

A STUDY OF TEACHER PERCEPTION OF FACTORS
RELATED TO EDUCATIONAL RESEARCH

by

AUBREY HOWARD MOSELEY

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CHAPTER I

INTRODUCTION

Many ideas and techniques relating to improved educational practices have been researched and are reported in the professional literature, both educational and that of related disciplines. In spite of the fact that educators express value for the results of research, seldom do the research results find their way into practice in educational programs via educational philosophy and objectives. The following could be said: (1) that to a great extent many of the ideas from research are not being tested and implemented in the education of our youth to the extent that they could be; (2) that though some of these ideas are being used by a few people, seldom is there a systematic plan for the introduction, implementation, or evaluation of ideas; and (3) that many teachers seem to be able to build a verbal ideology in regard to a new idea, but seem to face problems when they attempt to establish an action ideology in behavioral terms.

A basic problem in education is to determine what should be taught. Since research is a major factor in curriculum development and improvement, it would seem that more attention should be given to research related to what should be taught. Though much concern is being given to what content should be taught and to a certain extent, how that content should be organized for learning, increased attention should be given to the way students might be brought into contact with that content. Scientific inquiry appears essential in the following areas: (1) analysis of content needs for individual students; (2) how individual students might organize content according to individual purposes; (3) ways in which students might become involved in the content while pursuing learning goals; (4) how students might structure knowledge for themselves as they solve their problems of growing and becoming in movement toward intelligent behavior; and (5) the evidence indicating the extent to which students organize, become involved in, structure, and use knowledge to effect growth.

The ultimate objective of curriculum change is what happens to the learner. There are certain basic curriculum decisions, such as the above, which must be made. These

lead to what happens to the learner. What a faculty believes guides its educational objectives. Whatever a faculty believes and commits itself to in relationship to the above questions will be reflected in philosophy and objectives of its educational program. Logically speaking, a change in practice may have to appear in a change in the objectives, which would be restated as a result of a change, a belief, or philosophy.

A lag or gap exists in our educational system between the establishment of research findings and their adoption as governing principles in the daily operation of the schools and in the classrooms. Actually the classroom is the level at which the effects of change are realized. The results of research which find their way into our school processes--into the philosophy and objectives of our school which are used as a guide to select learning experiences and which are used as a basis for evaluation--constitute only a skeletal basis of a school program on which the decisions of the individual teachers can "put meat on the bones."¹

¹John I. Goodlad, "Organizing Center in Curriculum Theory and Practice," Theory Into Practice, I (October, 1962), 216.

Statement of the Problem

The purpose of this study was to explore and analyze teachers' perceptions in conducting and using educational research. This exploration was three fold:

1. To explore teachers' perceptions of the usefulness of new ideas which have been reported as helpful research findings.
2. To explore teachers' perceptions of the value of conducting original research or testing new ideas in the classroom.
3. To explore teachers' perceptions of ways to promote the increased use by teachers of research and research findings for curriculum improvement.

A widely accepted fact seems to be that teachers do not adequately utilize available research and research findings. There is a need for much greater use of educational research in the schools. The use of research by teachers may be placed on a continuum from very low to very high. Related very closely to this are teachers' perceptions of research which may be placed on a continuum from very negative or closed to very positive or open. Negative perceptions would relate to low use of research

while positive perceptions would relate to high use of research.

There are tried and tested ideas constituting a body of research reported in the professional literature which teachers could use to improve the teaching-learning process that are not being practiced to any great degree in our classrooms. Many teachers seem to face difficulty in reading and translating research findings into behavioral terms for use in the classroom. This is the lag or gap which exists between research and application. The lag or gap may be attributed to some of the following factors:

1. Teachers have a general resistance to research and are skeptical about carefully controlled studies.
2. The methods and means presently employed in disseminating research results in a lack of communication between the researcher and the practitioner. There is also no fixed responsibility for the dissemination of research.
3. The language in which research is reported to teachers is unfamiliar and they lack preparation and practice in the interpretation of research.

4. Teachers are unable to see how the research relates to the teaching-learning process and how it will affect their classroom situation.
5. Teachers are unable to see the immediate results of their finished products due to the relative invisibility of their output.

Teachers may hesitate to conduct and apply research for various reasons. It is realized that many teachers may conduct research or may try new ideas, but by and large they do not go about this in a systematic or scientific way, that is, they do not generally follow the scientific method, the process of curriculum development, or the steps in action research. Still others may go about the process of conducting or the use of research in a systematic or scientific way, but are unaware that this is the process they are following. Teachers may doubt their research abilities in that they do not conduct original research and test ideas on a limited scale, because of various reasons, some of which may be:

1. Teachers are doubtful of their knowledge about research, research methods, and the use of research; thus resulting in negative perceptions and feelings

of insecurity.

2. Teachers have not been exposed to or made aware of the value of research and how it will help in their work.
3. Teachers do not conduct research or try new ideas because they do not have the time, facilities, support, or guidance and supervision.
4. Teachers do not see the research process or the curriculum process as part of the image of the teacher, or of the teaching process, or of the function of the school.

Significance of the Study

In order to assist people in the establishment of procedures and/or models for change, it is necessary to know where they are at the present time. This involves an examination of the present situation. These data obtained are a basis for assessing the status quo and for making decisions, on the basis of this assessment, about how to proceed toward effecting a change, toward the improvement of practices, or toward the solution to a problem. The same procedure is true in relation to curriculum development. This is a sound principle that should

be followed when curriculum decisions are made. This study provided data on several factors related to the reasons why teachers are not conducting research and/or using research ideas in the classroom. Suggestions about what can be done to improve the situation were reported in the study.

An examination of certain characteristics and/or factors related to the problem area provided useful information which could be utilized in working with teachers in promoting a broader and more general acceptance of educational research in the improvement of practices and in the solution to problems in the classroom. Once the steps mentioned above are completed, objectives may be refined and restated and plans can be made for the involvement of the teachers according to their own needs such as creating models for the implementation of a change or designing ways of working for the individual teacher.

There has been a great deal in the literature recently about the dissemination of materials and information to teachers. This is one phase of the United States Office of Education Cooperative Research Program which involves the regional research centers. Many of the new

federal programs, such as the Elementary and Secondary School Act of 1965, have many implications for research for the public schools in terms of funds. These programs emphasize research in terms of planning, development, innovations, and the diffusion of knowledge. Special attention is given to the application of new ideas.

The literature is currently describing the role and function of a research director in the local school systems. The teachers interviewed expressed their ideas on the need for a person competent in research techniques and understandings to work with them on the local level in conducting and using research.

The Alabama Association for Supervision and Curriculum Development saw the need for increased research and increased use of research findings to improve education in Alabama. As a result of this felt need, three action groups were organized to work toward improving education.

This study will provide information in the areas of professional attitude, dissemination of research, classroom change, experimentation, leadership, and improvement of practices. These data could be useful in providing information related to some of the above mentioned

endeavors. This study utilized the information gathered to suggest possible ways to increase the efficiency and use of educational research and to suggest hypotheses for further study.

The lag or gap between research and application presents a problem in education. In regards to the time factor, Mort and Ross said:

. . . studies indicate that, in the past, a period of 50 years between the recognition of a need and the first introduction of an adequate invention to meet it has not been unusual. This is commonly followed by about 15 years of experimental tryout, during which the adaptation appears in about 3 per cent of the school systems, and 35-plus years of general diffusion. To put it in another way, the average American school lags 25 years behind the best practices.²

Industry and business seem to be making much better use of research and research findings than are schools. Keppel made the following statement: "Compared with industry, education has long been lagged in the development of research and, above all, in the application of its results."³ Phil Hirsch added, "There is more research done

²Paul R. Mort and Donald H. Ross, Principles of School Administration (2d ed.; New York: McGraw-Hill Book Company, Inc., 1957), p. 181.

³Francis Keppel, "On Improving the Diffusion of Knowledge," National Association of Secondary School Principals Bulletin, XLVIII (April, 1964), 4.

in education than in practically any other subject. Unfortunately, much of it is not being used."⁴

There is not a systematic effort made to introduce a change. Models which teachers can utilize in change are limited. As Traxler stated,

Many teachers have little or no knowledge of the research that has been done in their field and are unaware that there are practical findings that could be applied to their every day work.⁵

Many people express the need for improvement in the means and methods of dissemination of research. Ianni and Briggs made the following statements:

. . . despite all that research has discovered about learning theory and teaching, the teaching-learning process has remained largely unchanged, . . . [and] . . . if educational technology is to be improved, teachers must know what research has found and be convinced that the changes the findings of research lead to will benefit their pupils.⁶

[An] obvious need is popularization of proved findings that research has already made and the

⁴Phil Hirsch, "How To Make Research Worthwhile," School Management, V (November, 1961), 63.

⁵Arthur E. Traxler, "Some Comments on Educational Research at Mid-Century," Journal of Educational Research, XLVII (January, 1954), 363.

⁶Francis A. J. Ianni, "USOE Cooperative Research," School Life, XLVI (November, 1963), 15.

promotion of general practical use in our schools. Unfortunately, the results of sound research are not now made widely known to administrators and teachers, for education has no professional magazine, such as medicine has, that reports approved findings by research.⁷

Findley stated,

Administrators and classroom teachers have always shown a healthy skepticism of the results of neatly controlled studies. They are of course, the persons who are hostile to any new approaches that involve adaptation on their part.⁸

Briggs continued the discussion as he stated:

Even after the proved results of research on major problems are made widely available, something more is still needed. For several reasons, the majority of school administrators and teachers are not adventurous. Already they know more about what has been proved superior to traditional practice than they attempt to put into practice. It is their cardinal sin to give verbal approval and then do nothing. It is easier, and sometimes safer, to continue doing what one knows how to do than to introduce innovations that the supporting public may neither understand nor approve. And, moreover, teachers need guidance and help in translating new theory into practice.⁹

⁷Thomas H. Briggs, "Research in Education," Phi Delta Kappan, XLVI (November, 1964), 102.

⁸Warren G. Findley, "The Impact of Applied Problems to Educational Research," in First Annual Phi Delta Kappa Symposium on Educational Research, edited by Frank W. Banghart (Bloomington: Phi Delta Kappa, 1960), p. 46.

