the concept for professional educators at all levels of responsibility.

Miller describes ID as being (in essence) little more than ". . . a nurturing of innovative practices in the educational community."[1] He further clarifies his view by defining nurturing as, ". . . the creation of conditions for innovators that are advantageous for their work."[2] Dale Hamreus, on the other hand, defines ID as, ". . . a systematic process of

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[1]Elwood E. Miller. Directions for Instructional Development. A Paper presented to the Symposium on Instructional Development, Michigan State University, May 3 and 7, 1971, p. 2.

[2]Miller, ibid., p. 2.

bringing relevant instructional goals into effective learning activity."[3] Gustafson states the following: "Perhaps the best way to define ID is to say it is a process for improving the quality of instruction."[4]

Still others, feeling a need to be concise and precise, describe ID as the application of systems theory to the design of instruction and the solution of related educational problems. Banathy, for instance, views the concept as ". . . a pragmatic application of the scientific method . . . (and) it is common sense by design."[5]

The President's Commission on Instructional Technology has offered the following definition of instructional technology which also serves as a most comprehensive and exacting definition of the concept of instructional development:

> . . . a systematic way of designing, carrying out and evaluating the total process of learning and teaching in terms of specific objectives based on research and human learning and communication and employing a combination of human and non-human resources to bring about more effective instruction.[6]

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[3]Dale G. Hamreus. Toward A Definition of Instructional Development. A paper presented at the 1971 AECT Annual Convention, Philadelphia, Pennsylvania, March 24, 1971, p. 2.

[4]Kent L. Gustafson. Toward A Definition of Instructional Development. A paper presented to the Symposium on Instructional Development, Michigan State University, May 3 and 7, 1971, p. 1.

[5]Bela Banathy. Instructional Systems. Fearon Publishers, Palo Alto, California, 1968, p. 16.

[6]Commission on Instructional Technology. To Improve Learning: A Report to the President and the Congress of the United States. Washington, D. C.: U. S. Government Printing Office, 1970, p. 5.

In spite of an evident variation with regard to sophistication and detail, each of the definitions or descriptions presented here and others in the literature implies that ID is a process, a way of attempting to solve educational problems and designing instruction so as to improve teaching and learning. Hamreus addresses himself to the implication of process as follows: ". . . emergent models of ID have been 'process oriented,' i.e., defining instructional development in terms of the procedures and/or steps required to produce the desired outcomes (products)."[7]

Instructional development, then, is a systematic process used to improve the process of instruction in an effort to insure learning which is of higher quality and of greater efficiency.

Statement of the Problem

It is the purpose of this study to determine whether selected professional characteristics of three groups of educators contribute to differences in their expressed attitudes toward instructional development. The three professional characteristics considered in this study are: (1) level of professional responsibility (teacher, administrator, board member, specialist); (2) curricular responsibility (academic/subject-centered or non-academic/skill-centered); and (3) the highest degree earned.

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[7]Hamreus, op. cit., p. 2.

A modification of the instrument, Attitude Toward Instructional Development, an attitude assessment scale produced under a grant by the United States Office of Education is used in this study to measure the attitudes of the three groups toward instructional development.

Need for the Study

Group dynamics and human relations have always been viewed as critical factors with respect to the conduct of ID efforts. In spite of this awareness, the emphasis in the ID literature has been directed toward other components of the total process. Witt contends that, ". . . the leaders in instructional development have not given these factors as much or as serious attention as they have given to the process by which instruction should be designed."[8] Most recent readings tend to indicate a general shift toward a more appropriate emphasis on the human element.

In a recent paper presented to ID students at Michigan State University, Witt asserts that while the process itself is aimed at the creation of a product, more effective teaching and learning, ". . . it is directly concerned with interpersonal relations and cooperative endeavor and its immediate goal is to facilitate and maximize the productivity of the individual and joint efforts of the people who are engaged in the instructional

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[8]Witt, op. cit., p. 16.

development activity."[9] Gustafson is even more emphatic and explicit with respect to the emphasis which must be placed upon the human component. He expresses this view as follows:

> Without a doubt the most important element of the ID system is people. People are its energy, its insight, its product and its consumer. To engage in ID is to change people. . . . To ignore any segment of the population is to invite frustration and probable failure. . . . A balance must be struck between product development and people development.[10]

Because of the primacy of the human element and the need to conduct ID as a team effort whenever possible, it has become necessary for the professionals in the field of instructional development to initiate assessments of the attitudes which educators in the field hold toward ID.

Presently, the literature provides little data regarding the manner in which educators at various levels of responsibility perceive the ID process and its application in the academic setting. Still further, there is little data regarding the extent to which educators are willing to accept the practicing developer as an active and equal partner in the instructional enterprise.

Gustafson states the following concerning the dilemma which the lack of data creates for the developer who is currently practicing in the field and for the professional who is about to move out into the field with his initial ID responsibility: ". . . much of what is done is still based on the

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[9]Witt, ibid., p. 18.

[10]Gustafson, op. cit., p. 6.

biases and heuristics of those who engage in ID. Many decisions are made (by the developer) with minimal data and represent someone's best guess."[11] Such a complete lack of data may well contribute to rather aimless and ineffectual ID activity over an extended period of time.

A study by Kelley[12] concerning teacher attitudes toward the utilization of audiovisual materials in classroom instruction provides a knowledge of attitudes about only a minor aspect of the total ID process. It should not be inferred that any sample population's attitudes toward media would be similar to their attitudes toward ID. The reason being that the application of systems theory to the design, carrying out, and evaluation of instruction (ID) is a totally different concept than is the utilization of audiovisual materials as instructional aids (media).

Since a major aspect of the instructional developer's professional role is one of facilitating the widespread acceptance and utilization of the ID process, his role very closely approximates that of an innovation diffusion change-agent. His diffusion responsibility is one of creating an environment which is conducive to the acceptance of what has been classified by the diffusion people as "planned change."

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[11]Gustafson, ibid., p. 15.

[12]Gaylen B. Kelley. "A Study of Teachers' Attitudes Toward Audiovisual Materials." Educational Screen and Audiovisual Guide, Vol. 39, March 1960, pp. 119-121.

In light of this function, the attitudes of those within the general academic setting are extremely significant or influential in that they represent the climate of acceptance into which ID must be introduced.

Numerous authors have expressed their concern with regard to the kind of environment or climate which exists in education with respect to professional change of any kind. Witt, for example, states that:

> The history of innovation in American education makes it clear that a new process or practice such as instructional development, no matter how promising, is not likely to be widely adopted in a brief period of time. In view of what has almost always happened in the past, quite the contrary is likely to happen.[13]

Evans is very surely in agreement with Witt's perception regarding education's history of resistance to change:

> . . . social institutions rarely include mechanisms for facilitating change . . . (and) the greatest resistance to change will be found in those institutions whose traditional primary function has been the perpetuation of a society's folkways, mores, and values, such as religious and educational institutions. In general, changes in educational methods have been exceedingly slow, due primarily to the climate of resistance and the educator's often outright hostility toward change.[14]

Such a climate of general resistance to change makes an assessment of attitudes toward ID imperative in order to identify those educators who are either favorable toward ID or who are less negative toward the concept that one might

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[13]Witt, op. cit., p. 18.

[14]R. I. Evans. In collaboration with Peter K. Leppmann. Resistance to Innovation in Higher Education. San Francisco: Jossey-Bass Inc., Publishers, 1968, p. 213.

conclude them to be in view of their past record of resistance.

The identification of opinion leaders within the client-system is an extremely logical first step for a developer and an assessment of attitudes would serve as a sound basis for identifying these individuals. The identification and utilization of key persons (opinion-leaders) within a system is a practice which is consistent with general diffusion strategy: "Change-agents often use opinion leaders within a given school system to prime the pump of planned change."[15]

This study represents an attempt to provide some attitudinal data for instructional developers for their use in planning strategies for the conduct of specific ID projects and for general diffusion activities as well.

Furthermore, this study represents an attempt to provide useful baseline data to serve in directing future investigations of a similar nature which are more comprehensive in scope. Also, the attitudinal data gathered within the scope of this study, regardless of the determined positiveness or negativeness of the attitudes, could serve as guidelines for the development of both preservice and inservice ID instruction. It seems rather apparent that some data regarding educators' attitudes toward ID is needed.

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[15]Everett M. Rogers and F. Floyd Shoemaker. Communication of Innovations: A Cross-Cultural Approach. New York: The Free Press, 1971, p. 19.

Definition of Key Terms

A number of terms used in this study are commonly found in the innovation diffusion literature and are defined below in order to facilitate the reader's comprehension.

Attitude

> . . . The degree of positive or negative affect associated with some psychological object. Psychological object is simply a generic term for any concept, issue, institution, ideal, person or group toward which individuals may have positive or negative feelings.[16]

Attitude Scale

> . . . A quantitative method for assessing an individual's relative position along a unidimensional attitude continuum. The direction and intensity of the respondent's attitude are indicated by a single score which summarizes his responses to a series of items, each of which is related to the single concept, object, or issue under study.[17]

Decision Process

> . . . the mental process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject and to confirmation of this decision.[18]

Diffusion

> . . . the process by which innovations are spread to the members of a social system.[19]

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[16]Allen L. Edwards. Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1957, p. 2.

[17]Allen L. Edwards and Bette C. Porter. "Attitude Measurement." In The Affective Domain: A Resource Book for Media Specialists. Washington, D. C.: Communication Service Corporation, 1970, p. 123.

[18]Rogers and Shoemaker, op. cit., p. 99.

[19]Rogers and Shoemaker, ibid., p. 12.

Guttman Scalogram Analysis

> . . . a procedure for evaluating sets of statements or existing scales to determine whether or not they meet the requirements of a particular kind of scale, set forth in some detail by Guttman.[20]

Innovation

> . . . an idea, practice, or object perceived as new by an individual. If the idea seems new to the individual, it is an innovation . . . the "newness" aspect of an innovation may be expressed in knowledge, in attitude, or regarding a decision to use it.[21]

Change Agent

> . . . a professional who influences innovation-decisions in a direction deemed desirable by a client-system. In most cases he seeks to secure the adoption of new ideas, but he may also attempt to slow the diffusion and prevent the adoption of certain innovations.[22]

Client-System

> . . . the organization, institution, or system into which one attempts to diffuse an innovation or prevent the adoption of an innovation.

Instructional Development

> . . . is a systematic way of designing, carrying out and evaluating the total process of learning and teaching in terms of specific objectives based on research and human learning and communication and employing a combination of human and non-human resources to bring about more effective instruction.[23]

Theory and Rationale

An acceptance or recognition of instructional development as an innovation justifies drawing much of the theory and

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[20]Edwards and Porter, op. cit., p. 172.

[21]Rogers and Shoemaker, op. cit., p. 19.

[22]Rogers and Shoemaker, ibid., p. 227.

[23]President's Commission, op. cit., p. 5.

rationale for this study from the realm of innovation diffusion. Presently, there is a vast accumulation of information within the diffusion literature which appears to equate the general roles and specific strategies of the diffusion change-agent and the professional instructional developer.

Substantiating instructional development as an innovation is not difficult in view of the widely-accepted definition of an innovation which is offered in the literature by Everett Rogers. His contention is that an innovation is ". . . an idea, practice, or object perceived as new by an individual. . . . If the idea seems new to the individual, it is an innovation."[24] Furthermore, there is little in the professional media and ID literature which substantiates other than a very limited use of ID in the educational community at this time. It logically follows, then, that ID, for all practical purposes, must be viewed as an innovation.

Presently, some of the more perceptive and more concerned leaders in the ID field are somewhat pessimistic about the extent to which the process is actually known and/or accepted as being applicable in the educational or academic community. Witt expresses this concern as follows:

> 1. In general, people who make the critical decisions regarding educational programs and budgets do not recognize (likely do not know) the values to be realized through instructional development.

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[24]Rogers and Shoemaker, ibid., p. 19.

2. Teachers at all levels of education are generally unaware of instructional development and its potential for helping them increase the effectiveness and efficiency of their professional endeavors. . . .

3. Students and the public in general are likewise uninformed about instructional development and its potential for improving education. . . .[25]

Such a widespread unawareness as is suggested by the previous series of statements would appear to justify the attachment of an "innovation" label to the instructional development concept as it has been described in this study.

Innovations, whether they are envisioned as being directly applicable to the fields of education, business, industry, etc., are characterized by the diffusion people as a process or as processes of planned change. The concept of planned change; what it is, how it is accomplished (generally), and who facilitates this change is very concisely and adequately dealt with by Bennis:

> The process of planned change involves a change-agent, who is typically a behavioral scientist brought in to help a client-system, which refers to the target of change. The change-agent, in collaboration with the client system, attempts to apply valid knowledge to the client's problems. These four elements in combination--change-agent, client-system, valid knowledge, and a deliberate and collaborative relationship--circumscribe the class of activities referred to as planned change. These four elements also help to distinguish planned change from other forms of change.[26]

It should be readily apparent that ID must be characterized as planned change. Also, it is readily apparent that

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[25]Witt, op. cit., p. 19.

[26]W. G. Bennis. Changing Organizations. New York: McGraw-Hill, 1966, pp. 80-81.

Bennis, though not with direct intent, has appropriately described what ID people at Michigan State University perceive as a major role and function of the professional instructional developer--a change-agent function.

The same change-agent/developer parallel is further supported by Chin who deals more explicitly with the type of relationship which must be established by the professional if he is to experience a reasonable degree of success in his efforts:

> Planned change is implemented because of the quality of the relationship between the change-agent and the client-system. This approach does not assume that the change-agent has a solution he must get across to the client, and yet it does not reject the fact that the change-agent does have some specialized valid knowledge about new technology and procedure.[27]

Success as a developer hinges upon this person's ability to develop, within a client-system, the kind of quality relationship which is suggested by Chin. Effective communication is facilitated by such a feeling of rapport and mutual trust. Since diffusion is viewed as "a special type of communication," developers must consider the establishment of such a relationship as a prime requisite for success in each aspect of their total role.

Cooper identifies seven specific strategies which have been identified as key factors which contribute to successful diffusion activity. Inherent in each of these strategies is

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[27]Robert Chin. "The Utility of Systems Models and Development Models for Practitioners." In Warren G. Bennis and others (Eds.), The Planning of Change. New York: Holt, Rinehart and Winston, 1966, p. 333.

the quality relationship which Chin has suggested.