⁹Briggs, loc. cit.

Educators constantly discuss the lag in the application of educational research results into practice in the classroom. The idea is frequently expressed that if we would apply what is already known in educational research findings, the quality of education would be greatly increased. It seems that teachers do not have adequate cultural models to follow in making changes. As indicated in the literature, many ideas have been proven successful but are not being practiced in the classrooms. Many teachers do not know about many of the new ideas from research studies, but many teachers do know much better than they do. There is some indication that this is related to the personal factors involved in the process of change. A major concern is expressed over the problem of the diffusion of research ideas to the practitioners in the field. It is imperative for procedures or models to be established which would insure that adequate leadership and guidance are provided to help reduce this gap which exists between research and practice in education.

Sources of Data

The teacher's perceptions of educational research were obtained through tape-recorded interviews with a

selected group of fifty teachers. The interviewees were selected from teachers with at least three years teaching experience who were enrolled in the 1965 Summer School at the University of Alabama and who volunteered to participate in the study. The study was explained and described to a number of classes in the College of Education. Volunteers were requested and the sample was selected from this group.

A loosely structured general stimulus approach was used in the interview process. Information on the problem was gathered under six related categories: (1) professional attitude; (2) classroom changes; (3) experimentation; (4) dissemination of research; (5) leadership; and (6) improvement of practices. When the general stimulus questions failed to provide answers on desired points, structured questions were directed to elicit responses.

The interview process included three phases which were as follows: (1) tell the purpose and nature of the study; (2) engage the teacher in conversation to set a relaxed atmosphere through a discussion of their background, experience, and school; and (3) proceed into the information gathering phase of the interview by introducing

the general stimulus questions. The interviews were transcribed and tabulated in terms of the number and percentage of response to each of the items for each interviewee and for the total group. The data were analyzed and described in both tabular and narrative form in Chapter IV. The description was enhanced by the use of tables and excerpts from the interviews to illustrate various points and trends. Various conclusions and recommendations for further study were made in Chapter V.

Delimitations and Limitations

The following statements describe the delimitations and limitations of the study:

The perceptions and data reported in the study were restricted to a sample of public school teachers interviewed.

The number of teachers was limited to 50 teachers enrolled in the 1965 Summer School of the College of Education at the University of Alabama.

The teachers were under no compulsion to take part in the study. All of the teachers who were interviewed volunteered to participate in the study.

Teachers who were interviewed were selected from a

group who volunteered to participate in the study. The selection was based primarily on geographical distributions as to school and/or school system to avoid duplication of schools as much as possible. The screening was done to give a broader view of what is happening in the schools in terms of research.

Only teachers with a minimum of three years experience were used since experience seems to be imperative for teachers to have had time to adequately become involved in educational research and to be able to verbalize perceptions of its use and value in the classroom.

Significant conclusions were not intended to be drawn from a limited sample since this was an exploratory study, but observations may be drawn from the sample which may warrant other studies with a more rigidly-chosen sample.

Definition of Terms

For the purpose of this study certain terms were defined as stated:

Educational Research: research which deals primarily with the teaching-learning process. This may

include basic or action research. It will include research reported in the literature and research conducted by the teachers. It may include the following phases: conducting research, reading and understanding research, and applying research.

Perceptions: those opinions, feelings, and/or attitudes teachers express about a number of aspects of educational research.

Experimentation: classroom research by the teacher to determine the effectiveness of classroom techniques, methods, and materials.

Dissemination: the distribution or making available the results of research for use by teachers.

Changes: the changes made in the classroom by the teachers which they describe in the interviews.

Improvement of Practices: teachers find better ways of doing things as a result of research.

Leadership: local efforts to help teachers get better results from reported research and to conduct more research themselves.

Professional Attitudes: the attitude expressed by teachers toward educational research, the

profession of teaching, and certain school practices.

Lag: the period of time that lapsed between research and practice.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

Introduction

Research studies which related to the problem in this study were limited in number. Seldom were specific research studies relating to this area of study reported in the literature. Therefore, there was an inadequate amount of data and information for a background in the study. In order to build an adequate background and a case for the study, a general reading of the related literature, consisting of articles in professional books and journals, was pursued. In general, these articles reflected writers' ideas and opinions based on experience and bibliographical material.

There were many writers who recognized the problem of getting research ideas into the schools. These ideas and studies were presented to exemplify the significance of the problem in education today. The ideas and studies

from the related literature were presented in five parts in this chapter as background information for the study.

The parts are as follows:

1. The Lag Between Research and Practice
2. The Dimensions of Change with Related Factors and Recommendations
3. The Role of Leadership in Innovation
4. Ways to Alleviate the Lag
5. Communication and Dissemination of Research Findings

The Lag Between Research and Practice

Many references have been made in the literature to a lag or gap which exists between theory and practice in the classrooms of our schools. As pointed out in Chapter I, the average American school lags 25 years behind the best practices.¹

Keppel said, "In an era when research is greatly esteemed in most areas of endeavor, research in education has been long undervalued, underfinanced,

¹Mort, op. cit.

and under a cloud."²

Caswell stated that:

We have found for a long time that a major problem in curriculum improvement is the lag that exists between the practice in outstanding schools and that in the great rank and file. Yet, so far as I know, we have made no detailed analysis of the nature of this lag, of the factors which lead some schools to change and others not to, or of how improvement can be speeded.³

Van Dalen said:

Society has exerted considerable effort to promote research in the natural sciences, but it has assumed a more skeptical and antagonistic attitude toward supporting research in the social sciences. Many people are quite willing to accept changes in physics and technical fields, but they are rather reluctant to alter their social institutions. Citizens who quickly turn to scientists for aid in solving industrial problems rely on do-it-yourself and trial-and-error techniques for improving educational practices. Men who would not think of providing for national defense by returning to the military hardware of World War I confidently claim they can solve educational problems by returning to the practices of the McGuffey reader era. Manufacturers and politicians who

²Francis Keppel, 1965: Education's Turning Points, An Address before the Third Annual Conference of the National Committee for the Support of the Public Schools, at the Mayflower Hotel, Washington, D. C., on Monday afternoon, April 26, 1965 (Mimeographed and distributed by Bureau of Educational Assistance Programs).

³Hollis Caswell, "Research in the Curriculum," Educational Leadership, VII (April, 1950), 438-45.

continually increase research expenditure to produce more comfort gadgets and deadly weapons are not equally eager to earmark funds for educational research. Seeking better means of developing the potentialities of our children does not command as much attention as creating a new model car. Technologically, society's attitude toward research is in the Space Age; educationally, it is hardly beyond the Horse and Buggy Age.⁴

Shaftel recognized that a great hiatus between our stated objectives and actual school practices exists today. Shaftel reported that observation of classroom practices across the nation reveals little fundamental change in classroom practices from those of 30 years ago. More is known today about child growth and development and there has been an increase in the availability of more attractive and interesting instructional materials, but a large majority of classroom teachers continue to teach in terms of mechanistic theories of learning and extrinsic motivation, using standardized routine text-material.⁵

Keppel made the following statement concerning research:

⁴Deobold B. Van Dalen, Understanding Educational Research (New York: McGraw-Hill Book Company, Inc., 1962), pp. 3-4.

⁵Fannie R. Shaftel, "Evaluation--for Today or for the Future," Educational Leadership, XIV (February, 1957), 292-98.

The bewildering pace of social and economic change calls for increased research. And, above all, it calls for the liveliest cooperation between the researcher and the schools if we mean to apply our new knowledge in the classrooms for the benefit of this generation of American students.⁶

Even in discussions among researchers concerned with research in the schools, it is common to deplore the lag that exists between the establishment of research findings and their acceptance as operating principles in the schools.⁷

Shumsky described this lag as a dichotomy in education between theory and practice. Even in discussing theory and practice, educators speak about the educational practitioners as distinct from the educational theorists.⁸ Similar ideas were expressed by Keppel in an address made in 1965.⁹

Chase reported that education, as well as the other social sciences, suffers from what he described as

⁶Keppel, "On Improving the Diffusion of Knowledge," op. cit., 5.

⁷Findley, op. cit., p. 43.

⁸Abraham Shumsky, Creative Teaching in the Elementary School (New York: Appleton-Century-Crofts, 1965), pp. 6-7.

⁹Keppel, 1965: Education's Turning Points, op. cit.

a "double lag," slow progress in fundamental research and a delay in using research findings in the classroom.¹⁰

Foshay stated, "Existing research has little intrinsic value to the practitioners. Its value to him becomes apparent only at the point where he replicates it."¹¹ Although many of the findings of research in education are tentative and uncertain, the potential values of research for teachers are much greater than values now being realized.¹² In 1948, the Official Report of the American Educational Research Association stated, "We get value out of research in the field of education just to the degree we actually apply its findings."¹³

Dewey wrote that great contributions could be made to the field of research and practice by utilizing the

¹⁰Francis S. Chase, "The Status of Research in Education," School Review, LXII (November, 1954), 457-64.

¹¹Arthur W. Foshay, "Action Research as Imaginative Hindsight," Educational Research Bulletin, XXXIV (October 12, 1955), 169-71.

¹²Traxler, op. cit.

¹³T. C. Holy, "Getting the Value Out of Research Thru Application," Improving Educational Research, 1948 Official Yearbook of the American Educational Research Association (Washington: The Association, 1948), p. 37.

classroom teacher which we have failed to do in the past. The teachers are the ones in contact with the students and therefore the ones through whom scientific findings finally reach students. Dewey continued:

They are the channels through which the consequences of educational theory come into the lives of those at school. I suspect that if these teachers are mainly channels of reception and transmission, the conclusions of science will be badly distorted and deflected before they get into the minds of pupils. . . .