1. The change-agent should identify the characteristics and the needs of the client-system and base plans on them.

2. The change-agent should seek, and play a major role in, the establishment of rapport and the building of mutual trust and respect between the client-system and himself.

3. The change-agent should view the change process as a mutual, collaborative, reciprocal undertaking between the client-system and himself.

4. The change-agent should identify key leaders, formal and informal, in the client-system and work through them.

5. The change-agent should understand the communication-diffusion of innovations process and utilize it in a strategy in working with the client-system.

6. The change-agent should seek continued self-improvement in performing his role.

7. The change-agent should teach the clients to be their own change-agents, to understand the process of change, to develop self-renewing behavior.[28]

The successes and failures of the change-agent are contingent upon the degree to which he successfully achieves the above. Each of the strategies contributes to the development of a climate within a system which is conducive to the acceptance of change and is, in great measure, directly attributable to the change-agent's communication skills.

Diffusion and Attitudes

The diffusion of an innovation such as ID is a human interaction process by which one person attempts to communicate a

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[28]R. M. Cooper. "Initiating Educational Change." In Kenneth J. Hallam (Ed.), Innovations in Higher Education. Baltimore, Maryland. Towson State College, 1966, p.

new idea to one or more persons. At the most basic level the process functions as follows:

> . . . (1) a new idea, (2) individual A who has knowledge of the innovation, (3) individual B who is not yet aware of the new idea, and (4) some sort of communication channel connecting the two individuals. The nature of the social relationships between A and B determines the conditions under which A will or will not tell B about the innovation, and further, it influences the effect that the telling has on individual B.[29]

It is presently recognized that attitudes of those within a system function as very powerful variables which influence the general flow of the diffusion process. Investigations indicate that these variables influence: (1) The channels of communication chosen in the process; (2) effectiveness of communication; and (3) the time span required to reach the decision to accept or reject. These attitudes, if sufficiently negative, may even prevent one from ever reaching the decision stage.

Rogers and Shoemaker present the following conceptualization of the innovation-decision process:

1. Knowledge. The individual is exposed to the innovation's existence and gains some understanding of how it functions.

2. Persuasion. The individual forms a favorable or unfavorable attitude toward the innovation.

3. Decision. The individual engages in activities which lead to the choice to adopt or reject the innovation.

4. Confirmation. The individual seeks reinforcement for the innovation-decision he has made but he may reverse his previous decision if exposed to conflicting messages about the innovation.[30]

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[29]Rogers and Shoemaker, op. cit., p. 24.

[30]Rogers and Shoemaker, ibid., p. 103.

Each of these stages represents a situation at which one's attitudes are reinforced or changed in direction.

Bienenstok, in examining the probable influence of proposed change on organizations or institutions and the individuals who comprise them, states that, "Innovations by their very nature pose a threat to the stability and continuity of an ongoing program or system. Any change of any consequence requires some shifts in habits, beliefs, and attitudes, very often learned in emotionally compelling ways."[31] The perceived threat to individuals is indeed very real for those individuals and therefore, poses a significant challenge to the developer who must constantly interact with individuals and their attitudes and perceptions.

Further evidence of the importance of the individual and his perceptions or attitudes is inherent in the definition of innovation itself:

> . . . an idea, practice, or object perceived as new by an individual. It matters little, so far as human behavior is concerned, whether or not an idea is "objectively" new as measured by the lapse of time since its first use or discovery. It is the perceived or subjective newness of the idea for the individual that determines his reaction to it. If the idea seems new to the individual, it is an innovation.[32]

The determination or acceptance of the view that it is one's perception of an idea or a practice which establishes

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[31]Theodore Bienenstok. "Resistance to an Educational Change." Elementary School Journal, Vol. 65, May 1965, p. 420.

[32]Rogers and Shoemaker, op. cit., p. 19.

it as an innovation has influenced the manner in which the diffusion-decision process is now being conceptualized. Lin et al. assert that the individual's attitudes toward a proposed change (his perceptions of it) greatly influence the ultimate decision to either accept or reject the proposed change. The authors have labeled this phenomenon of individual perception or attitude development as innovation internalization and they have defined it as follows:

> . . . the extent to which a teacher perceives the innovation as relevant and of value to his role performance in the school. In other words, it is the degree of a teacher's attitudinal acceptance of a specific innovation.[33]

Recognizing that some decisions to accept a change within an institution are made as a result of a concensus of opinion or are, in essence, forced upon the individual by high level decisions, the individual is still recognized as a key element. Evans asserts that, "Regardless of the extent of the individual faculty member's role in the initial decision, the individual is the single most significant determiner with regard to complicance or continuation over time."[34]

Investigators continue to examine and further clarify the relationship which exists between the individual's perceptions

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[33]N. Lin, D. J. Leu, E. M. Rogers and D. F. Schwartz. The Diffusion of an Innovation in Three Michigan High Schools: Institution Building Through Change. Institute for International Studies in Education and the Department of Communication, Michigan State University, East Lansing, Mich., 1966, p. 60.

[34]R. I. Evans, op. cit., pp. 2-3.

of change and his acceptance or rejection of it. Some investigators assert that attitudinal variables function at multiple levels in the relationship. Rogers, for instance, states that, "Just as there are at least three levels of knowledge about an innovation there are at least two levels of attitudes: (1) a specific attitude toward the innovation, and (2) a general attitude toward change."[35] It is recognized at this time that one's attitudes toward a given innovation often intervene between the first exposure to or awareness of an innovation and the accept-reject decision.

There is evidence, though limited, that there is a carry-over (attitudinal) from one specific innovation to another. Previous positive experience with the adoption of an innovation tends to create an attitudinal set which seems to influence, positively, one's personal evaluation when a subsequent innovation is considered within a system. On the other hand, a previous negative experience tends to produce an opposite set of attitudes which may well lead to the development of personal resistance.

Numerous studies which have been designed and conducted with the intent of establishing a link between attitudes and innovation adoption rates have succeeded in isolating four factors which appear to bear directly upon that rate. Though Rogers and Shoemaker have labeled these factors as characteristics of innovations, they very clearly represent foci about

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[35]Rogers and Shoemaker, op. cit., p. 110.

which individuals develop a set of attitudes, thus establishing a climate into which a given innovation must be diffused:

1. Relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes.

2. Compatibility is the degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of receivers.

3. Complexity is the degree to which an innovation is perceived as difficult to understand and use.

4. Trialability is the degree to which an innovation may be experimented with on a limited basis.[36]

Both levels of attitudes to which Rogers has made reference appear to play a very vital role in determining innovation adoption rate. One's attitude toward change in general influences the development of the attitudes toward a specific innovation with respect to its (1) relative advantage, (2) compatibility, (3) complexity, and (4) trialability.

Kelley's study regarding the attitudes of teachers toward the use of audiovisual materials (cited earlier) supports the significance of attitudes. He concluded that teachers' attitudes had a greater influence on their use than did their knowledge about the materials or their skill in using them.

Classon[37] concluded from her 1963 study with elementary school teachers that a careful study of attitudes is a

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[36]Rogers and Shoemaker, ibid., pp. 22-23.

[37]M. E. Classon. A Correlation Study of Elementary School Teachers' Attitudes Toward Children and Teaching and Toward Supervision. Unpublished Dissertation, Colorado State College, 1963.

necessity before attempting to improve or develop any kind of educational program.

Investigations over the years appear to have provided sufficient proof that attitudes within any given system greatly determine the outcome of diffusion efforts within that system. Furthermore, the attitudes of each individual within a system demand serious consideration since these attitudes greatly determine compliance with and continuation of authority-type decisions over long periods of time.

Establishing the influential role played by attitudes with respect to diffusion has implication for this study only to the extent that a strong relationship between attitudes and behavior can be determined or supported. Any assessment of attitudes toward ID is rather irrelevant and useless unless attitudes will serve as reliable predictors of behavior--a willingness to become actively involved in ID activities at a future time.

Attitudes and Behavior

In spite of the recognition that one's attitudes predispose his actions in certain situations, they alone are not considered to be the sole determinants of overt behavior. Numerous studies have shown very definite inconsistencies between verbally expressed attitudes and subsequent overt behavior, as evidenced by the classic study conducted by LaPiere.[38]

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[38]R. T. LaPiere. "Attitudes vs. Actions," Social Forces, 1934, Vol. 13.

The controversy over the attitude-behavior relationship has existed since the concept of attitude was first established by Thomas and Znaniecki[39] (1918) and later reaffirmed by Allport in 1935. Except for a short period of decline in the 1950's, the attitude concept has been central to studies of behavior since it was first defined by Allport as: "the degree of positive or negative affect associated with some psychological object."[40]

Investigations conducted during the 1950's and 1960's by Cook and Sellitz,[41] DeFleur and Westie,[42] and Kutner, Wilkins, and Yarrow[43] showed very definite inconsistencies between verbally expressed attitudes and overt behavior. The continued inconsistency prompted Fishbein to conclude the following with respect to the use of attitudes in predicting behavior:

> After more than seventy-five years of attitude research, there is still little, if any, consistent evidence supporting the hypothesis that knowledge of an individual's

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[39]W. I. Thomas and F. Znaniecki. The Polish Peasant in Europe and America. Boston: Badger, 1918.

[40]G. W. Allport. "Attitudes," Handbook of Social Psychology. Worcester, Mass., Clark University, 1935.

[41]S. W. Cook and C. Sellitz. "A Multiple Indicator Approach to Attitude Measurement," Psychological Bulletin, 1964, Vol. 62, pp. 36-55.

[42]M. DeFleur and F. Westie. "Verbal Attitudes and Overt Acts: An Experiment on the Salience of Attitudes," American Sociological Review, 1958, Vol. 23, pp. 667-673.

[43]B. Kutner, C. Wilkins and P. R. Yarrow. "Verbal Attitudes and Overt Behavior Involving Racial Prejudice," Journal of Abnormal Social Psychology, 1952, Vol. 47, pp. 649-652.

> attitude toward some object will allow one to predict the way he will behave with respect to the object.[44]

A growing number of studies showing similar inconsistencies prompted investigators to seriously question the existence of a strong relationship between attitude and behavior. Some authors attributed the inconsistencies to definitions of the attitude concept which were too vague, while others attributed this to the measurement instruments which were used. Still others blamed both of the above. Weisberg,[45] however, viewing attitudes as only one of several factors which must be considered in predicting behavior, insisted that the nature of the environment itself be examined as a possible source of influence.

Rokeach, asserting that there is a strong relationship between attitudes and behavior, offers a definition or reconceptualization of attitude which tends to account for the earlier inconsistencies or discrepancies. He defines attitude as, "(1) a relatively enduring (2) organization of beliefs (3) around an object or situation (4) predisposing one to respond (5) in some preferential manner."[46] Rokeach contends

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[44]M. Fishbein. "Attitude and the Prediction of Behavior." Readings in Attitude Theory and Measurement. New York: Wiley, 1967, p.

[45]N. Weisberg. On DeFleur and Westie's, "Attitude as a Scientific Concept." Social Forces, Vol. 43, pp. 422-425.

[46]M. Rokeach. "Attitudes." In D. L. Sills (Ed.), International Encyclopedia of the Social Sciences, Vol. 1, New York, 1968, p. 450.

that the major weakness in early studies was a "failure to appreciate that an attitude object is always encountered in some situation, about which we also have an organized attitude."[47]

Kliejunas[48] and Rokeach have determined that situational variables can be reformulated as attitude-toward-situation and can then be assessed much as the attitude-toward-object is assessed. When the two attitudes and the interaction between them are assessed, as Rokeach and Rothman[49] direct, verbally expressed attitudes do become reliable predictors of behavior.

Attitude Measurement

The dimensions of attitudes which are most often measured are the positiveness or negativeness (direction) of the feeling and the magnitude or intensity of the feeling. The magnitude of the feeling is measured as a means of determining the degree to which one is motivated to behave in a given way. The present view is that one's attitudes do, in fact, predispose his action and that those attitudes which are more intense

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[47]Rokeach, ibid., p. 452.

[48]Peter J. Kliejunas. Attitude Toward Object and Attitude Toward Situation as Predictors of Behavior. Unpublished dissertation, Michigan State University, 1969.

[49]M. Rokeach and G. Rothman. "The Principle of Belief Congruence and the Congruity Principle as Models of Cognitive Interaction." Psychological Review, 1965, Vol. 72, pp. 128-142.

are stronger motivators than are those which are less intense.

A number of apparent difficulties encountered in assessing attitudes by observing spontaneous behavior or through inference from one's membership in a group have lead to frequent reliance upon the interview or survey method of assessment. Though the interview technique does, in fact, allow for the correction of respondent misinterpretation, this advantage may be outweighed by the respondent's frequent hesitancy to make his feelings public.

The use of the questionnaire enables the investigator to exercise more control over the measurement situation than does his use of the interview technique. Also, the standardized format of the questionnaire (item format) eliminates the frequent influence of the personality of the investigator which is commonly encountered in the interview technique.

The development of attitude scaling techniques makes it possible to provide a quantitative method for determining one's relative position along a unidimensional continuum. Utilization of such scales allows one to measure both the direction and intensity of the feeling under question with the same items and both can then be represented with a single numerical score.

The two major approaches to attitude scale development are those which were contributed by Thurstone and Likert. Most of the scales in use today are of one or the other of these types.

The Thurstone technique of construction has as its basis, the development of "an attitude scale with equal-appearing intervals dividing the continuum between opposing extremes in attitude."[50] One's responses on such a scale will localize his position along the continuum. The technique is covered in greater detail in Chapter II.

The primary concern which lead to the development of the Likert-type scale "was with the unidimensionality of the measure[51] attempting to assure that all of the items measured the same common factor." On the Likert-type scale the respondent indicates the degree to which he is in agreement or disagreement with each of the items which comprise the scale. A total score is then arrived at by summing the sub-scores which are assigned to each of the items. This technique is also covered in greater detail in Chapter II.

Measuring Teacher Attitudes

Numerous investigations of teacher attitudes have been conducted since 1940 with the following conclusion:

> . . . The attitudes of teachers toward children and school work can be measured with high reliability, and that they are significantly correlated with the

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[50]Allen L. Edwards and Bette C. Porter. "Attitude Measurement." In The Affective Domain: A Resource Book for Media Specialists. Washington, D. C.: Communication Service Corporation, 1970, p. 126.

[51]Edwards and Porter, ibid., p. 127.

teacher-pupil relations found in the classroom.[52]

It would appear that the Minnesota Teacher Attitude Inventory (MTAI), developed from the early investigations of Cook, Leeds, and Callis, has been the single most popular instrument for the measurement of teacher attitudes. As late as 1963, more than 50 rather extensive investigations were reported in which the MTAI was used to assess attitudes.

The instrument is comprised of 150 statements concerning the nature and behavior of children in general, and pupils in particular. Examinees were asked to express their degree of agreement or disagreement on a five-point Likert scale.

High scores indicate permissiveness toward children and uncritical, positive attitudes toward teaching; low scores, on the other hand, suggest critical, authoritarian attitudes. Mid-range scores may be optimal in that they reflect a democratic, but at the same time, realistic, orientation toward children and teaching.

The authors state the following with respect to the instrument:

> It is designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly how well satisfied he will be with teaching as a vocation.[53]

Numerous studies have been done centered about the MTAI itself. Ferguson, Brown, and Callis conducted a factor

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[52]W. W. Cook, C. H. Leeds and R. Callis. The Minnesota Teacher Attitude Inventory. New York: Psychological Corporation, 1951, p. 3.

[53]Cook, Leeds and Callis, ibid., p. 3.

analysis and concluded that, "In terms of content, the evidence so far suggests a single positive attitude factor is measured."[54]

This instrument was investigated by the author since a number of references are made to the instrument in the Related Studies section of this chapter. Furthermore, numerous studies are reported which have examined the possible influence of professional variables upon attitudes which were measured with the MTAI.

Related Studies

Over the years a great many investigations have been made of teachers' attitudes toward a wide variety of psychological objects. These studies have also examined numerous personal and professional characteristics of teachers in order to ascertain their possible influence upon expressed attitudes and overt behavior. Because the characteristics examined have been found to influence some attitudes and not others, it is extremely difficult to generalize with respect to teachers' attitudes.

Each of the studies selected for inclusion in this section has examined one or more of the professional characteristics included in this study. The findings or conclusions from these studies are reported separately by characteristic for the reader's convenience.

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[54]J. L. Ferguson, K. B. Brown and R. Callis. Factor Analysis of the Minnesota Teacher Attitude Inventory. Columbia: University of Missouri, 1954, (Rep. No. 4, ONR 649 (00)), p. 7.

Professional Responsibility

Urich[55] polled school personnel (teachers, superintendents, and board members) in "rural-urban" schools and those in "central-city" schools, finding their attitudes to be very similar with respect to the superintendent's role in collective negotiations. He inferred, on the basis of a single study, a high degree of professional solidarity among professional educators in Iowa and stated, "that there are no clear-cut findings in research literature to assume that, in general, this solidarity does not characterize the teaching profession nationally."[56] Michael,[57] on the other hand, found that teachers and administrators held significantly different attitudes toward the general philosophy of merit-rating teachers for salary purposes.

The attitudes of administrators and teachers toward the potential contribution of programed instruction to their overall educational program were found to be strikingly similar by O'Toole.[58] Both groups expressed quite positive attitudes.

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[55]Ted R. Urich. "A Q-Sort Analysis of Attitudes of School Personnel in Iowa Toward Collective Negotiations," Journal of Educational Research, Vol. 63, October 1969, p. 74.

[56]Urich, ibid., p. 76.

[57]Calvin C. Michael. "Teachers' Attitudes Toward Merit-Rating as a Function of Conflict of Interest," Journal of Teacher Education, Vol. 15, June 1964, pp. 210-218.

[58]John F. O'Toole. "Teachers' and Principals' Attitudes Toward Programed Instruction in the Elementary School," Audio-Visual Communication Review, Vol. 12, 1964, pp. 431-439.

Bashaw, Kenney, Landrum, and Rentz[59] assessed the attitudes of teachers, superintendents, principals in six southeastern states regarding the scope and quality of services provided to them by their state departments of education. Their analysis of data indicated a significantly more negative attitude toward existing services among the teachers than among the administrators. Differences between superintendents and principals were not significant.

Wendt and Butts[60] found that teachers expressed significantly more positive attitudes toward the use of TV in the classroom than did their administrators. The study cited was conducted in Milwaukee, Miami, Anaheim, and North Carolina. The attitudes of graduate students (on MTAI) at North Texas State College were assessed by Beamer and Ledbetter[61] and an analysis showed the mean scores of administrators to be significantly lower than those of any other grouping of experienced educators. The conclusion being that administrators hold critical, authoritarian attitudes toward teaching and pupils.

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[59]W. L. Bashaw, James B. Kenney, William Landrum, and Robert Rentz. "Attitudes Toward Services of State Departments of Education," Journal of Experimental Education, Vol. 37, Spring 1969, pp. 8-12.

[60]Paul R. Wendt and Gordon Butts. "Teacher Attitudes Toward Instructional Television," Review of Educational Research, 1962, Vol. 32, pp. 162-167.

[61]G. C. Beamer and Elaine W. Ledbetter. "The Relation Between Teacher Attitudes and the Social Service Interest," Journal of Educational Research, 1957, Vol. 50, pp. 655-666.

Curricular Responsibility

Results of an N.E.A. study[62] of public school teachers showed that proportionally more teachers of academic subjects perceived their teaching loads to be heavy or extremely heavy than did the teachers of non-academic subjects. At the secondary level, more academic subject teachers reported strain in their teaching function than did the non-academic teachers. The curricular responsibility, however, appeared to have less influence upon the teachers' expressed willingness to teach again. The academic teachers were slightly more negative toward teaching as a profession than were their non-academic colleagues.

Callis,[63] using the MTAI, found the attitudes of professional education juniors and seniors significantly different when they were placed into the following curricular groupings: (1) Early childhood majors; (2) Academic field majors; (3) Special field majors. Group 1 scored significantly higher at both levels (junior and senior) than did the special field majors. Kelley,[64] on the other hand, found that curricular

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[62]National Education Association, Research Division. American Public School Teachers, 1960-61. Research Monograph 1963-M2, April 1963, p. 5.

[63]R. Callis. "Change in Teacher-Pupil Attitudes Related to Training and Experience," Educational Psychology Measurement, Vol. 10, 1950, pp. 718-727.

[64]Gaylen B. Kelley. "A Study of Teachers' Attitudes Toward Audiovisual Materials," Educational Screen and Audiovisual Guide, Vol. 39, March 1960, pp. 119-121.

area was not a significant factor with respect to the attitudes which teachers held toward the use of audiovisual materials. This finding, though, may have been due to the fact that the sample was composed entirely of elementary teachers. Leeds and Cook[65] concluded also that subject area bore little or no relation to the attitudes which teachers held toward their students.

Linden and Linden,[66] in a study conducted at the secondary level, found that the teachers of academic subjects held more positive attitudes toward their pupils and were much more permissive than their non-academic counterparts. Rocchio and Kearney's[67] study tends to support this finding in that they found no significant difference in the failing rates within academic and non-academic subject areas.

Kearney and Rocchio[68] determined in a 1955 study that the MTAI scores of elementary school specialists and those

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[65]Carroll H. Leeds and Walter W. Cook. "The Construction and Differential Value of a Scale for Determining Teacher-Pupil Attitudes," Journal of Experimental Education, Vol. 16, 1949, pp. 149-159.

[66]Kathren E. Linden and James D. Linden. "A Longitudinal Study of Teachers' Attitudes and Personality Characteristics," Journal of Teacher Education, Vol. 20, Fall 1969, pp. 351-360.

[67]P. D. Rocchio and N. C. Kearney. "Teacher-Pupil Attitudes as Related to Non-Promotion of Secondary School Pupils," Educational Psychology Measurement, Vol. 16, 1956, pp. 244-252.

[68]N. C. Kearney and P. D. Rocchio. "The Relation Between the Minnesota Teacher Attitude Inventory and Subject Matter Taught by Elementary Teachers," Educational Administration and Supervision, Vol. 41, 1955, pp. 358-360.

teachers who taught all subjects to the same pupils (self-contained classroom) differed significantly. The authors concluded that teachers who have pupils for longer periods during the day are interested in the development of the pupils' whole personalities as well as knowledge acquisition. Special subjects teachers, on the other hand, think primarily in terms of subject matter to be covered. Another possible explanation could well be that those who choose to teach special subjects do so because they have different attitudes initially and the teaching responsibility exerts no influence.

Highest Degree Earned

The N.E.A. Research Division[69] identified a strong relationship between the degree earned and the teachers' perceived heaviness of teaching load. Those with more advanced degrees perceived their loads as being heavier. This variable was also found to be positively correlated with the teachers' feelings of strain in their teaching position. Holders of the master's and doctoral degrees reported more noticeable strain than did those with the bachelor's degree.

The degree held was also found to be related to the teachers' degree of reluctance to teach again. The higher the degree, the more reluctant and less positive the attitude toward teaching. Teachers with such attitudes of negativeness toward teaching will likely be less positive toward ID.

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[69]N.E.A. Research Division, op. cit.

Robbins[70] also found "attitude-toward-profession" to be influenced similarly by the degree held.

Cappelluzo and Ahern,[71] by sampling the attitudes which teachers held with respect to their school board's innovative tendencies, found the degree held to be of no significance. Banning[72] investigated teachers' feelings of satisfaction, dissatisfaction, or indifference regarding the existing curriculum and their attitudes toward curriculum change involvement. The authors concluded that the degree status, course credits, and degrees earned after appointment were not significantly influential variables. When the perceived roles of teachers were investigated by Fishburn,[73] the role described as "membership in a profession" was found to be significantly less important in the minds of holders of the bachelor's degree than for those with the master's or a higher degree.

Summary

The literature provides little basis from which to make sweeping generalizations with respect to attitude objects and

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[70]Russel Robbins. "Measurement of the Attitudes of Teachers Toward Teaching as a Profession," Journal of Educational Research, Vol. 60, February 1967, pp. 243-247.

[71]Emma Cappelluzo and John Ahern. "How Do Your Teachers Really Rate Your Board?" American School Board Journal, Vol. 156, June 1969, p. 28.

[72]Evelyn I. Banning. "Personal Relationships Do Affect Curriculum Change," School Executive, September 1953, pp. 47-49.

[73]C. E. Fishburn. "Teacher Role Perception in the Secondary School," Journal of Teacher Education, Vol. 13, 1969, pp. 55-59.

the expressed attitudes and subsequent behavior which they evoke. Similar social stimuli evoke widely differing attitudes and the greater the number of variables considered with respect to expressed attitudes, the more difficult it becomes to offer and justify generalizations.

Professional responsibility was determined to be a significant factor in attitude formulation among educators (teachers) in four of the six studies reported. Very similar results were reported with regard to curricular responsibility. Though the attitudes being assessed were quite different, five studies of seven reported found curricular responsibility to be a significantly influential variable. Highest degree earned was significantly linked to attitude differences in four of six studies previously cited.

The attitude studies reviewed appear to reinforce the proposed need to assess the attitudes of educators toward instructional development rather than to make inferences from a wide variety of earlier studies within the realm of media or from studies concerned with any other psychological object.

Hypotheses to be Tested

The study will specifically test the following hypotheses across the three groups established for the study:

1. There will be a difference in the expressed attitudes toward instructional development as a function of professional responsibility.

    A. The specialists will express a more positive attitude toward instructional development than will the teachers and the administrators.

B. The teachers will express a more positive attitude toward instructional development than will the administrators.

2. There will be a difference in the attitudes expressed toward instructional development as a function of curricular responsibility.

   A. Teachers of the non-academic (skill-centered) subjects will express a more positive attitude toward instructional development than will the teachers of academic (subject-centered) courses.

3. There will be a difference in the attitudes expressed toward instructional development as a function of the highest degree earned.

   A. Teachers with a B.S. degree will express a more positive attitude toward instructional development than will the teachers with a Master's degree.

Limitations of the Study

There are specific limitations of the study which must be considered prior to making generalizations with respect to the findings.

The results of this study will be generalizable only to other populations to the extent that other populations are similar in nature to the population used in this study.

1. An instrument determined to be scalable at a given point in time may not form a scale at a subsequent time.

2. The universe of items may form a scale for the total population yet may not form a scale for any number of subgroups of that population.

3. The relatively small sample size poses a problem with regard to statistical analysis of the differences (if any) which may exist between subgroups established with respect to the variables to be examined.

Organization of the Study

Chapter I develops the frame of reference for the study. Included within the chapter are the introduction, statement of the problem, need for the study, definition of key terms, theory and rationale, related studies, hypotheses to be tested, and limitations of the study.

Chapter II contains a review of the attitude concept literature. This includes the development of the concept, attitude-behavior relationship, attitude measurement techniques, and Guttman Scalogram Analysis.

A general plan for the study is contained in Chapter III. The chapter is centered about the identification of the sample, modification of the attitude assessment instrument, hypotheses in testable form, and the statistical treatment of the data collected.

Chapter IV contains an examination and analysis of the data.

A summary of the study, conclusions, and recommendations for further research are presented in Chapter V.

CHAPTER II

REVIEW OF ATTITUDE RESEARCH

The Concept of Attitude

An examination of the literature regarding the historical development of the concept of attitude supports the widely-held contention that this concept is extremely central to the broad field of social psychology and to the more specific area of personality theory. Gordon Allport, following an exhaustive review of the social psychology literature, wrote the following in 1935: ". . . attitude is probably the most distinctive and indispensable concept in contemporary social psychology. No term appears more frequently in experimental and theoretical literature."[1] Murphy, Murphy and Newcomb, in 1937, reaffirmed Allport's viewpoint as follows: "Perhaps no single concept within the whole realm of social psychology occupies a more nearly central position than that of attitudes."[2]

Allport, in the previously cited source, and Stern,[3] both

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[1]Gordon W. Allport. "Attitudes," Handbook of Social Psychology. (C. Murchison, Ed.), Worcester, Mass.: Clark University Press, 1935, p. 798.

[2]G. Murphy, L. B. Murphy and T. M. Newcomb. Experimental Social Psychology. New York: Harper, 1937, p. 889.