As far as the schools are concerned, it is certain that the problems which require a scientific treatment arise in actual relationships with students. Consequently, it is impossible to see how there can be an adequate flow of subject matter to set and control the problems investigators deal with unless there is active participation on the part of those directly engaged in teaching.¹⁴

On the job growth of the graduate in teacher education is absolutely essential. His in-service training must necessarily be largely self-initiated and self-sustained activity. Hence, every teacher should design a research study large enough to attract him but also one that can be pursued with personal satisfaction and with assurance of professional achievement. On the job research

¹⁴John Dewey, The Sources of a Science of Education (New York: Horace Liveright, 1929), pp. 46-48.

necessitates the adoption of a research attitude and philosophy. It is easy to discuss research processes, but the real test comes when the decision is made that each teacher should engage himself in research while on the job.¹⁵ Traxler wrote:

As Corey and others have urged in recent years, there is an insistent need for the development throughout the schools of a conception of research, not as an independent set of techniques that can contribute to the teaching process, but as an integral part of that process. As research gradually becomes an aspect of everyday classroom practice with teachers themselves studying the effectiveness of their own procedures, it loses in erudition and refinement of techniques but it acquires a dynamic character difficult to achieve when confined to the work of the expert alone.¹⁶

There is a need to bring research into the classrooms. Researchers have often viewed research as something conducted under carefully controlled conditions by specially trained personnel, after which it has been thought, the results could be transmitted to school personnel for use in their work. In other words, "research has often appeared to be something done for education

¹⁵ Harry A. Grace, "Leadership: The Educator's Challenge," Educational Administration and Supervision, XLI (November, 1955), 416-30. See also "The Human Resource of the United States," preface, Scientific American, 185:27, September, 1951.

¹⁶ Traxler, op. cit., 363.

rather than as a part of education."¹⁷

In the words of Spicer and his colleagues,

Needs can not be established by fiat. . . . Real participation involves taking part in the planning and discussion of advantages to be gained in the devising of methods of introduction, and in the execution of the innovation. . . .¹⁸

Ryans reported that educational practitioners have not been putting educational research into use. He feels that educational thinkers and researchers have often lamented this situation. The lag we deplore between the research and its implementation in the classroom is a valid criticism, but the research produced has not always been the kind that could be easily applied to educational practice.¹⁹

Research has had little influence on practice during the last fifty years. Most of this work was done on the individual level in a laboratory--concerned only with the doing of a piece of research--with little effort,

¹⁷ Ibid.

¹⁸ Ed H. Spicer (ed.), Human Problems in Technological Change (New York: Russell Sage Foundation, 1952), p. 292.

¹⁹ David G. Ryans, "Looking to the Future in Education," Educational Record, XLIV (October, 1963), 360-68.

after writing his story, to do the really hard job of helping to put the recommendations into practice.²⁰

This does not excuse practitioners for being so slow in implementing ideas that may be practicable, but it does place a large share of the blame on the work of educational researchers.²¹

A common practice in education has been to implement ideas that sound reasonable without adequate pretesting. We have had to learn this the hard way by expending large amounts of money, effort, and time before we replace this favored idea with a new one.²² "Educational innovations are almost never evaluated on a systematic basis."²³ A similar discussion of this point is given by Beach²⁴ and Keppel.²⁵

²⁰Norton L. Beach, "Research Goes Into Action," Journal of Educational Research, XLVII (January, 1954), 351-58.

²¹Ryans, loc. cit.

²²Ibid.

²³Matthew B. Miles (ed.), Innovations in Education (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 657.

²⁴Beach, loc. cit.

²⁵Keppel, 1965: Education's Turning Points, op. cit.

Shumsky made the following comment about teachers doing research:

The classroom teacher often fails to see the real meaning of research as an opportunity for the expression of a spirit of inquiry and for a higher level of thinking, feeling, and working. The result is he scurries to adapt an idea to some conventional mechanical procedure rather than to search for means of investigating meaningful areas of personal concern. He does research only because he is forced to do it; he does not create and does not grow.²⁶

A similar discussion of this idea is given by Abelson.²⁷

The following is a list of some shortcomings of educational research:

1. . . . Educational research has been too fragmentary. It has dealt with small details that require many inductive leaps and stretches of the imagination to envision how the research and its findings might be applicable to classroom or administration.
2. . . . It is not use directed so far as educational practice is concerned.
3. . . . Our lack of knowledge of the behavioral variables that are significantly related to a desired educational product [is a third problem].²⁸

²⁶ Abraham Shumsky, The Action Research Way of Learning (New York: Bureau of Publications, Teachers College, Columbia University, 1958), p. 62.

²⁷ Harold H. Abelson, "The Role of Educational Research in a Democracy," The Journal of Educational Sociology, XXI (April, 1964), 454-61.

²⁸ Ryans, op. cit., 362-63.

4. Even when useful, much educational research avoids basic issues.
5. Educational research tends to avoid what is controversial and therefore exciting.²⁹

Similar factors related to the shortcomings of educational research are pointed out by Beach.³⁰

Ryans reported that many of the shortcomings could be overcome or a great improvement could be made if educational practice and educational research were to undertake systematic, long-range, educational planning, development, and research.³¹

The Dimensions of Change with Related
Factors and Recommendations

Most innovations appear to be stimulated, initiated, guided, and nurtured by some active person or group, either external to or within the potentially innovation adopting system. The isolated hero concept seems inappropriate. One should examine the progress of any innovation in relation to the complex network of groups, individuals, and

²⁹George D. Stoddard, "Educational Research Lacks Impact, It Avoids Controversies and Human Values," Nation's Schools, XLIX (May, 1952), 44.

³⁰Beach, loc. cit.

³¹Ryans, loc. cit.

organizations involved in the innovation. The professional, political, and economic context of an organization's operation must be considered when innovations are being studied or attempted.³²

Kniseley mentioned that the basic responsibility for preventing obsolescence and promoting change in teaching falls upon the organization in which the teacher works. Schools are threatened by obsolescence in knowing and teaching practice. Many problems such as inefficiency, lassitude, bigotry, confusion, and ineptness exist in the schools. Progress can be hindered by different segments of the community making conflicting demands. Goals and objectives are not always clear.

In spite of the admonitions of educational literature, in spite of hours spent in framing statements of purpose, a large amount of our effort is expended toward ends that are undetermined, that are presumed without having been examined, or about which we disagree.³³

Kniseley made the following recommendations which might facilitate change:

1. If the school seeks teachers who are capable, independently thinking people, it must in turn

³²Miles, op. cit., pp. 639-40.

³³V. V. Kniseley, "Inevitable Obsolescence?" Theory Into Practice, III (February, 1964), 34.

- provide an atmosphere for innovation, an environment . . . in which the introduction or adaptation of something new is expected rather than an unusual event.
2. After his orientation, the new teacher must find the conditions as described do exist in reality. . . .
 3. Change occurs most profitably when encouraged on a continuous "broken-front" pattern. . . . In-service activities . . . will move continuously in a variety of ways with efforts applied to a variety of problems
 4. The role of leadership in change should be one of inspiration and coordination. . . .³⁴

Griffiths pointed out that the responsibility for the increased use of research rests squarely on the shoulders of those who lead.³⁵ Chesler, Schmuck, and Lippitt made the following statements concerning teacher cooperation and sharing:

It is a unique school indeed in which teachers discuss their classroom problems, techniques, and progress with one another and with their principal. In most schools teachers practice their own methods--rarely hearing, or even caring, if one of their colleagues is experimenting with some new teaching device or technique. We know that many teachers are trying out new ideas and experimenting with new practices and forms of classroom management, and we believe that teaching is improved when teachers share and evaluate new

³⁴ Ibid., 30-34.

³⁵ Daniel E. Griffiths, Research in Educational Administration, An Appraisal and a Plan (New York: Bureau of Publications, Teachers College, Columbia University, 1959), pp. 58-59.

ideas and practices with their colleagues. Further, we maintain that teachers can learn from one another's experience, and any situation enhancing the interchange of ideas and practices should add to each teacher's repertoire of skills and techniques. Such sharing of information and experience should improve the character of education in a school, and should be a vital concern to those interested in improving classroom education.³⁶

Chesler, Schmuck, and Lippitt conducted a study in which they collected data from the entire staff of each of nine elementary and secondary schools. The teachers reported the following factors as influencing innovative teaching:

1. Teachers' feelings that new practices can help solve problems important to them and their pupils.
2. Teachers' feelings that a given practice is easily adaptable to their own styles of teaching and does not demand a great investment of time and energy.
3. Teachers' feelings that the school administration will support new teaching practices.³⁷

The data pointed out that the principal plays an important role in stimulating innovative classroom teaching. A high and significant correlation ($\rho = +.65$,

³⁶Mark Chesler, Richard Schmuck, and Ronald Lippitt, "The Principal's Role In Facilitating Innovation," Theory Into Practice, II (December, 1963), 269.

³⁷Ibid., 269-77.

p. less than .05) was found between the amount of staff inventiveness, as measured by the mean number of new practices developed by each teacher, and the staff's perception of the principal's support for innovative teaching. A higher correlation ($\rho = +.73$, p. less than .05) was found between the teacher's perception of his principal's support and his perception of his colleagues' support of innovation.³⁸

Van Dalen mentioned that the lag between research findings and their application suggests that teachers are unaware of educational research conducted by competent scholars, or unwilling to apply the outcome of research in the schools, or unable to apply the findings due to inadequate facilities or restrictive administrative policies.³⁹

Van Dalen said, "Teachers retard the professionalization of education if they regard research as an expendable academic appendage."⁴⁰

Related to the problem of knowing much better than

³⁸Ibid.

³⁹Van Dalen, op. cit., p. 12.

⁴⁰Ibid.

we do in our schools, one dominant conclusion emerges. School staffs that have experience in experimental work are willing to utilize the experimental work of others. School staffs that tend to accept the existing program with little question are not readily influenced to make changes from reports of the experiments of others.⁴¹

Any attempt to explore reasons for the lag or gap which exists between research and the application of its findings in the daily role of the school must recognize the impact of certain critics on school practice. The people at the policy level are proposing changes that fundamentally challenge the values and goals of the teachers whom they are attempting to change.⁴²

Shaftel made the following hypothesis:

It is my hypothesis that this haitus occurs because professional leaders are proposing fundamental curricular changes without fully facing up to the realities inherent in any social practices as intimately involved with human values as public education.

Unless we make the decision to work much more fundamentally than we now do in our present curriculum procedures, we shall continue to formulate objectives at the "expert" level and continue to

⁴¹Caswell, op. cit., 438-45.