[3]George G. Stern. "Measuring Noncognitive Variables in Research on Teaching." In Handbook of Research on Teaching, (N. L. Gage, Ed.). Chicago: Rand McNally & Company, 1965, p. 403.

attribute the establishment of the concept, attitude, as a potential central feature of social psychology to the 1918 study of Thomas and Znaniecki.[4] The concept emerged within their study of Polish peasants, people in transition between two vastly different cultures, and the term attitude, says Stern, was employed by them "as a way of conceptualizing the unifying force which appears to lie behind what would otherwise seem to be discrete and arbitrary overt behaviors."[5]

Thomas and Znaniecki, in addressing themselves to the prominence of the attitude concept, strongly suggested that social psychology be defined as the scientific study of attitudes. Numerous other writers, including Bogardus[6] and Folsom,[7] also tended to equate social psychology and the study of attitudes.

The publication of such books as Escape from Freedom[8] and The Authoritarian Personality[9] reflects a growing awareness

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[4]W. I. Thomas and F. Znaniecki. The Polish Peasant in Europe and America. Boston: Badger, 1918.

[5]Stern, op. cit., p. 404.

[6]E. S. Bogardus. Fundamentals of Social Psychology. (2nd ed.), New York: Century, 1931.

[7]J. K. Folsom. Social Psychology. New York: Harper, 1931.

[8]E. Fromm. Escape from Freedom. New York: Farrar and Rinehart, 1941.

[9]T. W. Adorno, E. Frenkel-Brunswik, D. J. Levinson, and R. N. Sanford. The Authoritarian Personality. New York: Harper, 1950.

of the relevance of the attitude concept in the field of personality theory. Recent attitude-oriented publications have emerged from the political science field, notably, The American Voter[10] and Political Opinion and Electoral Behavior.[11]

Trites makes reference to a recent trend in which social, political, and industrial planners have greatly increased their utilization of technical services for gauging and influencing human motivation. This trend, "is reflected in the rise and the growth in popularity and influence of professional organizations for attitude measurement and change. . . . These services are now widely used by governmental, industrial, educational, health, welfare, political, and merchandising organizations seeking public support, patronage, and influence."[12]

The attitude concept and its referents have undergone a readily apparent clarification, refinement and extension over the years since its inception and it appears to be fully as significant, relevant, and central as ever and perhaps moreso. Fishbein, writing in 1967, reports the following:

> . . . despite the enormous growth of social psychology, and the diversity of interest of contemporary social

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[10]A. Campbell, P. E. Converse, W. E. Miller and D. E. Stokes. The American Voter. New York: Wiley, 1960.

[11]E. Dreyer and W. A. Rosenbaum. (Eds.), Political Opinion and Electoral Behavior: Essays and Studies. Belmont, California: Wadsworth, 1966.

[12]David K. Trites. "Attitudes." Encyclopedia of Educational Research. Chester W. Harris, (Ed.), New York: The Macmillan Company, 1965, p. 103.

psychologists, Allport's words are as true today as they were in 1935. In addition, the attitude concept has come to play an increasingly important part in almost all of the behavioral sciences and of the applied disciplines.[13]

Definitions of Attitude

Considerable effort has been expended over the years to define and/or clarify an attitude and most of the notables in the social psychology field have offered definitions. Most of these definitions appear to have a rather common theme which suggests that attitude may legitimately be viewed as a latent variable. "This theme," says Green, "is the concept of attitude as a consistency among responses to a specified set of stimuli, or social objects."[14] Krech and Crutchfield perceive the concept, attitude, as ". . . an enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world."[15] Allport, following a review of many early definitions of attitude, concluded that "an attitude is a mental and neural state of readiness exerting a directive influence upon the individual's response to all objects and situations with which it is related."[16]

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[13]M. Fishbein. (Ed.). Readings in Attitude Theory and Measurement. New York: Wiley, 1967, p. v.

[14]Bert F. Green. "Attitude Measurement." In Gardner Lindzey, (Ed.), Handbook of Social Psychology, Vol. I, Adison-Wesley, 1954, p. 335.

[15]D. Krech and R. S Crutchfield. Theory and Problems of Social Psychology. New York: McGraw-Hill, 1948, p. 152.

[16]Fishbein, op. cit., p. 810.

Fuson takes a simplistic and straightforward approach and defines attitude as "the probability of occurrence of a defined behavior in a defined situation."[17] Campbell,[18] on the other hand, suggests that a social attitude is evidenced by consistency in response to social situations. Thurstone, as cited by Edwards,[19] asserts that an attitude may be defined as the degree of positive or negative affect associated with some psychological object and for the express purpose of establishing a meaningful context for the attitude definition. He further describes a psychological object as being any symbol, phrase, slogan, person, institution, ideal or idea toward which people can differ with respect to positive or negative affect.

Thurstone, in a later publication co-authored by Chave,[20] used the concept of attitude to mean the sum total of man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats, and convictions about any topic. Opinions, closely related to attitudes, were perceived as being verbal expressions of attitudes and could be utilized for the measurement of attitudes.

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[17]W. M. Fuson. "Attitudes: A Note on the Concept and Its Research Context." American Sociology Review, 1942, Vol. 7, p. 856.

[18]D. T. Campbell. "The Indirect Assessment of Social Attitudes." Psychological Bulletin, 1950, Vol. 47, pp. 15-38.

[19]Allen L. Edwards. Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1957, pp. 2-5.

[20]Louis L. Thurstone and E. G. Chave. The Measurement of Attitude. Chicago: The University of Chicago Press, 1929, pp. 6-7.

Green, in his efforts to define an attitude, emphasizes the necessity of examining it (attitude) in a latent variable context:

> . . . Like many psychological variables, attitude is a hypothetical or latent variable, rather than an immediately observable variable. . . . The concept of attitude does not refer to any one specific set of responses of an individual, but is an abstraction from a large number of related acts or responses.[21]

The term "latent variable" has traditionally been used in the field of social psychology in an attempt to explain the variety of responses which are frequently made to similar social stimuli and the variable is viewed as having the potential to mediate the stimuli and the responses.

Covariation of responses is said to exist as a direct result of mediation by the single latent variable. The actual worth of the latent variable (for the social psychologist) stems from its capacity to unify observed responses which often constitute or comprise a set of data. Such a view is not inconsistent with that set forth by Thomas and Znaniecki.

Social psychologists, in referring to hypothetical variables of this type, have utilized a variety of terms such as traits, intervening variables,[22] latent variables,[23]

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[21]Green, op. cit., p. 335.

[22]K. MacCorquodale and P. E. Meehl. "On a Distinction Between Hypothetical Constructs and Intervening Variables." Psychological Review, 1948, Vol. 55, pp. 95-107.

[23]P. F. Lazarfield. "The Logic and Mathematical Foundation of Latent Structure Analysis." In S. A. Stouffer et al., Measurement and Prediction, Princeton, N. J.: Princeton University Press, 1950, pp. 362-412.

genotypes,[24] and factors,[25] whereas the resultant observable responses (data) have been termed manifest variables, phenotypes, and indicants.[26]

Any subsequent attempts to measure or assess attitudes, the logical objective of the social psychologist or social scientist, must be preempted by the recognition of attitude as a latent variable. Green states that "the characteristic of attitude that is basic to all attitude measurement is response covariation. In each measurement method, covariation of responses is related to the variation of an underlying variable . . . (and) The latent attitude is defined by the correlations among responses."[27]

Stern, in attempting to summarize the multiplicity of attitude definitions subsequent to that given by Thomas and Znaniecki, notes that these definitions appear to agree in four respects:

1. Attitudes are socially formed. They are based on cultural experience and training and are revealed in cultural products. The study of life history data reveals the state of mind of the individual, and of the social group from which he derives, concerning the values of the society in which he lives.

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[24]C. H. Coombs. "A Theory of Psychological Scaling." Engineering Research Institute, Bulletin No. 34, Ann Arbor, Michigan: University of Michigan Press, 1952.

[25]L. L. Thurstone. Multiple Factor Analysis. Chicago: University of Chicago Press, 1947.

[26]S. S. Stevens. "Mathematics, Measurement, and Psychophysics." In S. S. Stevens (Ed.), Handbook of Experimental Psychology. New York: Wiley, 1951, pp. 1-49.

[27]Green, op. cit., p. 336.

2. Attitudes are orientations toward others and toward objects. They incorporate the meaning of a physical event as an object of potential or actual activity.

3. Attitudes are selective. They provide a basis for discriminating between alternative courses of action and introduce consistency of response in social situations of an other-wise diverse nature.

4. Attitudes reflect a disposition to an activity, not a verbalization. They are organizations of incipient activities, of actions not necessarily completed, and represent therefore the underlying dispositional or motivational urge.[28]

Summary

In spite of the apparent diversity of definitions which have been provided over the years for the concept of attitude, the underlying theme is one which strongly suggests that attitude be viewed as a latent variable. Such a latent variable conceptualization of attitude promotes its acceptance as a consistency of responses made to a given set of social stimuli. The previous summarization by Stern strongly supports such a contention. This concept is also basic to methods devised to measure attitudes.

Attitude and Behavior

The vagueness and confusion which persists regarding the definitions and referents of the attitude concept are paralleled by a similar vagueness and confusion in terms of the relationship which exists between attitudes and behavior.

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[28]Stern, op. cit., p. 404.

There does exist, however, a common core of agreement in the literature which reflects the belief that attitudes are related in some way to behavior. Previously conducted studies, though, have allowed investigators to do little more than assume or make references with regard to this relationship.

Peter Kliejunas states the following with regard to early investigations:

> There are surprisingly few studies which have systematically examined the relationship between attitudes and behavior. Those studies which have attempted to study this relationship have generally found a lack of correspondence between overt behavior and verbally expressed attitudes. This lack of correspondence is often attributed to inadequacies of definition or of measurement or is explained away by some nebulous allusions to the influences of situational variables. It has also led to conclusions that behavior cannot be predicted on the basis of attitude test scores alone.[29]

The most commonly inferred or assumed relationship to appear in the literature is a causal one and the contention is that one's behavior depends upon or is in some way influenced by his attitudes. Numerous investigators have sought to establish some degree of consistency between expressed attitudes and subsequent overt behavior, yet the relatively few studies which have attempted to utilize expressed attitudes as predictors of behavior have been rather unsuccessful.

Fishbein states the following about the failure encountered in early studies:

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[29]Peter J. Kliejunas. Attitude Toward Object and Attitude Toward Situation as Predictors of Behavior. Unpublished dissertation, Michigan State University, 1969, p. 1.

> . . . After more than seventy-five years of attitude research, there is still little, if any, consistent evidence supporting the hypothesis that knowledge of an individual's attitude toward some object will allow one to predict the way he will behave with respect to the object.[30]

Corey[31] states that there is a common insistence, whether explicit or implicit, that an attitude predisposes one to behave in a particular manner and that the way one acts over a period of time is a reliable and valid indicator of his attitudes. Green states that "an attitude governs or mediates, or predicts, or is evidenced by a variety of responses to some specified set of social objects or situations."[32] Campbell, in providing the following definition of attitude appears to support this view: "An individual's social attitude is an (enduring) syndrome of response consistency with regard to (a set of) social objects."[33]

Hartley and Hartley, in their writings on social behavior, place great emphasis on the person as a whole in interaction with others and they define attitudes as "relatively stable patterns of reaction which, though developed through experience, characterize individuals and groups."[34]

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[30]M. Fishbein. "Attitude and the Prediction of Behavior." In M. Fishbein (Ed.), Readings in Attitude Theory and Measurement. New York: Wiley, 1967, p. 477.

[31]Stephen M. Corey. "Professed Attitudes and Actual Behavior." Journal of Educational Psychology, Vol. 28, 1937, p. 272.

[32]Green, op. cit., p. 336.

[33]Campbell, op. cit., p. 31.

[34]Eugene L. Hartley and Ruth E. Hartley. Fundamentals of Social Psychology. New York: Alfred A. Knopf, 1961, p. 651.

Stouffer, in support of this conceptualization of attitudes, claims that the development of a scientific body of knowledge regarding human behavior is possible only if one subscribes to the basic assumption that there are certain elements of consistency in behavior:

> Indeed, all human living is possible only because a large part of our daily activities permit us to make successful predictions. . . . A science of human nature or of social relations must be based on the solid fact that there are regularities in man's behavior which do admit of acturial prediction.[35]

The term, consistency, when it is used in relation to human behavior should not be confused with either rigidity or the repetitiveness of a specific response as one finds in conditioned response behavior. Consistency, as it is used here, refers strictly to a context of social meaning. Hartley and Hartley assert:

> There is flexibility enough to adapt to a wide variety of situations and circumstances, but the reactions will tend to be in a consistent direction. Conceptually, the consistency is in the order of goal-oriented behavior. The individual seems to have some patterned expectancies or wishes or hopes and desires, and he develops response patterns in specific situations that seem likely to help him achieve his goal.[36]

It is the continuity, the consistency, and the subsequent predictability of a general mode of response to previously experienced objects which many social psychologists state is a primary characteristic of human social behavior.

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[35]Samuel A. Stouffer. "Basic Social Science Research." The Polls and Public Opinion. In N. C. Meier and H. W. Saunders (eds.), New York: Henry Holt & Company, Inc., 1949, p. 12.

[36]Hartley and Hartley, op. cit., p. 652.

A number of authors, including Fishbein,[37] have seriously questioned the basic assumption that there is a very strong relationship between attitude and behavior, as stated previously. Some, such as Cook and Sellitz,[38] have tended to lay the blame for frequent inconsistency of results upon the measuring instruments which were used. Still others, DeFleur and Westie[39] for example, attribute inconclusive findings to vague and inappropriate definitions of the attitude concept itself. Katz and Stotland[40] find both discrepancies present in past studies.

The earliest and best known study to relate attitudes and behavior was the classical study of LaPiere in 1934. The attitudes expressed by hotel and motel proprieters on a mailed questionnaire did not reflect their behavior toward a Chinese couple requesting occupancy. As a result of his study, LaPiere concluded the following:

> . . . If social attitudes are to be conceptualized as partially integrated habit sets which will become operative under specific circumstances and lead to a particular pattern of adjustment they must, in the main, be derived

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[37]Fishbein, op. cit., pp. 477-492.