⁴²Shaftel, op. cit., 294; 298.

have little basic change, or at best, superficial change at the classroom or school level.⁴³

The classroom teacher is the key person in achieving our educational objectives. Some procedure needs to be developed in order that the teacher will have access to the knowledge of the researcher in such a direct way that new needs are felt by the teacher which in turn would generate even better educational objectives.⁴⁴

Findley pointed to a problem experienced in the application of findings as that of a certain distortion which can result from using findings from situations that are well defined and controlled in very diverse and ill-ordered situations to be found in the different school systems throughout the United States.⁴⁵ A similar discussion of this point is made by Lazarsfeld and Sieber.⁴⁶

Chase mentioned that research in education has not received sufficient time and talent because of the lack

⁴³ Ibid., 292-98.

⁴⁴ Ibid.

⁴⁵ Findley, op. cit., p. 43.

⁴⁶ Paul F. Lazarsfeld and Sam D. Sieber, Organizing Educational Research (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1964), p. 54.

of the necessary financial resources. He further mentioned that research has been short of financial support because there is little effective demand for its products. The problem of getting the needed research is related very closely to the problem of getting the research results used in our schools. "The demand for additional research products is not likely to grow while consumption lags so far behind present production."⁴⁷ This statement is reinforced by Lazarsfeld and Sieber who pointed out that there exists little demand on the part of the practitioner for research results.⁴⁸

Chase recognized the "paucity of research reports" and the "density of the language" as being possible problems, but believes that a more basic problem is the change of behavior of the person involved and/or the modification of cherished institutions in the translation of research into action. These results must be internalized before they can become effective. Many times the translation is dependent not only upon psychological processes but also

⁴⁷ Chase, op. cit., 458.

⁴⁸ Lazarsfeld and Sieber, op. cit., p. 51.

upon social and political procedures.⁴⁹ A similar discussion is offered by Shumsky in The Action Research Way of Learning.⁵⁰

Shumsky described the problem of the lack of integration between research and practice as a tendency on the part of teachers to seek a gimmick, a prescription, or a rule of thumb as an answer to curriculum problems. ". . . These are the teachers who change the external form rather than the content and the spirit."⁵¹

The improvement of education calls for the setting of new goals and a careful study of the process of change--the conceptions and attitudes of the classroom teacher.⁵²

The amount of effort we put forth to make research readable and accessible will not have a marked effect upon the practices of the classroom teacher unless we develop a scientific attitude in our teachers and administrators and

⁴⁹ Chase, op. cit., 457-64.

⁵⁰ Shumsky, The Action Research Way of Learning, op. cit., pp. 43-62.

⁵¹ Shumsky, Creative Teaching in the Elementary School, op. cit., pp. 6-7.

⁵² Ibid.

encourage the maintenance of that attitude on the job.⁵³

Andrews said, ". . . If educational practice is to be substantially based upon research, we must drastically revise our dilettante approach and put research on a realistic basis."⁵⁴

Traxler reported there is a need for better publicity among school people in terms of educational research and for restating findings of research in a language that is understandable by the teacher.⁵⁵

Taba expressed the possibility of the gap between research and practice may exist because the preoccupation with changes in organizational schemes has not been paralleled by experimentation with curriculum as it functions in the teaching-learning process.⁵⁶

Robinson expressed the feeling that the lag is

⁵³Walter R. Borg, "Teachers as Intelligent Consumers of Research," School and Society, LXXIII (June 9, 1951), 357-59.

⁵⁴J. H. M. Andrews, "The Practical Function of Research," Canadian Education and Research Digest, III (September, 1963), 169.

⁵⁵Traxler, op. cit., 363.

⁵⁶Hilda Taba, Curriculum Development Theory and Practice (New York: Harcourt, Brace, and World, Inc., 1962), p. 344.

large because no one in education has any clear cut responsibility for closing the gap. "We are all too busy and we can all point to some other task as being our 'chief responsibility.'"⁵⁷

Lazarsfeld and Sieber pointed out indifference, resistance, and ignorance as factors which permeate the lag which exists. Indifference was discussed in terms of the administrative problem of cost versus quality of product and the problem of measuring the school's product or output. Skepticism about the value of educational research and the political milieu of the school system in America are cited as evidences of resistance. Inadequate channels of communication and the difficulty of the language were mentioned as causes of ignorance of research.⁵⁸ Robinson gave an additional discussion of the factor of resistance to research as it related to the schools of Canada.⁵⁹ Keppel stated, "Education's resistance

⁵⁷ F. G. Robinson, "Deficiencies in Our Present Organization For Educational Research and Suggestions For Improvement," Canadian Education and Research Digest, II (December, 1962), 245.

⁵⁸ Lazarsfeld and Sieber, op. cit., pp. 55-59.

⁵⁹ Robinson, op. cit., 243-51.

to the findings of research has been unmatched in other fields."⁶⁰

Several methods have been used to overcome the language barrier and to create receptivity to research results. These include teacher preparation and in-service training, study councils and workshops for post-graduate re-tooling, speeches at professional meetings and research publications. But in view of slowness with which innovations based on research have been adopted in the past, as well as the continuing skepticism toward research, there is reason to believe that most of these methods have been ineffectual.⁶¹

A recent study of a representative sample of 1580 elementary school teachers confirmed that teachers do not read publications which contain research results. This study shows that only about one per cent read either the NEA Research Bulletin, the Journal of Educational Psychology, or the Review of Educational Research. None of the publications which the teachers read with any

⁶⁰Keppel, 1965: Education's Turning Points,
op. cit.

⁶¹Lazarsfeld and Sieber, op. cit., pp. 57-59.

regularity are listed in America's Educational Press (27th Yearbook, 1960, The Educational Press Association of America, Washington, D. C.) as research sources.⁶²

A study by Rockarts reported that from a sample of 50 teachers of English, 86 per cent reported reading current literature in the field of English.⁶³ Rockarts reported:

Every teacher interviewed perceived teacher sharing of ideas as very valuable. Those who had no opportunity to profit from this communication of ideas in a formal way, expressed the desire that they be given some free time in which they might visit other teachers' classes. They indicated that this was one very profitable means of improving methodology which has not been exploited.⁶⁴

Shumsky administered an "Attitude Toward Research" scale to a group of 25 subjects enrolled in a class with him. Items were coded as pertaining to certain broad areas set-up. The scale offered five choices on each item and values were assigned, depending on the choice made and whether the statements were positive or negative. In a

⁶²Ibid.

⁶³Grace Rockarts, "Teacher Perception of Successful Methods of Teaching in the Field of English," (unpublished Ed. D. dissertation, College of Education, University of Alabama, 1964), p. 83.

⁶⁴Ibid.

category dealing with their feelings of confidence in doing or reading research, 65 per cent of the responses were expressions of confidence in ability to produce and consume research, while 17 per cent were expressions of inadequacy. Even though the majority felt adequate in handling research, they were worried about the amount of time required. The small minority who felt inadequate and unmotivated expressed feelings toward tedious library work and the difficulty in becoming involved in serious work. In a category emphasizing the significance of research to teachers, 71 per cent of the responses indicate that research is impractical. The majority felt that teachers could and should be researchers.⁶⁵

The same group of 25 subjects were asked to jot down their first reaction to the word "research." An analysis of the responses showed that 56 per cent were negative responses; 28 per cent were positive; and 16 per cent were mixed.⁶⁶

When asked the question, "Did you read research projects during the last year?" eight said yes and 17 said

⁶⁵ Shumsky, The Action Research Way of Learning, op. cit., pp. 32-51.

⁶⁶ Ibid.

no. Of the eight responding yes, four said it did help them with their work; four said it did not.⁶⁷

When asked the question, "What is your attitude toward doing research as part of your job?" 16 responded "useful and willing"; six responded "not too happy"; three responded "never thought about it."⁶⁸

Shumsky and Mukerji have observed teachers who were trying to put research ideas into practice. Not only the teachers' behavior but also their attitudes toward research showed ambivalent feelings. These feelings resulted from two conflicting sets of values that the teachers held simultaneously. The teachers accepted the value of research and believed experimentation to be important for professional growth. At the same time they resisted putting into practice new ideas that emerged from research.⁶⁹

Teachers have been hesitant to apply research findings from a laboratory to their own classroom.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Abraham Shumsky and Rose Mukerji, "From Research Ideas to Classroom Practice," Elementary School Journal, LXIII (November, 1962), 83-86.

Observation has pointed out that conflict between the old and new patterns of behavior creates resistance to change. Some teachers try to avoid the difficulties in trying to change their behavior by claiming that the research design is impractical. They try to adjust the design so that they will not have to change their behavior.⁷⁰

Miles pointed out that it is likely that innovations which require excessive outlays of money, energy, or time by the adopting person or group are likely to move slowly. At the application level, it appears that many features of technological innovations influence diffusion, which include feasibility, ease of availability when use is desired, and convenience of use. Materials give considerable aid to the diffusion of educational innovations. Aside from the motivational reactions of potential users, the difficulty of implementation of a particular innovation is a genuine barrier to adoption and continued use. Some innovations bear characteristics which do not necessarily serve to slow adoption rates in themselves, but do retard acceptance because of their incongruence and the problems

⁷⁰Ibid.

they present within the potentially accepting systems.⁷¹

Robinson pointed out that educators constantly deplore the lag between research and practice, but further stated:

As a rule, administrators and teachers are unable to evaluate differences in findings so that they become suspicious of educational research in general. They tolerate the "ivory tower" reports but rely on the "tried-and-true" practices with which they are comfortable.⁷²

Corey pointed out that research which relates to the physical aspects of teaching--production of instructional materials, school buildings, and other material innovations--are accepted much faster than research which has implications for teacher-pupil relations.⁷³ The research findings which deal with teacher-pupil relations deal with the personal and human elements of teaching. In trying to adopt some of these ideas, the school practitioner often finds himself resistant and afraid.⁷⁴

⁷¹Miles, op. cit., pp. 635-37.

⁷²Helen M. Robinson, "Applying Research," Elementary School Journal, LXI (May, 1961), 407.

⁷³Stephen M. Corey, Action Research to Improve School Practices (New York: Bureau of Publications, Teachers College, Columbia University, 1953), p. 10.

⁷⁴Shumsky, The Action Research Way of Learning, op. cit., p. 43.

Traditional educational research courses have looked at research mainly as a "system of logic and complex subject matter discipline" and have ignored the personal implications of research to teachers. This is one of the major reasons why the effects of educational research on teachers are relatively limited.⁷⁵

Lippitt mentioned that research in the physical sciences is being absorbed rather quickly by the public. In the social sciences, due to our emotional involvement in ways of behavior and difficulty in visualizing the tangible results of new practices, we tend to resist change.⁷⁶ Trager and Rodek pointed out that:

Almost universally, efforts to introduce change in educational practice are resisted. The resistance comes from many quarters in the school and the community, takes many forms, and seriously interferes with progress.⁷⁷

"Change forces and resistance forces are both operating

⁷⁵ Ibid.

⁷⁶ Ronald Lippitt, Training in Community Relations (New York: Harper and Brothers, 1949), p. 7.

⁷⁷ Helen Trager and Marie Rodek, "Launching a Program of Change," Kenneth D. Benne and Bozidar Muntyan (eds.), Human Relations in Curriculum Change (New York: The Dryden Press, 1951), p. 287.

in almost every situation."⁷⁸ Thomas listed the following causes of change:

1. Dramatic events.
2. Pronouncements of prestige groups sometimes causes us to stop and think and make changes in the schools.
3. The discovery of new materials and methods.
4. Legislative enactment.
5. Changes in society itself make demands on schools.
6. World events.⁷⁹

It has been pointed out previously in this chapter that teachers tend to resist change.⁸⁰

Eichholz interviewed in depth 45 teachers in five schools who were known to be rejectors of new ideas on the basis of a previously administered questionnaire. He identified five basic types of rejection:

⁷⁸Ronald Lippitt, Jeanne Watson, and Bruce Westley, The Dynamics of Planned Change (New York: Harcourt, Brace, and Company, 1958), p. 72.

⁷⁹Eugene H. Thomas, "The Principal's Role in Change," National Association of Secondary School Principals Bulletin, XLVII (February, 1963), 26-30.

⁸⁰Lazarsfeld and Sieber, op. cit., pp. 51-54; F. G. Robinson, op. cit., 243-51; Keppel, 1965: Education's Turning Points, op. cit.

1. Ignorance--The subject simply does not know about the proposed innovation.⁸¹ This was also pointed out in a study by Willower.⁸²
2. Suspended judgment--Some teachers want to wait and see how good a new idea is before they try it. They view with anxiety any change that might endanger past success.
3. Situational--Many times teachers feel that "other things are equally as good"; they are defensive in that "school regulations will not permit it;" or they feel deprived in that "it costs too much to use in time and/or money."
4. Personal--They feel anxious in that "I don't know if they can operate it"; they feel guilty in that "I know I should use them but I don't have time"; they feel alienated in that "these gadgets will never replace a teacher."
5. Experimental--They are convinced in that "I tried them once and they aren't any good."

⁸¹Gerald C. Eichholz, "Why Do Teachers Reject Change?" Theory Into Practice, II (December, 1963), 264-68.

⁸²Donald J. Willower, "Barriers to Change in Educational Organization," Theory Into Practice, II (December, 1963), 257-63.

Eichholz reported that once forms of rejection can be identified among the teachers, an attempt can then be made to overcome it.⁸³

In the case of ignorance, information can be made available by placing professional magazines in the lounges; by discussing innovations and changes at faculty meetings; and by providing for formal and informal channels of communication.⁸⁴

If the rejection is a case of suspended judgment, there are always a few teachers in any school who will accept change readily. The administrator can start with this group as a nucleus. Then this will spread to the entire group with constant communication of accomplishments to the entire faculty.⁸⁵

An environment conducive to experimentation is effective in meeting rejections for situational reasons. Change is best implemented as a group operation so as to alleviate the individual teacher's fear of a personal failure.⁸⁶

⁸³ Eichholz, loc. cit.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Ibid.

Trying something new and different is always risky because it is impossible to predict in advance what will happen when changes are introduced. When the group as a whole is taking the risk, the risk of the individual is considerably reduced.⁸⁷ Studies in group dynamics point out that it is easier for individuals to change as members of a group than it is for them to change as individual members, isolated from others.⁸⁸

If the rejection is personal in nature it seems to present a greater problem. The teacher who feels anxious or alienated about change will see others accept change and will build a defense to rationalize his guilt feelings. Examples, proofs, and appeals to logic will not overcome this resistance. If change is forced, the result will be a greater state of rebellion. The best advice here is to proceed at a slow pace. The administrator can reinforce what this teacher is doing and provide leadership. As faculty acceptance of change continues, pressure mounts against the rejector which will eventually lead to a trial

⁸⁷ Corey, Action Research to Improve School Practice, op. cit., p. 39.

⁸⁸ Abraham Shumsky, "Cooperation in Action Research: A Rationale," Journal of Educational Sociology, XXX (December, 1956), 180-85.

stage and some experimentation.⁸⁹

"Mere trial or experimentation does not assure acceptance in many instances, it provides the means to reinforce attitudes of rejection." This person might be experimenting to reinforce his rejection, but with leadership, this might turn into acceptance.⁹⁰

An important source is found in the real or perceived threat that change poses to status. Blau and Scott observed that much of the resistance to change in organizations is due to the disturbance it would produce in the status structure.⁹¹

Lippitt, Watson, and Westley pointed out that resistance to change may occur when the proposed change promises to benefit one part of the organization at the expense of other parts.⁹²

Willower and Jones found that older teachers had generally conservative views, while younger teachers were

⁸⁹Eichholz, op. cit., 264-68.

⁹⁰Ibid.

⁹¹Peter M. Blau and Richard W. Scott, Formal Organizations (San Francisco: Chandler Publishing Company, 1962), p. 100.

⁹²Lippitt, Watson, and Westley, op. cit., p. 82.

more liberal and permissive. The dominance of the older teachers in the informal structure of the school and the status quo norms which they held functioned to discourage the proposal and accomplishment of certain kinds of changes.⁹³

Trager and Rodke cited a three year project in the Philadelphia Public Schools. An effort was made to keep teacher resistance to change at a minimum. The project effected change in both the school program and in the teachers by recognizing that what appears to be teacher resistance to change is really resistance to the methods ordinarily used to initiate change. They were able to keep teacher resistance at a minimum by substituting methods that do not in and of themselves induce resistance.⁹⁴

The Role of Leadership in Innovation

"The crucial role of school administrators in causing a school to be more or less innovative warrants

⁹³ Donald J. Willower and Ronald G. Jones, "When Pupil Control Becomes an Institutional Theme," Phi Delta Kappan, XLV (November, 1963), 107-109; Willower, loc. cit.

⁹⁴ Trager and Rodke, op. cit., pp. 287-93.

special emphasis."⁹⁵ A high relationship has been found between the financial resources of a school system and its innovativeness.⁹⁶ Willower stated, "If a community or board of education is economy-minded or places a higher value on other accomplishments, educational changes that bear a price tag will be resisted."⁹⁷

Several factors such as social characteristics, social relationships, and communication behavior of the faculty of a school relates to the innovativeness of their school system. The teachers may affect the innovativeness of a school system but also the school system may affect the innovativeness of the teachers through its policies.⁹⁸

Rogers paraphrased Ross as saying that teachers at more innovative schools usually acquired new educational ideas from outside their community.⁹⁹

⁹⁵ Everett M. Rogers, "What Are Innovators Like?" Theory Into Practice, II (December, 1963), 256.

⁹⁶ Ibid., 252-56.

⁹⁷ Willower, op. cit., 257-63.

⁹⁸ Rogers, op. cit., 252-56.

⁹⁹ Ibid. [paraphrases Donald Ross (ed.), Administration for Adaptability (New York: Metropolitan School Study Council, 1958), p. 21].

Ahrens pointed out that where leadership involves a power struggle for self approval, security at the expense of others, and a greed for achieving personal motives and goals, it is very unlikely that a research approach to curriculum improvement will be utilized.¹⁰⁰ Ahrens defined the need as follows:

The need . . . is for leaders who are sensitive to the needs of teachers, who have relatively stable personalities, who work democratically with teachers in assisting them to solve problems and achieve goals which they feel are important and significant and who are conversant with the concepts and techniques of cooperative research.¹⁰¹

Rogers mentioned that innovative school administrators might be expected to maintain close contact with laboratory or experimental schools and with universities. This may be through graduate work or attendance at conferences and workshops.¹⁰²

Rogers quoted Demeter as saying:

Building principals are key figures in the process. Where they are both aware of and sympathetic to an innovation, it tends to prosper. Where they are

¹⁰⁰Maurice R. Ahrens, "Leadership for Curriculum Research," Editorial in Educational Leadership, XII (May, 1955), 450-52.

¹⁰¹Ibid., 451.

¹⁰²Rogers, op. cit., 252-56.

ignorant of its existence, or apathetic if not hostile, it tends to remain outside the blood stream of the school.¹⁰³

Guest pointed out that students of organizations generally agree that controls imposed from the top of the hierarchy do not assure the co-operation of subordinates. He said, "There must be some kind of involvement from below which makes it possible for subordinates to accept and even to initiate a certain amount of change themselves."¹⁰⁴

Rockarts found that 90 per cent of the teachers interviewed perceived the administrative climate of the school as reflected by the principal to be either one of freedom to experiment for improvement or one of active encouragement and help. This indicates that a great majority of teachers are exposed to a climate of professional freedom and/or encouragement to see change in order to improve.¹⁰⁵

¹⁰³ Ibid. [quotes Lee H. Demeter, "Accelerating the Local Use of Improved Educational Practices in School Systems," unpublished Ph.D. dissertation, Teachers College, Columbia University, 1951, p. 23].

¹⁰⁴ Robert H. Guest, Organizational Change: The Effect of Successful Leadership (Homewood, Illinois: Dorsey Press, Inc. and Richard D. Irwin, Inc., 1962), p. 153.

¹⁰⁵ Rockarts, op. cit., pp. 83-84.