[38]S. W. Cook and C. Sellitz. "A Multiple-Indicator Approach to Attitude Measurement." Psychological Bulletin, 1964, Vol. 62, pp. 36-55.

[39]M. DeFleur and F. Westie. "Attitude as a Scientific Concept." Social Forces, 1963, Vol. 42, pp. 17-31.

[40]D. Katz and E. A. Stotland. "A Preliminary Statement to a Theory of Attitude Structure and Change." In S. Koch (Ed.). Psychology: A Study of a Science, Vol. 3. Formulations of the Person and the Social Context. New York: McGraw-Hill, 1959, pp. 423-475.

> from a study of humans behaving in actual situations. They must not be imputed on the basis of questionnaire data.[41]

Results from a similar study by Kitner, Wilkens and Yarrow[42] in 1952 also indicated a large discrepancy between expressed attitudes and actual behavior.

DeFleur and Westie[43] did find, however, in 1958, a statistically significant relationship between attitudes and behavior. The analysis of the data, however, indicated that the relationship was not linear in nature. Approximately 30 per cent of the sample (classified as prejudiced and unprejudiced) showed an inconsistency between their expressed attitudes and their behavior. Since the proportion was considered too great to be attributed to measurement error, the authors concluded that a one-to-one relationship should not be expected and they stressed a need to examine the possible influence of intervening variables.

Lohman and Reitzes,[44] Minard,[45] and Pettigrew,[46] to name

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[41]R. T. LaPiere. "Attitudes vs. Actions." Social Forces, 1934, Vol. 13, p. 237.

[42]B. Kitner, C. Wilkens and P. R. Yarrow. "Verbal Attitudes and Overt Behavior Involving Racial Prejudice." Journal of Abnormal Social Psychology, 1952, Vol. 47, pp. 649-652.

[43]M. DeFleur and F. Westie. "Verbal Attitudes and Overt Acts: An Experiment on the Salience of Attitudes." American Sociological Review, 1958, Vol. 23, pp. 667-673.

[44]J. G Lohman and D. C. Reitzes. "Deliberately Organized Groups and Racial Behavior." American Sociological Review, 1954, Vol. 19, pp. 342-348.

[45]R. D. Minard. "Race Relations in the Pocahontas Coal Field." Journal of Social Issues, 1952, Vol. 8, pp. 29-44.

[46]T. F. Pettigrew. "Social Psychology and Desegregation Research." American Psychologist, 1961, Vol. 16, pp. 105-112.

a few, emphasize the importance of situational variables, particularly in studies dealing with race relations. Because of the recognized influence of such variables, some authors have concluded that it is situational characteristics, as opposed to attitudes, which determine one's behavior toward an attitude object. Weisberg, one of the numerous investigators and authors who subscribes to this viewpoint, states that "an attitude, no matter how conceived, is simply one of the terms in the complex regression equation we use to predict behavior."[47] He strongly urges an examination of the nature of the environment as a source of behavioral influence.

Because of the inability of many investigators to firmly establish and isolate the role played by "situational variables" and the inability to firmly link expressed attitudes and subsequent overt behavior, the usefulness of the attitude concept itself has been seriously questioned. L. W. Doob,[48] for example, has claimed that attitude has no systematic status as a scientific construct and Blumer[49] views attitude as being vague and lacking an empirical reference and is, therefore, of little or no consequence in analyzing social action.

Rokeach, on the other hand, states that "the confused

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[47]N. Weissberg. On DeFleur and Westie's "Attitude as a Scientific Concept." Social Forces, 1965, Vol. 43, pp. 422-425.

[48]L. W. Doob. "The Behavior of Attitudes." Psychological Review, Vol. 54, 1947, pp. 135-146.

[49]H. Blumer. "Attitudes and the Social Act." Social Problems, 1955, Vol. 3, pp. 59-64.

status of the concept can best be corrected, not by abandoning it, but by subjecting it to continued critical analysis with the aim of giving it a more precise conceptual and operational meaning."[50] And in discussing the nature of attitudes he firmly rejects the idea that there is no strong relationship between attitudes and behavior.

The definition of attitude which has been proposed by Rokeach offers one possible explanation for the discrepancies reported in previously conducted attitude-behavior studies. Rokeach defines attitude as: ". . . (1) a relatively enduring (2) organization of beliefs (3) around an object or situation (4) predisposing one to respond (5) in some preferential manner."[51]

It is Rokeach's contention that individuals possess a set of interrelated beliefs (attitudes) about how to behave in a specific situation as well as possessing attitudes toward concrete or abstract objects such as a person, a group, an institution, or a social issue. It is the former attitude which is regarded as the attitude-toward-situation and though this is not a totally new concept, investigators have concentrated their measurement upon object attitudes and have done so <u>across</u> situations. The prime weakness in many of the earlier

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[50]M. Rokeach. "Attitudes." In D. L. Sills (Ed.), <u>International Encyclopedia of Social Sciences</u>, Vol. I. New York: Macmillan, 1968, p. 450.

[51]Rokeach, ibid., p. 450.

investigations, says Rokeach, has been "a failure to appreciate that an attitude object is always encountered in some situation, about which we also have an organized attitude."[52]

The failure to deal appropriately with situations has been due, to some degree, to the scarcity of instruments to measure situational attitudes. Rokeach writes the following about the previous reluctance to take situational attitudes into account and the problems encountered when they are considered for investigation purposes:

> . . . As a result, the study of attitudes-toward-situations has become more or less split off from the study of attitudes-toward-objects. And to account for the characteristic ways people behave with respect to specific social situations, altogether new concepts are introduced, . . . trait concepts . . . role concepts . . . group norm . . . definition-of-the-situation and social structure.[53]

The study conducted by Kliejunas as well as a number attributed to Rokeach clearly indicate that whenever an attitude toward an object is activated, it need not be manifested, to the same degree, in the expressed behavior. Kliejunas states that, "The expression of the attitude activated by the object will vary as the attitude toward the situation in which the object is encountered varies. The reverse is also true."[54]

Both Kliejunas and Rokeach have determined that a situational condition can be psychologically reformulated as attitude-toward-situation and can then be assessed in a manner

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[52]Rokeach, ibid., p. 452.

[53]Rokeach, ibid., p. 452.

[54]Kliejunas, op. cit., p. 16.

very similar to the assessment of the attitude-toward-object. Results of their studies have prompted the authors to disagree with earlier writers who have stated that attitude test scores alone are usually not enough to predict behavior. Rokeach, in making the point that behavior is more than a mere function of two attitudes, asserts that one must recognize that:

> . . . attitude toward object and toward situation will cognitively interact with one another, and will have differing degrees of importance with respect to one another, thereby resulting in behavior which will be differentially influenced by the two sets of attitudes. In one case, an attitude object may activate relatively more powerful beliefs than those activated by the situation, thereby accounting for the generality of behavior with respect to an attitude object; or the situation may activate the more powerful beliefs, thereby accounting for the specificity of behavior with respect to the attitude object.[55]

In order to predict behavior with any degree of accuracy, then, both types of attitudes and the cognitive interaction between the two must be assessed through the use of a cognitive interaction model such as that proposed by Rokeach and Rothman.[56]

Summary

Many of the early studies which were conducted for the purpose of firmly establishing a strong causal relationship between verbally-expressed attitudes and subsequent overt behavior reported obvious discrepancies. Strong suggestions were

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[55]Rokeach, op. cit., p. 456.

[56]M. Rokeach and G. Rothman. "The Principle of Belief Congruence and the Congruity Principle as Models of Cognitive Interaction." Psychological Review, 1965, Vol. 72, pp. 128-142.

made by numerous investigators that environmental factors greatly influence both the formulation of attitudes and the exhibited behavior. The recent work of Rokeach and Kliejunas indicates that the situation in which one encounters an attitude object greatly influences the attitude which is developed toward the object. Furthermore, when both attitudes are assessed, attitude-toward-object and attitude-toward-situation, the assessed attitudes do in fact become reliable predictors of one's behavior.

Attitude Measurement

Very early it was assumed that the most logical way to determine how another individual felt about a psychological object or social issue was to ask him. The direct questioning approach provided rather limited data and enabled an investigator to classify a respondent into one of three groups: (1) those with favorable attitudes, (2) those with unfavorable attitudes, and (3) those who said they were doubtful or undecided about their attitudes toward the object or subject in question. The following are considered to be disadvantages or limitations of the direct questioning technique:

1. Reluctance of people to give public expression of their attitude;
2. Some individuals are not always immediately aware of their feeling toward a given psychological object;
3. Sometimes feelings are so mixed and confused to a direct question that it is difficult to respond on the spur of the moment;

4. It does not conveniently lend itself (true of direct observation as well) to an assessment of the degree of affect which individuals may associate with a psychological object.

The emergence of the concept of dimension increased the degree of sophistication with which attitudes could be assessed and analyzed. It has become a rather common practice to examine attitude variations in terms of four broadly accepted characteristics or dimensions. Hartley and Hartley state that, ". . . research workers have found it helpful to analyze attitudes with respect to four major dimensions: direction, degree, intensity, and salience."[57] Such an analysis allows researchers to describe one's attitudes quantitatively so that a large amount of data may be summarized conveniently and comparisons and analyses may be made, utilizing statistical procedures or techniques.

Direction

The direction dimension, the simplest to assess, is the determination as to whether one is for or against a given social stimulus, person, group, activity, process, or institution. Are the affective connotations positive or negative? Does he like it or dislike it? The assessment of this dimension is an extremely gross appraisal of a behavioral tendency, yet it is not completely without complications. Hartley asserts:

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[57]Hartley and Hartley, op. cit., p. 665.

> . . . Everyone is "for virtue and against sin," but people differ greatly in what they define as virtue and what they consider sin . . . (and) the failure to make the precise orientation clear often leads to confusion of the psychological characteristics involved.[58]

Degree

Any identification of the general direction of one's attitude normally leads to an assessment of existing variations of that attitude with respect to degree. Two persons may hold negative or hostile attitudes toward a particular social stimulus (same direction), yet one may be mildly opposed while the other may be extremely antagonistic. Most investigators and authors appear to subscribe to the practice of assessing variations in both direction and degree with a single attitude scale item since attitude studies of the past two decades have been centered about the assessment of these two dimensions.

Intensity

Social psychologists have become increasingly aware of the importance of the intensity dimension when analyzing attitudes and opinions. Intensity has rather generally been described as the degree of conviction with which one holds an attitude and though degree and intensity are related, they are not considered to be identical. Hartley makes the following distinction:

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[58]Hartley and Hartley, ibid., p. 666.

> The dimension of intensity, as distinct and separate from degree, is an important clue to determining whether an individual is more or less likely to shift his attitude, may be frustrated if channels of expression are blocked, or be strongly instigated to action.[59]

Both Katz[60] and Cantril[61] have dealt with the theoretical difficulties of conceptualizing and gauging the intensity dimension. It has neen determined that the more extreme an attitude is in its direction, the more intensely it is likely to be held. Attitude studies conducted in the Army during World War II provide extensive data to support the stand taken by Katz and Cantril.

Investigations indicated that intensity appeared to vary consistently with degree and the more extreme the attitude, regardless of direction, the more strongly the respondents felt about their expressed position. The significance of the intensity dimension as an aspect of attitudinal studies is expressed by Hartley as follows:

> . . . For any given degree of attitude, individual differences in intensity must be explored if we are to achieve an improved understanding of the attitude of the individual. This is especially important if the objective of the study is prediction or control of behavior.[62]

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[60]D. Katz. "Do Interviewers Bias Poll Results." Public Opinion Quarterly. Vol. 26, 1942, pp. 248-268.

[61]H. Cantril. "The Intensity of an Attitude." Journal of Abnormal and Social Psychology. Vol. 41, 1946, pp. 129-135.

[62]Hartley and Hartley, op. cit., p. 670.

Salience

The dimension, salience, within the context of an attitudinal study represents an attempt by the investigator to provide ". . . an objective index of the position within the respondent's constellation of attitudes of the particular attitude being expressed."[63] Is the attitude a relatively central one? Is it peripheral in nature?

The term salience has been adopted from the work of Stern[64] and is utilized to determine the relative importance (for an individual) of any specific attitude and the measurement of salience is accomplished by framing a situation and then noting the tendency which the subject has to spontaneously introduce the attitude variable.

A brief summarization of attitude dimensions reveals that direction represents the pro or con nature of an attitude, degree indicates the extent, intensity indicates the strength of the feeling held (regardless of direction), and salience reflects the importance of the attitude for that individual.

Measurement Techniques

The entire area of attitude assessment was significantly modified with the introduction of psychological test construction techniques to the design and construction of attitude

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[63]Hartley and Hartley, op. cit., p. 673.

[64]W. Stern. General Psychology from the Personalistic Standpoint. New York: The Macmillan Company, 1938.

questionnaires. Two of the earliest efforts in this direction were made by Watson[65] and Bogardus.[66]

Bogardus Scale of Social Distance

Emory Bogardus, in 1925, developed the most precise of the so-called "social distance" scales and it has been the most widely used instrument of its type. Social distance, states Hartley, is customarily defined as ". . . the degree of sympathetic understanding obtaining between one group and another."[67] The 7-point scale measures the amount of social distance between oneself (respondent) and average members of various ethnic, religious, national, or racial groups. Respondents, by placing checks beside each of a number of groups (ethnic, religious, etc.), project their pattern of preference toward these groups and indicate whether or not they would allow or accept the following relationships with average members of the specified groups: (1) would marry, (2) would have as regular friends, (3) would work beside in an office, (4) would have several families in my neighborhood, (5) would have merely as speaking acquaintances, (6) would have live outside my neighborhood, and (7) would have live outside my country. A tolerance

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[65]G. B. Watson. "The Measurement of Fairmindedness." Teach. Coll. Contr. Educ., 1925, No. 176.

[66]Emory S. Bogardus. Immigration and Race Attitudes. Boston: D. C. Heath & Company, 1928.

[67]Hartley and Hartley, op. cit., p. 432.

score was obtained for the respondent by averaging the step values ranging from 1 to 7 as assigned to each of the groups rated.

A number of very significant issues have been raised and expressed regarding the type of scale developed by Bogardus. Stern views the following four points of issue as being prominent in those scales which incorporate the arbitrary keying of assembled items in accordance with opinions of the investigator:

1. Are all items relevant to the same measurement continuum?
2. Are the items in fact ordered as steps along that continuum?
3. Is the relative distance between steps constant?
4. Are the responses actually a function of the attitude the items were intended to sample, rather than of some irrelevant process?[68]

Watson's Test of Fairmindedness

The "fairmindedness" test developed by Watson in 1925, was designed, says Stern, to "provide a measure of prejudice on 12 different issues related to religious observance, moral code, and political beliefs."[69] A numerical score for each issue was obtained by adding selected responses from a group of 300 items placed into six categories. Each category represented a list of opinions to which respondents indicated their

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[68]Stern, op. cit., p. 405.

[69]Stern, ibid., p. 405.

degree of acceptance on a five-point scale ranging from unqualifiedly true (+2 points) to unqualifiedly false (-2 points). Because of the datedness of many of the items, Watson's test has been abandoned.

In order to more adequately measure the two dimensions of direction and degree, a number of methods for transmitting qualitative expressions of attitudes into quantitative terms have been designed. Each of these methods of attitude scale construction is primarily concerned with establishing variations in attitude along a linear continuum.

The Thurstone Method

A large number of opinion statements about a particular social stimulus and representative of the full range of opinion are collected by the investigator. The statements, each typed on a separate slip of paper, are then sorted into eleven piles by a group of judges with each pile representing a point on a subjective scale from "most favorable" through a midpoint rated "neutral", to "least favorable." The judges are then instructed to maintain approximately the same distance (a subjective estimate) between piles, hence the "equal interval" term frequently used to describe this technique.

Each of the opinion statements is then assigned the same number of positions on the continuum as there are judges. The median of the assigned position for any specific statement will be termed its scale position and an index of the variability of the judgments for each statement (semi-quartile range) is

computed. Items on which there is the highest agreement among judges are then selected to provide evenly spaced statements along the opinion continuum. Since the position of each item is known to the investigator, translating the checked items into an attitude scale for the subject is quite simple.

Likert Technique

Likert published, in 1932, a technique for designing an attitude scale (summated ratings) which also utilizes a series of statements referring to the attitude being studied. Five categories of response are provided for each of the items: (1) strongly approve, (2) approve, (3) undecided, (4) disapprove, and (5) strongly disapprove. Scores or weights of 5, 4, 3, 2, and 1 are then assigned to the categories respectively. When items are cast in a negative context the scoring or assignment of weights is reversed.

Green asserts that, ". . . items on a Likert-type scale should have operating characteristics that are monotonically increasing functions of the latent attitude continuum. That is, the more favorable a person's attitude, the higher his expected score for the item would be."[70]

Evaluation of the items is accomplished by administering them to a group of respondents and the relation of each item score to the total score for the full set of items serves as an item discriminating index. Those items shown to be highly

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[70]Green, op. cit., p. 351.

discriminating are selected for use in the final form of the questionnaire. While the Thurstone technique relies upon the subjective judgment of a series of judges, the Likert technique depends upon internal consistency criteria.

Osgood's Semantic Differential

The semantic differential scale developed by Osgood in 1957, "consists of a number of graphic, seven-unit rating scales with opposing, or bipolar, adjectives at each end."[71] Each of the semantic scales, says Osgood, "is assumed to represent a straight line function that passes through the origin of this space, and a sample of such scales then represents a multi-dimensional space."[72]

The theoretical rationale underlying the development of the technique, its properties as a measuring device, and numerous applications of the device are very thoroughly discussed in the Osgood, Suci and Tannenbaum source cited on the previous page.

The following is a description of the manner in which "differentiating" the meaning of a concept is accomplished. The subject, for the sake of an example, is asked to rate the concept "teacher" against a series of scales. Numbers from

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[71]H. H. Remmers. "Rating Methods in Research on Teaching." In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand McNally & Company, 1965, p. 360.

[72]C. E. Osgood, G. J. Suci and P. H. Tannenbaum. The Measurement of Meaning. Urbana: University of Illinois Press, 1957, p. 25.

1 to 7 are then assigned to each of the individual scale units, thus providing a quantitative value for each of the individual scales in relation to the concept teacher. A factor analysis of a manageable sample of such bipolar adjectives yields what is termed the "factor structure" of the concept. The analysis should be done for a sample of the population for whom the meaning of the concept is to be determined. A factor analysis such as that described yields three dimensions of meaning termed evaluation, potency, and activity.

With the semantic differential one can measure the meaning, to any individual, of any concept within the scope of his understanding. Also, the similarity between any two concepts can be measured as described in detail by Osgood, Suci, and Tannenbaum.

Remmers states that Osgood and his associates have provided "a measuring device that is flexible, widely applicable, simple to administer, and in accord with many criteria of an acceptable measuring device."[73] It is also possible for the rater to control his rating accuracy by manipulating both the length and the variety of the measuring device.

The extent to which this technique has been and is still being utilized is evidenced by the more than fifty studies described in Osgood's book. Further evidence can be found in a series of studies cited by Remmers.[74]

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[73]Remmers, op. cit., p. 362.

[74]Remmers, ibid.

Guttman Scalogram Analysis

In spite of the high degree of sophistication which has been attained to date with respect to attitude and opinion measurement, a common problem, determining unidimensionality, still persists. Guttman states the following with regard to the measurement of a single variable within an assessment instrument:

> One of the fundamental problems facing research workers in the field of attitude and public opinion measurement is to determine if the questions asked on a given issue have a single meaning for the respondents.[75]

The fact that two people can give the same response to the same question and yet have different attitudes has posed a great problem for investigators for many years. The technique of scalogram analysis, however, provides a method for testing a series of qualitative items for the presence of a single variable. Such a determination is essential in the event that one wishes to rank respondents according to the degree of their favorableness toward the issue in question.

Scalogram analysis, as stated previously, is a technique which can be employed by investigators to evaluate and/or modify previously constructed attitude scales rather than to initially construct such an instrument. Edwards describes the technique in the following manner:

> In practice, scalogram analysis can perhaps be most accurately described as a procedure for evaluating sets

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[75]L. Guttman. "The Problem of Attitude and Opinion Measurement." In S. A. Stouffer (Ed.). Measurement and Prediction. Princeton: Princeton University Press, 1i50, p. 60.

> of statements or existing scales to determine whether or not they meet the requirements of a particular kind of scale set forth in some detail by Guttman.[76]

The scalogram technique was selected for use within the context of this study for the express purpose of modifying an existing attitude assessment instrument. The intent of the modification was to retain a universe of items which was sufficiently unidimensional in nature to allow respondents to be ranked according to their degree of favorableness. Since Guttman himself states that perfectly unidimensional scales should not be expected in practice, the technique provides a means of more closely approaching unidimensionality than is usually possible without its application.

Shaw asserts the following with respect to the application of scalogram analysis and the resultant scales:

> . . . these scales are more likely to be unidimensional than scales constructed by other procedures. The scalogram method usually yields scales that are reliable and valid according to the usual estimates of these attributes.[77]

Guttman has provided, through scalogram analysis, a means of calculating and expressing the degree to which a given set of items approximates or approaches unidimensionality. The term employed to reflect this approximation is the "coefficient of reproducibility." The reproducibility coefficient is

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[76]Allen L. Edwards. Techniques of Attitude Scale Construction. New York: Appleton-Century-Crofts, Inc., 1945, p. 172.

[77]Marvin E. Shaw and Jack M. Wright. Scales for the Measurement of Attitudes. New York: McGraw-Hill Book Company, 1967, p. 26.

expressed as a decimal and is frequently referred to as the "reproducibility index."

Reproducibility or R is determined in the following manner:

> It is secured by counting up the number of responses which would have been predicted wrongly for each person on the basis of his scale score, dividing these errors by the total number of responses and subtracting the resultant fraction from 1.[78]

This procedure is greatly simplified and clarified in the following formula:

$$R = 1 - \frac{\text{number of errors}}{\text{number of responses}}$$

For the purpose of example, if a scale consisted of 5 items tested on 100 people, the total number of responses would be 5 X 100 = 500. If there were 75 scaling errors for the sample, the reproducibility index would be calculated as follows:

$$R = 1 - \frac{75}{500} = 1 - .15 = .85$$

The literature on scalogram analysis consistently recommends or establishes a reproducibility index of .90 as an acceptable approximation to a perfect scale. It should be noted, however, that such an index is established for dichotomous items and it is suggested that the use of a greater number of response categories allows greater flexibility in the interpretation of scalability.

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[78]Guttman, op. cit., p. 77.

Spuriously low coefficients of reproductibility are sometimes achieved as a direct result of the somewhat arbitrary establishment of cutoff points indicating shifts within the pattern of responses. Guttman suggests that cutoff points be so established that no resulting category of responses contains more scaling errors than non-errors. Torgerson reinforces Guttman's suggestion by stating that:

> While it is desirable to have a considerable range of marginals, items with extreme marginals tend to make the value of Rep (reproducibility) spuriously high. Hence, few, if any, items should have more than 80 per cent of the subjects in their most popular category.[79]

Generally, as the number of response categories increases, the actual test for unidimensionality becomes more precise. According to Guttman:

> . . . four dichotomous items with high reproducibility do not provide as dependable an inference concerning the scalability of an area as would four trichotomous items which were equally as reproducible.[80]

As the preciseness increases due to an increase in the number of scaling errors, the reproducibility index becomes lower. It is for this reason that a reproducibility index of .85 is frequently recommended as being adequate for items which are other than dichotomous in nature.

Edwards states the following with regard to increasing response categories and the resultant decrease in the reprodicibility index:

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[79]Warren S. Torgerson. Theory and Methods of Scaling. New York: John Wiley & Sons, Inc., 1958, p. 234.

[80]Guttman, op. cit., p. 80.

> If a relatively large number of response categories is used, say five, then one will usually find that the discrepancies between the predicted patterns of response and those actually observed are so great that the number of errors is quite large, resulting in a value of less than .85 for the coefficient of reproducibility. When this is the case, Guttman suggests that a second score matrix be constructed. Where the recorded weights in a given column of the original score matrix appear to overlap considerably, then the categories of response assigned these weights may be combined.[81]

The process of combining categories, as is suggested above, is termed collapsing. This procedure becomes appropriate when the reproducibility index for a given set of items falls below .85 and when the responses for numerous items fluctuate between "agree" and "strongly agree" and/or between "disagree" and "strongly disagree." Once collapsing has been accomplished, new weights are then assigned to the categories on these items, the papers are rescored, and the individuals are reranked. Collapsing, in most instances, results in significantly fewer scaling errors and, consequently, a higher reproducibility index.

Oppenheim, in examining both the strong and weak features of Guttman's analysis, states the following:

> His procedures are laborious, and there is no certainty that, in the end, a usable scale will result. On the other hand, scalogram analysis will prevent us from building a single scale for a universe of content that really demands two or more separate scales; in other words, it offers the important safeguard of unidimensionality.[82]

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[81]Edwards, op. cit., p. 190.

[82]A. N. Oppenheim. Questionnaire Design and Measurement. New York: Basic Books, Inc., 1966, p. 144.

Summary

Scalogram analysis has been developed in the area of attitude scaling to combat the problem of determining the actual dimensions of meaning which items have for respondents. This analysis is a test for the presence or not of a single variable and enables individuals to be rank ordered (by score) for areas of an instrument which prove to be scalable.

Since perfect scales appear infrequently, the coefficient of reproducibility provides an accurate measure of the degree to which a series of items approximate unidimensionality. Any technique of observation of verbal or nonverbal behavior which can be made qualitative can be subjected to evaluation by scalogram analysis.

CHAPTER III

DESIGN OF THE STUDY

Introduction

The primary purpose of this study was to determine the degree of difference in expressed attitudes which existed across three selected groups as a function of: (1) professional responsibility; (2) curricular responsibility; and (3) highest degree earned. This chapter contains a description of the population, procedures, modification of the instrument, Attitude Toward Instructional Development, using Guttman's Scalogram Analysis, hypotheses to be tested, and statistical procedure. A short summary is also presented.

The Population

The population for this study consisted of participants in the Instructional Development Institute and enrollees in the Education 831A course in educational media which was taught during the winter term of 1972 at Michigan State University.

More specifically, the sample for this study consisted of the following three groups:

1. Those students enrolled in Education 831A during the winter quarter (1972) at Michigan State University. Education 831A is a graduate level course which

addresses itself to the instructional development concept and provides the enrollees with their initial formal exposure to the concept at Michigan State. These enrollees constituted experimental group one (1).

2. The Instructional Development Institute group, experimental group two (2) was pre-determined with respect to size and composition and included teachers, administrators (superintendents and principals), policy makers (board members), and specialists (content, curriculum, media). These persons were participants in the Instructional Development Institute program which is a function of the National Special Media Institute (NSMI). The IDI is, "a validated training program in ten (10) units (approximately 40 hours) designed to provide teams of teachers, administrators, policy makers, and specialists (TAPS) with initial competencies and skills in applying an instructional systems approach to the development of practical solutions to critical teaching and learning problems."[1] The institutions providing leadership for the IDI program are: (1) Michigan State University; (2) Syracuse University; (3) the University of Southern California; and (4) United States International University.

3. A control group was selected from the East Lansing, Michigan Public School System. Those persons selected for the control group had received no prior exposure to the instructional development concept via a formal course or an in-service workshop. This control group was selected so as to approximate both the size and the professional and curricular responsibilities represented in the IDI group.

This study will be generalizable to other populations only to the extent that other populations are similar in characteristics to the population used in this study.

Procedure

The procedure for this study included:

1. Modification of, Attitude Toward Instructional Development, an attitude assessment scale produced under a grant from the United States Office of Education,

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[1]National Special Media Institute. What Is An IDI? (Washington: United States Office of Education), p. 5.

Bureau of Libraries and Educational Technology, Division of Educational Technology.

2. The modification was made by employing Guttman's Scalogram Analysis. Specifically, the author:

   (a) Determined the unidimensionality of the instrument, with unidimensionality meaning or representing the presence of a single variable within the scale.