Simon stated, "Unless the executive conscientiously allocates time to innovation, he will find ways to fritter away his time by absorbing it in routine."¹⁰⁶

Griffiths and others conducted a study in which 232 elementary principals dealt with a simulated administrative situation called the Whitman School. The results of this study point out that the elementary principal seldom introduces a new idea into the school system. Aggressive leadership is not reflected in the few changes he does initiate. It seems that if we are to promote change in school systems we can not look to the principal to initiate this change. It must come from the top. Once the change is sanctioned by his superiors, the principal will work to effect that change at the building level.¹⁰⁷

Likert has observed "changes which are made rapidly or which are superimposed by authority meet with strong resistance." He mentioned also that errors are likely

¹⁰⁶ Herbert A. Simon, "The Decision Makers as Innovator," in Concepts and Issues in Administrative Behavior, Sidney Mailick and Edward H. Van Ness (eds.) (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1962), p. 68.

¹⁰⁷ Daniel E. Griffiths, "The Elementary-School Principal and Change in the School System," Theory Into Practice, II (December, 1963), 278-84.

to be made in introducing a major change and that the change will end abruptly if the subordinates who make mistakes are not supported by those at higher levels.¹⁰⁸

Lippitt and associates pointed out that resistance may come at any time from the initiation of a change through its implementation. It should be noted that continued implementation will be resisted if the initial phases of a change are exhausting.¹⁰⁹

Eichholz recognized that rejection is normal and a certain amount is good on any staff if for no other reasons than to control and channel change and to measure progress. He stated, "Immoderate and unthinking acceptance is as harmful as prolonged and unreasonable rejection." Possibly as the rejector himself and the process of rejection are more fully understood, the gap between the introduction of a change and its acceptance will be reduced.¹¹⁰

A quote by Straubel reinforced the demand for more research and development in the field of education.

¹⁰⁸ Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, Inc., 1961), p. 246.

¹⁰⁹ Lippitt, Watson, and Westley, op. cit., pp. 85-86.

¹¹⁰ Eichholz, op. cit., 264-68.

There are those who will say, "But the results of sound research and development are not always accepted and applied, not always transformed into operations, are often resented and opposed." Of course this is true in a free society. Human nature being what it is, this no doubt will always be true. It is all the more reason for more research and development--in depth.

Research breeds new knowledge; development applies new knowledge. Together they puncture traditions, break through social and economic barriers, overcome apathy and complacency--force issues, force change.¹¹¹

Caswell wrote that success in the area of research is perhaps more vital than any other in assuring the professional status of teaching.¹¹²

Ways to Alleviate the Lag

Much has been written about the lag between theory and practice which was discussed earlier in this writing. Many people have been pointing out the problems or causes of this lag. Many people have been offering suggestions about ways to alleviate these causes and making recommendations for improving the educational situation.

Ianni and Josephs discussed the problem by stating that people have been talking about three problems:

¹¹¹James H. Straubel, "No Room For Stuffed Birds," Theory Into Practice, I (April, 1962), 69.

¹¹²Caswell, op. cit., 438-45.

(1) articulation between levels of education; (2) overcoming the teacher's lack of preparation for teaching concept oriented courses; and (3) putting knowledge gained from research into practice. The findings of research must be utilized more quickly so that practicing teachers can use them and new teachers can learn them.¹¹³

Regardless of how promising an educational idea seems to be, it is useful only when the teacher successfully uses it with children. In teaching, as in society at large, the ideas which are used are the ones they are told about. For this reason Charters feels we will see some emphasis shift from the exploration of new ideas and concepts to the development of techniques for putting them into practice.¹¹⁴

Educational changes due to research are difficult to determine because of the fact that research is woven into the educative process and the process by which research causes change is often very subtle. Another

¹¹³Francis A. J. Ianni and Lois Josephs, "Needed--A Way To Save Curiosity," School Life, XLVI (November, 1963), 23-24.

¹¹⁴W. W. Charters, "The Era of the Educational Engineer," Educational Research Bulletin, XXX (December 12, 1951), 230-37, 246.

point is that research is not always expected to cause change. Much is often intended to increase human understanding without necessarily causing change.¹¹⁵

Cooper further stated, "The large amount of current status investigation, providing precise evidence about contemporary conditions, does not in itself offer any guide to the modifications of those conditions."¹¹⁶

The problem continues to be one of converting new ideas into forms that are usable in the classroom, testing their use in real schools, and diffusing the proven ideas throughout the educational system. The need for programming research and development resources so that careful research leads to engineering solutions which can be evaluated and made available for educational practice becomes greater every day.¹¹⁷

Cooper outlined two problems that must be solved in order to increase the impact of research on education.

¹¹⁵ Dan H. Cooper, "The Impact of Research on Education," Phi Delta Kappan, XXXV (October, 1953), 16-20, 44.

¹¹⁶ Ibid., 17.

¹¹⁷ Francis A. J. Ianni, "Research and Experimentation in Education," Phi Delta Kappan, XLVI (June, 1965), 489-91.

First, the influence of present research must be greater through increased application; or second, a larger body of significant research must be produced. "The emphasis in recent years seems to have been on improving applications."¹¹⁸

McAshan pointed out that practitioners in the field of education in all areas and at all levels have long been aware of the need for theoretical and action research. Very little research has taken place outside of the laboratory situation because of the lack of trained personnel, inadequate methods of financing substantial experimental projects, and daily problems occupying much of the teachers time. Sometimes the language of research and the statistical tools have prevented teachers from participating in research.¹¹⁹

Many professional fields such as law, medicine, and education have special languages which they have created and are often used with poor semantic judgment. This vocabulary laden with special terms and connotations

¹¹⁸ Cooper, op. cit., 16-20, 44.

¹¹⁹ Hildreth Hoke McAshan, Elements of Educational Research (New York: McGraw-Hill Book Company, Inc., 1963), p. 2.

seems to be one of the characteristics of a profession.¹²⁰

Shane described education's challenge as follows:

There is an important task ahead for educators who are willing to make the needed efforts to simplify and improve our communication skills in education as a whole and in research in particular. While there are no common place synonyms for such terms as correlate or integrate, more simple, precise communication needs to be stressed so that meaning is facilitated, not hampered by expressions adopted by the profession.¹²¹

Increasing enrollments, criticisms of education, and the addition of new subject matter and experiences have created heavy loads, both physical and psychological, for all educators. "Many teachers and administrators feel pressed and even harassed by their current responsibilities."¹²²

As a result they do not participate in research because of a lack of time to do more than they are already doing. Leadership needs to recognize this and seek to reduce some of the load now borne by many staffs. Shane feels this is particularly true if teachers are to make

¹²⁰ Harold G. Shane, "Responsibility For More Functional Use," Phi Delta Kappan, XXXV (October, 1953), 45-48.

¹²¹ Ibid., 47.

¹²² Ibid.

better use of research in their work.¹²³

McKim pointed out that one of the needs identified in surveys of curriculum research over the past 50 years is for studies made in classroom situations.

Almost every summary of the research on general methods to which this writer turned ended with the statement that attempts to establish the general superiority of a method outside of a particular classroom setting are likely to be of limited value.¹²⁴

Robinson, a Canadian educator, pointed out that:

. . . The primary force behind the inertia of local school systems is a misconception about the nature and function of educational research itself. Many educators imagine that when a new idea appears it would be possible for some large research project to be conducted by a respectable agency, and that the results of this experiment would tell the educator how and if he should proceed to implement the idea; in other words, they are simply waiting for research to "tell" them what to do. As neat and crisp as this arrangement might be, it is quite impossible to realize because it runs contrary to one of the more profound truths (and limitations, incidentally) of educational research. This truth, which is fortunately becoming more recognized every day, is that the effectiveness of any educational procedure or technique depends upon a cluster of local variables . . . and that whether

¹²³ Ibid., 45-48.

¹²⁴ Margaret G. McKim, "Curriculum Research in Historical Perspective," Research for Curriculum Improvement, 1957 Yearbook of the Association for Supervision and Curriculum Development (Washington: The Association, 1957), p. 35.

a procedure will be effective and how it can best be used in any given local situation can only be determined through experimentation in that situation. This means that the "message" from research will always be somewhat general and the knowledge of the specifics which must precede implementation can only be intelligently decided through local experimentation.¹²⁵

Corman stated that action research has been reported to challenge prejudices, develop leadership, clear channels of communication, create interest in research, and facilitate change. "The original point of departure for action research was the failure of educational research to play a significant role in changing practice."¹²⁶

At the present time, as mentioned earlier in this writing, teachers and administrators regard research as something separate from their regular responsibilities and activities. Many teachers view research with a considerable degree of doubt. Weitz reported that this attitude is due in part to the natural conservatism of teachers, but it is also based on some other factors. They have found that research means extra time and that these

¹²⁵F. G. Robinson, op. cit., 247.

¹²⁶Bernard R. Corman, "Action Research: A Teaching or a Research Method?" Review of Educational Research, XXVII (December, 1957), 544-47.

experiments must never fail. They have seen experiments thrust upon a staff without adequate preparation. They have seen many of these ideas dropped as soon as the innovator left the particular situation. Very few teachers have been trained to approach their role with an experimental and scientific attitude.¹²⁷ He predicted that:

If experimentation is ever to amount to anything in education, it should not depend solely upon the zeal, enthusiasm, and efforts of individual principals or a few teachers. Rather, it should constitute a regular and significant aspect of a school's and a system's continuous investment in education.¹²⁸

Current literature has pointed out the need for a specially trained person in the area of research methods and techniques to work with teachers in the school system.

Robinson pointed out that it is essential that those who know the research in particular areas assemble and interpret it for teachers.¹²⁹

¹²⁷ Leo Weitz, "Developing a Favorable Attitude Toward Experimentation," National Association of Secondary School Principals Bulletin, XLVII (February, 1963), 113-17.

¹²⁸ Ibid., 117.

¹²⁹ Helen M. Robinson, "Educational Research For Teachers," Educational News and Editorial Comment, Elementary School Journal, LIV (May, 1954), 487.

Shumsky found that when consultants take time to work with teachers during the implementation phase of action research, they are likely to see teachers make significant progress toward improving their teaching behavior.¹³⁰

Abelson mentioned that the translation of realistic problems into research terms requires the help of scientifically trained experts. Effective research can not be done without expert leadership.

The research expert must coordinate research activity, help to translate particularized questions into more generalized and hence more widely applicable issues, and assist in the education and application of special investigational techniques.¹³¹

The research director will find it difficult to help teachers improve practices in a scientific way unless he is able to find ways of helping teachers face their attitudes toward research. As stated earlier, when teachers have to face the personal implications of research as consumers or producers, they experience resistance and

¹³⁰ Shumsky and Mukerji, op. cit., 83-86.

¹³¹ Abelson, op. cit., 459.

express it in negative attitudes.¹³² The research person was described by Lazarsfeld and Sieber in the following paragraph:

. . . It should be noted that in recent years a group of practitioners has emerged whose jobs partially entail the translation of research into practice. These specialists have greater familiarity with the conditions prevailing in their own school systems than do experts affiliated with the universities; but this distinction may have disadvantages as well as advantages. They must rely on the generally available publications of research; they are subjected to pressures from teachers, administrators, and school boards as to the desirability or feasibility of implementing research results; they obtain a limited impression of educational possibilities because of their local orientation; and they are often saddled with small administrative tasks which sap their energies and perhaps also their professional commitments. Further, it should be noted that these specialists are found only in the better-supported systems. Much more needs to be known, however, about the qualifications and work habits of staff specialists with respect to evaluation and implementation of research findings. It seems apparent that administrators and teachers will rely increasingly upon such specialists; their work, therefore, may well affect attitudes toward the value of educational research.¹³³

¹³² Abraham Shumsky, "Teachers Explore Their Attitudes Toward Research," Educational Research Bulletin, XXXVII (February, 1958), 31-38; 56.

¹³³ Lazarsfeld and Sieber, op. cit., pp. 59-60.

Communication and Dissemination
of Research Findings

It is unquestionable that there exists an information gap between the researcher and the schoolman. Ianni says that "at present even the lines of communication which do exist seem to suffer from interference and bad connections." Where we have failed most obviously is in the process of making the results of research available to practitioners.¹³⁴

Clymer stated that one of our major problems of putting research findings into practice is the need to communicate effectively with the consumers of research.¹³⁵

Robinson pointed out that the entire process of educational change in Canada is characterized by an appalling lack of communication. This lack of communication is particularly noticeable between the tryout and implementation stages.¹³⁶

He further stated that: ". . . what may often

¹³⁴Ianni, op. cit., 489-91.

¹³⁵Theodore Clymer, "Some Current Educational Needs in Educational Research," Phi Delta Kappan, XL (March, 1959), 253-57.

¹³⁶F. G. Robinson, op. cit., 243-51.

appear to be inertia is, in fact, simple unawareness and results from the failure of the communication system. . . ." One can not remedy these deficiencies by merely increasing the size of the present research bodies, since the basic problem would still remain a lack of communication.¹³⁷

Bebell pointed out that the traditional approach to this matter of informing people has been that of writing and circulating research results, using such media as books, monographs, theses, magazine articles, newsletters, and committee reports. There have been some doubts about the efficacy of the written word for "rarely have such reports resulted in the actual application of the findings." He further points out that possibly a more efficient means of informing people is through involvement and participation.¹³⁸

Much has been written about regional research centers and many centers are being established by various

¹³⁷ Ibid.

¹³⁸ Clifford S. Bebell, "Getting Meaning From Research," Research for Curriculum Improvement, 1957 Yearbook of the Association for Supervision and Curriculum Development (Washington: The Association, 1957), pp. 138-39.

universities in cooperation with financial assistance from the United States Office of Education. The following quotation is taken from the developmental plans formulated by the University of Pennsylvania under a federal research grant project.

It is mandatory that careful attention be given to the flow of information to and from centers if the research results are to have immediate and desired effects on educational practices. The usual means of communicating research results, . . . are too slow and ineffective to be depended upon exclusively. The other media should be used extensively in addition to print.¹³⁹

Educational television and radio, demonstrations, and involvement of teachers and public school and college people in the planning as a means of communication is suggested by the report.¹⁴⁰

As Conrad mentioned, practical educational research looks towards application of its findings. Practical research disseminates its findings to the people in the field.¹⁴¹

¹³⁹University of Pennsylvania, A Research Report On Operational Plans For Developing Regional Educational Media Research Centers (University Park: Pennsylvania State University, 1962), p. 88.

¹⁴⁰Ibid.

¹⁴¹H. S. Conrad, "Research--Education's Gibraltar," School Life, XXXIV (April, 1952), 97-98, 109.

Corey predicted that the scientific method of inquiry will not have the influence its advocates predict until practitioners, teachers, supervisors, and school administrators learn to conduct research as a way of dealing with day by day problems.¹⁴²

Any person who attempts to validate beliefs through application must be motivated. Many times teachers have been forced to cooperate with a plan in which they did not agree. Frequently the assumption has been made that informing a person about the correct or desirable thing to do would motivate him to do it.¹⁴³

Rockarts drew the following conclusion from her study:

A general conclusion made by the interviewer is this--all the teachers spoken to expressed the desire to improve their teaching practices--not one expressed complete satisfaction with his present efforts. All, too, expressed the need for help in doing a better job in the classroom. They all wanted to increase their effectiveness and seventy per cent hoped to do this by taking further professional training. Many, however, felt that strong in-service programs and inter-teacher visitation could

¹⁴²Corey, op. cit., p. 161.

¹⁴³Bebell, loc. cit.

stimulate them and give them ideas to incorporate into their classroom practices.¹⁴⁴

Too often the conclusions of a teacher who has tried out an idea in his classroom remains with that teacher. Some effort has to be made to maintain adequate communications and records if other teachers are to know about what is happening in our schools.¹⁴⁵

To quote Charters: "A thousand studies are carried on, tested, and found useful in local centers. Ten are reported; 990 are unknown except to the workers."¹⁴⁶

Corey stated that it is not enough for researchers to study the problems other people must do something about, and to publish the results. More understandable reports specifying applications will undoubtedly result in reducing the gap between what is known to be better and what is done. "But most practitioners already know better than they do."¹⁴⁷ Corey made the following comment about research methodology:

¹⁴⁴Rockarts, op. cit., pp. 91-92.

¹⁴⁵Bebell, loc. cit.

¹⁴⁶Charters, op. cit., 236.

¹⁴⁷Stephen M. Corey, "A Perspective on Educational Research," Phi Delta Kappan, XXXV (October, 1953), 21-24.

The value placed upon research methodology is undoubtedly learned in much the same fashion as are other values. In the individual case, commitment to the research method of studying educational problems develops as one engages in research, as one experiences consequences perceived to be rewarding. The most intrinsic consequence is intimate experience with improvement in the educational difficulty that the research was designed to ameliorate.¹⁴⁸

Shumsky mentioned that the communication of scientific findings can have an impact only on those who are subjectively ready to receive the communication. What is needed is an approach to communication which will allow the reader to identify with the research's subjective experience. By reporting what is experienced by the researcher as well as the observations of the investigative experience one can hope to enhance the impact of educational research.¹⁴⁹

Shumsky paraphrased Carl Rogers from the American Psychologist, July, 1955, as saying that a common problem facing the teacher-researcher is the misunderstanding of what is primary and what is secondary in research. In reading research reports, the teacher is overwhelmed by

¹⁴⁸ Ibid., 23.

¹⁴⁹ Shumsky, The Action Research Way of Learning, op. cit., pp. 59-62.

the research design and the statistical analysis. Too often he fails to see that they do not exist for themselves, but rather as tools in an attempt to check the subjective faith of an individual with the objective facts of reality.¹⁵⁰ A good example was given by Mooney:

The situation in this regard may be likened to that which confronts most of us in seeing a play. As a member of the audience, we need only to see an actor within the construction of the role taken. An actor who is watching another actor, however will look behind the role taken into the role-taking, i.e., into the way the man who is acting is handling himself. This is the inner drama behind the scenes and the one that neither actors nor research producers have made public in any great degree.¹⁵¹

Systematic and efficient procedures for the collection and distribution of research in the future should be developed. A plan should be devised which will assemble and publish useful techniques to practitioners.¹⁵² In regard to this comment, Charters continued:

The form will be simple, the information terse, and the suggestions practical. Details will be

¹⁵⁰ Ibid.

¹⁵¹ Ross L. Mooney, "The Researcher Himself," Research for Curriculum Improvement, 1957 Yearbook of the Association for Supervision and Curriculum Development (Washington: The Association, 1957), p. 154.

¹⁵² Charters, op. cit., 230-37; 246.

worked out in the light of experience. . . .
Obviously the builder of techniques must
patiently and persistently perfect his methods
until they reach the goal of practice.¹⁵³

Educators are asking the question--what does
research have to say about this? They want tested answers.
They are looking to research to give them straight
facts.¹⁵⁴

The following is a list of problem areas which
must be dealt with:

1. Further research is often needed before applying
the results of available studies.
2. The results of research must often be modified
before their application is attempted.
3. The results of research must be stated in terms
of an understandable program.
4. The program based on research must be made familiar
to educators and laymen.¹⁵⁵

¹⁵³ Ibid., 236.

¹⁵⁴ Beach, op. cit., 351-52.

¹⁵⁵ W. C. Reusser, "How a College of Education
Studies State Educational Problems," from The Application
of Research Findings to Current Educational Practises, The
Official Report of the American Educational Research
Association (Atlantic City, N. J.: February 23-27, 1935),
pp. 145-50.

Teachers say the greatest difficulty they face is finding time to carry on research. Duties have been continuously added to the teacher's load but seldom have we taken anything away.¹⁵⁶

For years the experts in research have pointed out the pitfalls in doing a good research job. Teachers are still gun-shy. They are not sure about their participation. Reports of successful participation by teachers will encourage them.¹⁵⁷

Regardless of who does research, it requires money. Some situations have been limited because they have not faced up to this need. A leading industrialist from a midwestern state made the following comment while talking with a superintendent of schools: "Mr. Superintendent, if we spent as little money on research in our organization as you do in your schools, we would be out of business tomorrow morning."¹⁵⁸ More money is being spent on research now than ever before, but there can be little return on this investment unless dynamic efforts are made to get the findings out into the open for consideration

¹⁵⁶ Beach, op. cit., 351-58.