3. Administration of the revised instrument to the three selected groups.

Instrumentation

Attitude Toward Instructional Development, a fifty item Likert-type questionnaire, was selected for use in this study since it is one of few instruments designed specifically to assess attitudes which individuals hold toward instructional development. Since data pertaining to the instrument's unidimensionality and/or validity was unavailable from NSMI, the instrument was tested for unidimensionality and scalability.

Guttman Scalogram Analysis was used to determine unidimensionality and scalability. This technique is not designed to be utilized for scale construction but it is employed to determine, in an existing scale, if one and only one psychological object is being measured in that scale and whether or not the universe of items in the scale actually form a scale. Atherton, interpreting Guttman, writes that this technique, "is useful due to the favorable probability of providing unidimensionality in the constructed attitudinal scale."[2]

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[2]Lawrence L. Atherton. A Comparison of Movie and Multiple-Image Presentation Techniques on Affective and Cognitive Learning. Unpublished dissertation, Michigan State University, East Lansing, 1971, p. 13.

It is for this reason that the Guttman Scalogram Analysis was utilized in this study.

Experimental Procedures

The scale, Attitude Toward Instructional Development (see Appendix A), was administered as a pre-test to 43 students enrolled in Education 831A during the 1971 fall term at Michigan State University. Each statement in the instrument contained 5 possible responses ranging from strongly agree to strongly disagree. Each response was scored by assigning it a number with the higher number reflecting a more positive attitude toward the psychological object, instructional development. For example, a response of strongly agree was assigned a weight of 5, agree a weight of 4, undecided a weight of 3, disagree a weight of 2, and strongly disagree a weight of 1.

Scores were summed for each individual and the respondents were then ranked according to these summed scores. The ranking of individuals, according to Guttman, provides a more general approach to the problem of scaling. That is, a person with a more favorable attitude, a higher cumulative score, must be just as favorable or more favorable in his response to every item or statement contained in the universe of items than the other persons whose cumulative scores indicate a less favorable position. If this should happen, a perfect scale exists and perfect scales are not expected in the real world.

The closeness, then, of a scale to perfection is determined by the reproducibility index which accounts for the number of errors found in the scale response pattern.

The reproducibility index for the initial instrument was calculated to be .75, a figure which falls below the acceptable level of .85 as is specified by Guttman for items with more than two response categories. The reproducibility index was calculated by substituting in the following equation:

$$R = 1 - \frac{\text{number of errors}}{\text{number of responses}}$$

The initial instrument contained a total of 50 items which were responded to by 43 people. The number of responses (43 x 50) was calculated to be 2,150. Also, a total of 549 scaling errors were identified by adhering to Guttman's procedure for the establishment of cutting points within the response patterns for each item.

Scaling errors are those responses which fall outside of the category in which they are expected or predicted to fall as a direct result of the ranking of respondents. For example, responses of 1, 1, 1, 4, 1, 4, and 1 would constitute two scaling errors.

Substituting in the above equation, then, the reproducibility index was found to be .75:

$$R = 1 - \frac{549}{2,150} = 1 - .25 = .75$$

Care was taken when setting cutting points to identify scaling errors that no resultant categories of responses

contained more error than non-error. Those items which contained response categories having more error than non-error were eliminated from the instrument as per Guttman's recommendation, since such items have reproducibility indexes which fall below that of the total instrument.

Also, in order to insure that the calculated coefficient of reproducibility for the total instrument was not spuriously high, items were also eliminated in which 80 per cent or more of the respondents fell into the most popular response category.

An analysis of the remaining items indicated that the responses fluctuated back and forth between agree and strongly agree. Fluctuation was similarly apparent between the disagree and strongly disagree categories. As a result of this fluctuation, the response categories were collapsed and were then assigned new weights. Strongly agree and agree were given a weight of 3, undecided a weight of 2, and strongly disagree and disagree were given a weight of 1. The questionnaires were then rescored and the individuals re-ranked according to the cumulative scores based on the new weights. Collapsing categories, says Edwards,[3] "is designed to measure more accurately, respondents' attitudes toward the statements."

The procedures described resulted in the elimination of 26 original instrument items and the reproducibility index for the modified instrument was found to be .85.

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[3]Allen L. Edwards. "Techniques of Attitude Scale Construction." Century Psychology Series. Richard M. Elliott, Ed., Appleton-Century-Crofts, Inc., New York, pp. 190-191.

Hypotheses

The following hypotheses were generated and tested to determine the degree of difference in expressed attitudes which existed across the three "treatment groups."

1. There will be a difference in the attitudes expressed toward instructional development as a function of professional responsibility.

   A. The specialists will express a more positive attitude toward instructional development than will the teachers and administrators.

   B. The teachers will express a more positive attitude toward instructional development than will the administrators.

2. There will be a difference in the attitudes expressed toward instructional development as a function of curricular responsibility.

   A. Teachers of the non-academic (skill-centered) courses will express a more positive attitude toward instructional development than will the teachers of the academic (subject-centered) courses.

3. There will be a difference in the attitudes expressed toward instructional development as a function of highest degree earned.

   A. Teachers with a B. S. degree will express a more positive attitude toward instructional development than will the teachers with a Master's degree.

Analysis

The attitudinal scale for the pre-test and the revised scale administered to the three selected groups included in this study were analyzed by Guttman Scalogram Analysis. The revised scale was administered to the 831A class during the final examination week. The same scale was administered to the participants in the Instructional Development Institute at

the end of 40 hours of exposure to the instructional development concept. Since the control group had no formal exposure to instructional development and no treatment was administered, the point in time at which the questionnaire was administered was not a critical factor. The questionnaire however, was administered during the final exam week.

The analysis of variance was used to determine the differences which existed between and within the three groups as a function of professional responsibility, curricular responsibility, and highest degree earned. All of the hypotheses were tested at the .05 level of confidence.

Summary

The population for this study consisted of three groups: The 831A class which contained 46 students; the 31 participants in the Instructional Development Institute; and 33 individuals selected from the East Lansing Public Schools who comprised the control group. A demographic sheet was developed in order to gather information relative to the variables investigated in this study. This data was gathered at the time the attitudinal scale was administered.

CHAPTER IV

ANALYSIS OF RESULTS

Introduction

The purpose for this study, as stated previously, was to determine whether selected professional characteristics of three groups contributed to differences in their expressed attitudes toward the instructional development concept or process. The three professional characteristics under examination in this study were: (1) level of professional responsibility (teacher, administrator, policy maker, and specialist); (2) curricular responsibility (academic teacher or non-academic teacher); (3) highest degree earned.

This chapter is divided into two distinct sections with respect to analysis. The first of these sections provides a brief evaluation or analysis of the data gathering instrument used within this study. The analysis relates primarily to the unidimensionality of the instrument. The second section contains a statistical analysis of the data gathered with the attitude assessment instrument.

Analysis of Attitude Instrument

Prior to the gathering of data with the instrument, Attitude Toward Instructional Development, it was deemed necessary to determine the degree to which the instrument actually measured a single concept or variable, attitude toward instructional development. In order to evaluate the degree to which the instrument was unidimensional, the instrument was pretested by administering it to 43 students enrolled in Education 831A during the 1971 fall quarter at Michigan State University.

The Scalogram Analysis technique developed by Guttman was employed to evaluate the original form of the instrument. The coefficient of reproducibility (approximation of unidimensionality) for the instrument was calculated to be .75. This index of reproducibility fell below that recommended by Guttman (.85) for instruments containing multiple response items.

The elimination of items classified as extreme marginals and those containing response categories having more error than non-error significantly reduced the total number of items on the original instrument. Following the collapsing of response categories in order to compensate for fluctuation of responses between those categories on either side of the neutral category, the three remaining response categories were assigned new weights, the scores were retabulated and the respondents were re-ranked by scores based upon the newly assigned weights. The number of scaling errors were then retabulated and the

reproducibility index or coefficient for the remaining 24 items was calculated to be .85 (see Appendix B).

As a result of the application of Scalogram Analysis, the attitude assessment instrument (modified version) was considered to be sufficiently scalable or unidimensional for the purpose of gathering data for the study.

Statistical Analysis

Univariate analysis of variance revealed that the respondents' attitude scores were not significantly different at the .05 level when the respondents were grouped or classified with respect to the independent variable termed professional responsibility. The results of the analysis which are presented in Table 1 below clearly indicates the lack of significance when the respondents were classified as teachers, administrators, and specialists.

Table 1. Analysis of Variance: Professional Responsibility

Source of Variance	Degrees of Freedom	F Statistic	Significance Probability
Between categories	2	.73632	.482
Within categories	97		
Total	99		

The data presented in Table 1 fail to support the following:

1. There will be a difference, across the three groups, in the attitudes expressed toward instructional development as a function of professional responsibility.

   That is, the specialists will express a more positive attitude toward instructional development than will the teachers and administrators.

   Furthermore, the teachers will express a more positive attitude toward instructional development than will the administrators.

A preliminary comparison of respondent's attitude scores with respect to the independent variables, curricular responsibility and highest degree earned, resulted in a chi-square of 18.974 which indicated a significant relationship between these two variables at the .05 level. Further analysis of the interaction between the two independent variables (curricular responsibility and highest degree earned) and the formulation of attitudes toward instructional development revealed that the combined effect was not significant at the .05 level. The interaction yielded a significance probability of 0.1601 with 2 and 104 degrees of freedom.

Table 2 presents the results of univariate analysis for the variable, curricular responsibility.

The data presented in Table 2 (on the following page) and that presented in the discussion fail to support the following hypothesis:

Table 2. Analysis of Variance: Curricular Responsibility

Source of Variance	Degrees of Freedom	F Statistic	Significance Probability
Between categories	1	.11685	.733
Within categories	77		
Total	78		

2. There will be a difference, across the three groups, in the attitudes expressed toward instructional development as a function of curricular responsibility. That is, teachers of the non-academic (skill-centered) subjects will express a more positive attitude toward instructional development than will the teachers of the academic (subject-centered) subjects.

The F-Statistic yielded by a one-way analysis of variance for the variable highest degree earned, though not significant at the .05 level, was in the direction of the hypothesis. Results of the analysis are given in Table 3.

Table 3. Analysis of Variance: Highest Degree Earned

Source of Variance	Degrees of Freedom	F Statistic	Significance Probability
Between categories	1	1.97188	.166
Within categories	57		
Total	58		

The hypothesized influence of highest degree earned on the attitudes expressed toward instructional development, as stated below, was not supported by the analysis of the data.

3. There will be a difference, across the three groups, in the attitudes expressed toward instructional development as a function of highest degree earned.

   That is, teachers with a B. S. degree will express a more positive attitude toward instructional development than will the teachers with a Master's degree.

Summary

The original instrument, Attitude Toward Instructional Development, was subjected to Guttman Scalogram Analysis in order to determine the instrument's unidimensionality. This analysis led to the elimination of 26 items contained in the original instrument and resulted in a modified instrument which had an acceptable coefficient of reproducibility which was calculated to be .85. The 24 item modified instrument was considered to be sufficiently unidimensional to gather data for the study.

Univariate analysis of variance was used to test each of the hypotheses at the .05 level of confidence. It was found, through analysis of the data, that the independent variables, curricular responsibility, professional responsibility, and highest degree earned, had no significant effect upon the attitudes which were expressed toward instructional development across the three groups.

CHAPTER V

SUMMARY AND CONCLUSIONS

The primary purpose of this study was to determine the degree of difference in the attitudes expressed toward instructional development by three groups as a function of: (1) professional responsibility; (2) curricular responsibility; and (3) highest degree earned. The study was intended to assess the existing attitudes toward instructional development rather than to assess attitudinal changes within the sample population.

Though the existing literature contains numerous reports of attitude assessment studies conducted within the professional education area, little data has been generated with regard to the manner in which educators perceive the instructional development process as a useful tool for the design, carrying out, and evaluation of instruction. Studies which have assessed teachers' attitudes toward the utilization of audiovisual materials have addressed themselves to a very narrow aspect of the total instructional development process.

A major aspect of the instructional developer's professional role is one of facilitating the widespread acceptance and utilization of the instructional development process.

This diffusion responsibility centers about the creation of an institutional environment which is conducive to the acceptance of instructional development as a major contribution to more effective and efficient classroom instruction. In light of this diffusion function, the attitudes of those within the general academic setting are extremely significant in that they represent the climate of acceptance into which instructional development must be introduced.

Numerous previously conducted studies have clearly shown that there is a very strong relationship between one's attitude toward general change and specific changes and the ultimate acceptance or rejection of planned change. These factors, as well as influencing the rate at which the decisions are made, exert an influence on the continuation of these changes over time.

Past research has resulted in conflicting results with respect to the personal and professional characteristics of educators which influence the formulation of many of their attitudes with respect to educational practices. Previous examination of the professional characteristics considered in this study were found to significantly influence the formulation of some attitudes and failed to influence others. Since instructional development is innovative in nature, previous attitude studies shed little light upon existing attitudes toward instructional development and the professional characteristics which influence their formulation.

The population for this study consisted of 46 students enrolled in Education 831A during the winter term (1972) at Michigan State University, 31 participants in an Instructional Development Institute conducted in Toledo, Ohio, and 33 educators selected from the East Lansing Public School System. Both the size and the composition of the Institute and 831A groups were predetermined and were not under the control of the investigator. The control group, however, was selected to approximate the two previous groups with respect to both size and professional composition.

The attitude assessment instrument, Attitude Toward Instructional Development, was selected for use in this study since it was designed specifically for assessing attitudes toward the instructional development concept. Few other instruments exist to accomplish this end.

Prior to the gathering of data, the attitude instrument (50 Likert-type items) was subjected to scalogram analysis in order to determine its unidimensionality. The analysis resulted in the elimination of 26 of the original items and the modified version was determined to have a reproducibility coefficient of .85.

The data which was gathered with the modified instrument was subjected to univariate analyses of variance to determine the significance of the results. Each of the hypotheses was tested for significance at the .05 level.

Conclusions

An analysis of the data supports the following conclusions with respect to the assessed attitudes:

1. The level of professional responsibility (teacher, administrator, policy maker, and specialist) has no significant effect upon the attitudes which are expressed toward instructional development.
2. No significant differences in attitude toward instructional development were found to exist when teachers were classified as having an academic or non-academic curricular responsibility.
3. No significant differences in attitude toward instructional development were found when the teachers were grouped according to the degree held.

Discussion of Results

An analysis of the data gathered with the modified version of the instrument, Attitude Toward Instructional Development and the accompanying demographic sheet, indicated that the attitudes toward instructional development which were expressed by the respondents were not significantly influenced by the three professional characteristics (variables) introduced in the study.

The lack of significance with respect to the findings of this study could reasonably be attributed to the small sample which was used. The sample size, 110 subjects across

three groups, functioned as a constraint, particularly with regard to the variables of curricular and professional responsibility.

Since it was not feasible to classify administrators as having a curricular responsibility which could be termed as either academic or non-academic, the number of subjects available for analysis with respect to attitude was substantially reduced from the total sample of 110.

Furthermore, the range of responsibilities represented within the specialist group made it unfeasible to logically classify the majority of these subjects as having either an academic or a non-academic responsibility. The subsequent elimination of specialists from the analysis for this variable resulted in an overall number of 79 scores across the three groups. Further examination revealed a total of only 18 non-academic teachers as opposed to 61 academic teachers. Such a large difference in group size may well have contributed to the lack of significance across the groups for curricular responsibility.

It follows that if small numbers of subjects presented a significant analysis problem when subgroups were formed for levels of a given variable across the total sample, this posed an even more significant barrier with respect to a possible search for differences between the three treatment groups. Any examination of differences between groups was not feasible.

The results may have been further disguised by the fact that elementary level teachers have, in most cases, an

academic as well as a non-academic function within their total teaching responsibility. Though the non-academic responsibility is usually a very minor one in the elementary school, the dual responsibility may have influenced the results.

Also, the separation of the sample into three levels of professional responsibility (teacher, administrator, and specialist) designed into the study resulted in unequal numbers of subjects which may have contributed to a lack of significance across the sample. Numerically, there were 59 teachers, 21 administrators, and 20 specialists with 10 subjects excluded because of responsibilities which fell outside the normal educational responsibilities listed above. These 10 subjects were divided equally between the IDI and 831A groups.

Examination of the degree earned variable was limited to the two lower degree levels because of the expected infrequency of the doctoral degree at the public school level. Within the total group of teachers, 59 in number, 35 were found to be at the B. S. level and 24 had reached the Master's degree level.

It should also be noted that the degree earned variable was analyzed across the three groups only for the teachers since this was the only professional responsibility category which had more than one degree level represented within it. An examination of both the administrator and specialists groups revealed that the Master's degree was the only level represented within each of these two groups. A larger sample size might well have allowed an examination of possible differences with

the inclusion of the doctoral degree. Between group differences might well have been detected for this variable as well.

Recommendations for Future Research

1. This study should be replicated using a larger sample in order to increase the accuracy of the statistical analyses. The number of subjects within categories created by assignment to subgroupings of the professional responsibility and curricular responsibility was quite small for analysis.

2. Experiments should be conducted to determine whether there are specific elements or aspects of the total instructional development process which draw the most positive and negative respondent reaction. An examination of these elements may well be significantly related to those variables examined within this study.

3. Studies should be conducted, using a pretest and posttest design, which attempt to assess the possible relationship which exists between the attitudes expressed toward the process and the cognitive gain with respect to the process. Both 831A and Instructional Development Institute groups should be utilized with subjects randomly assigned to the sample population.

4. Since expressed attitudes can be utilized as reliable predictors of one's behavior when situational variables are considered and assessed, studies should be conducted which attempt to determine those institutional variables (conditions) which contribute most significantly to conflicts between

positive attitudes toward instructional development and participation in instructional development activities.

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APPENDICES

APPENDIX A

ATTITUDE TOWARD INSTRUCTIONAL DEVELOPMENT: ORIGINAL INSTRUMENT

Check One		Check One	
Male	☐	Teacher	☐
Female	☐	Administrator	☐
		Specialist	☐

ATTITUDE TOWARD INSTRUCTIONAL DEVELOPMENT*

Definitions

Instructional Development or I.D. is a system approach to solving instructional problems. It involves a definition stage where the problem and all related instructional elements and resources, including management organization are identified; a development stage where the behavior necessary to solve the problem is specified in measurable terms and a prototype learning experience is developed which employs the most effective methods and media that learning theory and practical experience can suggest; and finally, it involves a testing and application stage where the prototype system is tried out and revised repeatedly until some version(s) successfully teaches the desired behavior. Only then is the resulting system used by teachers who have been thoroughly trained to use it properly with qualified learners.

Instructions

When you answer the following statements please try to express the way you honestly feel about this idea of instructional development or I.D. Your answer is correct if it expresses your true opinion. PLEASE ANSWER EVERY ITEM. In each case encircle the letter which represents your own ideas as follows:

SA if you agree completely with the statement

A if you agree in general but wish to modify it somewhat

U if your attitude is undecided

D if you disagree but with certain modifications

SD if you completely disagree

*Produced under a grant from the U.S. Office of Education, Bureau of Libraries and Educational Technology, Division of Educational Technology, Media Specialist Program. Produced for the National Special Media Institutes by Jack V. Edling.

1. I.D. should be a part of the professional preparation of all teachers.	SA	A	U	D	SD
2. I.D. places too much emphasis on programming, media and technology.	SA	A	U	D	SD
3. I.D. makes one realize that you have to be specific on problems and objectives to communicate effectively.	SA	A	U	D	SD
4. I.D. really gives primary consideration to the learner's needs.	SA	A	U	D	SD
5. I.D. is a waste of time.	SA	A	U	D	SD
6. I.D. is so significant that it is urgent to promote its wide adoption.	SA	A	U	D	SD
7. I.D. allows each child to start from where he is and progress as far as he is capable.	SA	A	U	D	SD
8. I.D. enables children to find capabilities within themselves that they wouldn't have been able to find without it.	SA	A	U	D	SD
9. I.D. is nothing new.	SA	A	U	D	SD
10. I.D. seems like a better solution to our problems than anything else currently being considered.	SA	A	U	D	SD
11. I.D. will be ineffective unless all members of a team have a thorough understanding of the system and are committed to it.	SA	A	U	D	SD
12. I.D. is a flexible approach that allows for expansion and change.	SA	A	U	D	SD
13. I.D. is simply the old problem-solving method.	SA	A	U	D	SD
14. I.D. is the most challenging idea in education at the present time.	SA	A	U	D	SD
15. I.D. is the only really effective way to evolve a relevant curriculum.	SA	A	U	D	SD
16. I.D. requires too many alternatives to be practical.	SA	A	U	D	SD
17. I.D. enables the teacher to better see the purposes of his instructional program.	SA	A	U	D	SD

18. I.D. cannot be compared with traditional approaches to improving instruction.	SA	A	U	D	SD
19. I.D. will work only when everyone directly involved in instruction is favorable and familiar with it.	SA	A	U	D	SD
20. I.D. requires concentrated effort at first but it becomes less demanding as it becomes better understood.	SA	A	U	D	SD
21. I.D. is something every educator can use.	SA	A	U	D	SD
22. I.D. enables people to better work together to meet the needs of students.	SA	A	U	D	SD
23. I.D. enables teachers to develop new and more effective methods for meeting student needs.	SA	A	U	D	SD
24. I.D. may have some advantages but I haven't been sold completely on it.	SA	A	U	D	SD
25. I.D. is the most productive in-service training that I can conceive.	SA	A	U	D	SD
26. I.D. is the best answer yet for teachers who are looking for an objective method for attacking curriculum problems.	SA	A	U	D	SD
27. I.D. is a boring and uninteresting activity.	SA	A	U	D	SD
28. I.D. is the means to reduce the gap between "what is" and "what should be."	SA	A	U	D	SD
29. I.D. provides a means for "getting a handle" on the problems facing school districts.	SA	A	U	D	SD
30. I.D. can be the change agent that will elevate us from the morass of problems that blind, confuse and befuddle us.	SA	A	U	D	SD
31. I.D. is fine but I couldn't do it by myself.	SA	A	U	D	SD
32. I.D. is right on target--there is no better way or more opportune time than to move on it right now.	SA	A	U	D	SD
33. I.D. enables you to get the most effect for the money available.	SA	A	U	D	SD

34. I.D. has recognized and structured a systematic way to resolve problems and all educators should become committed to it.	SA	A	U	D	SD
35. I.D. is a giant step forward.	SA	A	U	D	SD
36. I.D. really makes one think about all aspects of the educational task.	SA	A	U	D	SD
37. I.D. provides a method to assess the goals of an instructional program realistically in terms of available resources.	SA	A	U	D	SD
38. I.D. has taken curriculum improvement from the abstract to tangible evidence in dealing with educational objectives.	SA	A	U	D	SD
39. I.D. is a procedure that will result in the improvement of an instructional program.	SA	A	U	D	SD
40. I.D. is long overdue--think of how many children we have failed and blamed them for their failure.	SA	A	U	D	SD
41. I.D. is a "must" for every administrator who assumes the role of instructional leader.	SA	A	U	D	SD
42. I.D helps teachers who have had little training on how to plan systematically.	SA	A	U	D	SD
43. I.D. and the resulting more systematic instruction has become essential since the educational process has become so complex.	SA	A	U	D	SD
44. I.D. is not an end in itself, but simply a means that educators can and must use to update schools.	SA	A	U	D	SD
45. I.D. is the best alternative we have to accomplish the task at hand.	SA	A	U	D	SD
46. I.D. seems to be the way to go.	SA	A	U	D	SD
47. I.D. is essential to get the support so often refused because we're always dealing with generalities.	SA	A	U	D	SD
48. I.D. is what we have been needing for years.	SA	A	U	D	SD

49. I.D. will succeed because it places primary emphasis on the learner and learning.	SA	A	U	D	SD
50. I.D. is the nearest thing we have to a panacea in education.	SA	A	U	D	SD

APPENDIX B

ATTITUDE TOWARD INSTRUCTIONAL DEVELOPMENT

REVISED INSTRUMENT

Please respond to each of the following items in order to provide essential background data.

SEX: Male Female

AGE: Please circle the appropriate age range:

up to 24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; over 60.

YEARS OF EMPLOYMENT: Please circle the appropriate range of years of your employment in an educational capacity.

None; 1-4; 5-9; 10-14; 15-19; 20-24; 25-29; 30-34; 35-39; over 40.

PRESENT POSITION: Please check your present position(s) in the following list and then indicate the number of years which you have held this position.

(Position)			(years)
Teacher	_____		_____
Administrator	_____	(principal or asst., superintendent or asst.)	_____
Board member	_____	(Trustee, regent, etc.)	_____
Specialist	_____	(counselor, media/library, curr., content)	_____

If other, please list and explain: _____

_____

CURRICULAR RESPONSIBILITY: Please list the subject(s) which you now teach.

(1) _____, (2) _____, (3) _____

TEACHING AND/OR ADMINISTRATIVE LEVEL: Please circle the appropriate level(s).

(K-8); (9-12); if other, specify: _____

DEGREE: Please circle your present degree level: (Bachelor's); (Master's); (Doctoral).

ATTITUDE TOWARD INSTRUCTIONAL DEVELOPMENT

DEFINITIONS:

Instructional Development or I.D. is a systems approach to solving instructional problems. It involves a definition stage where the problem and all related instructional elements and resources, including management organization are identified; a development stage where the behavior necessary to solve the problem is specified in measurable terms and a prototype learning experience is developed which employs the most effective methods and media that learning theory and practical experience can suggest; and finally, it involves a testing and application stage where the prototype system is tried out and revised repeatedly until some version(s) successfully teaches the desired behavior. Only then is the resulting system used by teachers who have been thoroughly trained to use it properly with qualified learners.

INSTRUCTIONS:

When you answer the following statements please try to express the way you honestly feel about this idea of instructional development or I.D. Your answer is correct if it expresses your true opinion. PLEASE ANSWER EVERY ITEM. In each case encircle the letter which represents your own ideas as follows:

SA if you agree completely with the statement

A if you agree in general but wish to modify it somewhat

U if your attitude is undecided

D if you disagree but with certain modifications

SD if you completely disagree

1. I.D. places too much emphasis on programming, media and technology.	SA	A	U	D	SD
2. I.D. really gives primary consideration to the learner's needs.	SA	A	U	D	SD
3. I.D. is so significant that it is urgent to promote its wide adoption.	SA	A	U	D	SD
4. I.D. enables children to find capabilities within themselves that they wouldn't have been able to find without it.	SA	A	U	D	SD
5. I.D. seems like a better solution to our problems than anything else currently being considered.	SA	A	U	D	SD
6. I.D. is the only really effective way to evolve a relevant curriculum.	SA	A	U	D	SD
7. I.D. requires too many alternatives to be practical.	SA	A	U	D	SD
8. I.D. requires concentrated effort at first but it becomes less demanding as it becomes better understood.	SA	A	U	D	SD
9. I.D. is something every educator can use.	SA	A	U	D	SD
10. I.D. is the best answer yet for teachers who are looking for an objective method for attacking curriculum problems.	SA	A	U	D	SD
11. I.D. is the means to reduce the gap between "what is" and "what should be."	SA	A	U	D	SD
12. I.D. provides a means for "getting a handle" on the problems facing school districts.	SA	A	U	D	SD
13. I.D. is right on target--there is no better way or opportune time than to move on it right now.	SA	A	U	D	SD
14. I.D. has recognized and structured a systematic way to resolve problems and all educators should become committed to it.	SA	A	U	D	SD
15. I.D. is a giant step forward.	SA	A	U	D	SD
16. I.D. really makes one think about all aspects of the educational task.	SA	A	U	D	SD

17. I.D. provides a method to assess the goals of an instructional program realistically in terms of available resources.	SA	A	U	D	SD
18. I.D. has taken curriculum improvement from the abstract to tangible evidence in dealing with educational objectives.	SA	A	U	D	SD
19. I.D. is a procedure that will result in the improvement of an instructional program.	SA	A	U	D	SD
20. I.D. is long overdue--think of how many children we have failed and blamed them for their failure.	SA	A	U	D	SD
21. I.D. is a must for every administrator who assumes the role of instructional leader.	SA	A	U	D	SD
22. I.D. and the resulting more systematic instruction has become essential since the educational process has become so complex.	SA	A	U	D	SD
23. I.D. is the best alternative we have to accomplish the task at hand.	SA	A	U	D	SD
24. I.D. seems to be the way to go.	SA	A	U	D	SD