¹⁵⁷ Ibid., 357.

¹⁵⁸ Ibid., 351.

by practitioners.¹⁵⁹

Moore made some suggestions about reporting research since he thought that practitioners were making little progress in their plea for more readable and articulate research. A page appended to each report that designates practical implications and some possible ways they might be tried can be helpful. Research conducted in the actual school setting which involves both researcher and practitioner can force each to understand the other.¹⁶⁰

Brickwell mentioned that demonstrations offer ideal circumstances for the dissemination of new approaches which are ordinary, unenriched, and normal. The demonstrations must look like everyday situations, or they rob the observed program of persuasive effects.¹⁶¹

Lazarsfeld and Sieber pointed out that observation of programs in action are by far the most persuasive, at least for the dissemination of new instructional methods.¹⁶²

¹⁵⁹ Samuel A. Moore III, "How Not To Report Research," Overview, II (December, 1961), 21-25.

¹⁶⁰ Ibid.

¹⁶¹ Henry M. Brickwell, "The Dynamics of Educational Change," Theory Into Practice, I (April, 1962), 81-88.

¹⁶² Lazarsfeld and Sieber, op. cit., p. 72.

As Beach pointed out, the school climate is a critical factor in successful research. Administrative encouragement and assistance are necessary. This has frequently been a serious limitation because the administrators have not always recognized the importance of the role they must play.¹⁶³

Efforts are being made in centers established across the country to attract new people within and outside of education into educational research. In attracting new talents, we must welcome them into our schools. They must work with teachers and create a new partnership between research and those who will use what research has to offer.¹⁶⁴

"If we hope to succeed through research we shall need school systems which dare to experiment, to try new ideas, to find out if there are better means of teaching-- and to put them to use." Most school systems will need the support of an enlightened lay leadership to encourage the educators if they are to initiate new programs of

¹⁶³Beach, op. cit., 351-58.

¹⁶⁴Keppel, 1965: Education's Turning Points, op. cit.

research and development and to reinforce and protect them from criticisms that inevitably come with change.¹⁶⁵

As an increasing number of teachers and other educational workers contribute their share to produce good research, more successful action in the classroom will result.¹⁶⁶

Summary

There exists a genuine concern for educational research in the classrooms of our schools today. This is indicative in the way people are writing in the literature concerning the lag between research and application.

Schools are being encouraged to provide for research in their budgets. Emphasis is being given in the literature to the dissemination and communication of research ideas to teachers. This is evidenced also by federal programs, more specifically the programs from the United States Office of Education, which are emphasizing the diffusion of knowledge.

The concern has been great in relation to the lag which exists between research and practice with particular

¹⁶⁵ Ibid.

¹⁶⁶ Beach, op. cit., 351-58.

emphasis given to change as it relates to personal factors and the need for involvement. Much has been written about communication and dissemination as potential contributors to the lag.

Many potential solutions have been theorized as ways to alleviate the lag between research and practice. Special emphasis has been given to teacher involvement, leadership, and the utilization of trained research personnel.

CHAPTER III

METHODS AND PROCEDURES

The study was designed to explore teachers' perceptions of educational research as revealed through tape-recorded interviews with a sample of fifty teachers. The methods and procedures are described more specifically in the following paragraphs in terms of various phases of the study.

Selection of Subjects

The subjects were selected from teachers enrolled in the 1965 Summer School in the College of Education at the University of Alabama. The interviewer visited classes, with the consent of the professor in charge, and described the nature of the study to the teachers in the class. Questions and discussion followed the description of the study to clarify certain issues. After the presentation of the study, the teachers in each class were given an opportunity to volunteer as interviewees. The teachers were under no compulsion to take part and were not told

in advance of the nature of the interview. They only knew that it would be tape-recorded and that the information would be tabulated to describe a group of teachers. They were assured that their responses would be held in confidence and that their identity would remain anonymous.

The teachers who volunteered gave their name, school, and telephone number on a card which was provided. The interviewees were screened on the basis of the school and/or the school system in which they taught in order to avoid duplication of schools and/or school systems as much as possible. The teacher must have had three or more years of teaching experience to qualify as an interviewee. The volunteers were contacted by telephone and an appointment was made for the interview.

The Pilot Study

A sample of five teachers was selected for a pilot study. One purpose of this phase of the study was to polish and sharpen the interview techniques through practice and from suggestions made by the interviewees who were asked to react to the interview session. Other purposes of the pilot study were: (1) to transcribe, tabulate,

and analyze the data in order to complete probable tables and scoring sheets and (2) to refine and redirect the interview if necessary.

The pilot study served its purpose in pointing out adjustments which were necessary in the interview process. The general stimulus questions were too broad and did not produce the desired results. In the proposal, the interviewer proposed three different and separate approaches. Plans were to use one approach; if it gathered the desired information, the others would not be used. If it did not provide the necessary information, the interviewer would proceed to the second, and so on. In the pilot study it was found that all three approaches were necessary in each interview in order to provide the necessary information. These approaches had to be combined and made more specific. This was discovered after the first interview. On the second interview these adjustments proved successful with certain polishing and the third interview was considered successful along with four and five.

The pilot study provided information for establishing scoring and tabulating procedures. The last three interviews were considered successful and were used as part of the sample.

The Interview

Tell the Purpose

The first statement made to each teacher being interviewed was approximately as follows:

There have been many writings about educational research and the application of these findings in the improvement of educational practices. The U. S. Office of Education is placing much emphasis on research through additional funds, but rarely has the teacher been asked for his ideas on the usefulness or the value of educational research in helping them become more effective teachers.

I am attempting to find out how successful teachers perceive research and research findings in an effort to identify certain characteristics which could insure more effective uses of research and research findings in the improvement of the classroom situation.

Engage the Teacher in Conversation to Set a Relaxed Atmosphere

This was done through discussion of the teacher's background, experiences, and information about his school. Questions asked during this portion of the interview were geared to secure the information tabulated in Chapter IV under the section titled "Information Concerning the Teacher Population." These facts pertain to the: degree held, teaching level, years experience, recency of training, participation in self-study, participation in in-service

programs, use of school professional library, size of school, courses taken in research methods, tests and measurements, and/or statistics, and availability of supervisory services.

Questions asked during the course of this conversation included questions such as:

1. When did you receive your degree? What degree do you hold?
2. On what level do you teach? What is your area of specialization?
3. Have you had any additional professional training since obtaining your degree?
4. Do you subscribe to a general professional journal or a professional journal in your field?
5. What professional materials has your school library been able to furnish for your own professional use?
6. Has your school participated in a self-study since you have been teaching there?
7. What is the size of your school? Do you have a supervisor?
8. Does your school have an in-service program?

Structure of the Interview

The interview was loosely structured with a general stimulus of "What do you think . . . ?" or "Tell me about" The interview began by getting teachers

to talk about their in-service programs and/or a change or changes they have made in their classroom teaching. The interviewer assumed a non-directive role, letting the teacher talk at will to the stimulus questions for each of the six general areas.

These approaches were used:

1. Professional Attitude--"Tell me what comes to your mind when you hear the word research." "Tell me about your in-service program."
2. Changes--"Think about a successful change you made in your classroom teaching and tell me about it."
3. Experimentation--"What do you think about teachers conducting research and testing ideas in the classroom and/or reading and applying reported research?"
4. Dissemination--"Tell me how you find out about and keep up to date with new ideas and innovations in education and in your teaching field. How could this be improved?"
5. Leadership--"Tell me about the emphasis placed on improvement, trying out new ideas, and research in your school."
6. Improvement of Practices--"Tell me some ways and/or

areas in which research and/or research information has helped in improving practices in your school."

"What are some problem areas you have experienced in which research could help?"

The loosely structured interview with general stimulus questions or statements was used in an attempt to motivate the interviewee to respond to each of the categories in terms of what seemed important to him. If and when the interviewee failed to discuss some of the criteria outlined under each category, the interviewer directed more specific questions in order to elicit points of view concerning the parts not discussed.

The interviewer constructed a check list to use as an interview guide, but found that after a few interviews, it was not necessary. A copy of this guide is included in the Appendix.

Transcription and Analysis of Data

The pertinent responses of the interviewee were transcribed verbatim from the tapes. The responses of the interviewer were transcribed in words and/or phrases to cue the writer, since most of the questions were standard in all interviews.

After the interviews were transcribed, a data sheet was compiled and kept for the responses of each teacher. The responses of the teachers were examined in order to seek answers to a series of questions based upon six factors relating to educational research.

1. Professional Attitude
 - a. Are the teachers enthusiastic about research?
 - b. Do the teachers perceive research as being helpful and useful?
 - c. Do the teachers read and/or subscribe to professional journals?
2. Changes
 - a. What kind of changes did the teachers make? If they did not make changes, why not?
 - b. Why did the teachers make these particular changes?
 - c. Where did the teachers get the ideas?
 - d. How was the change implemented? Has it been modified?
 - e. How do the teachers know the changes were successful?
 - f. Would the teachers like to make other changes?
3. Experimentation
 - a. Do teachers perceive conducting research as being part of their job?
 - b. Do the teachers think they are competent to conduct research?
 - c. Do the teachers think environmental factors such as time, support, and facilities are conducive to research?
 - d. What factors prevent teachers from doing more research?
 - e. What would motivate teachers to do more research?
4. Dissemination
 - a. Are present means and methods of dissemination of research to teachers adequate in terms of communication?

- b. Would they be willing for someone to come into their classroom to try out or demonstrate a new idea?
 - c. What are some ways to improve dissemination of research to teachers that would encourage use?
5. Leadership
- a. Are teachers getting help from in-service programs?
 - b. Are teachers receiving encouragement from the staff?
 - c. Do the teachers need someone competent in this area to work with them?
6. Improvement of Practices
- a. Can or has research helped teachers in decision making?
 - b. Can or has research helped teachers in making curriculum revisions?
 - c. Can or has research aided in improving pupil achievement?
 - d. Can or has research aided in improving teaching methods?
 - e. Can or has research helped in achieving goals?

The responses of the teachers, in most cases, could be identified and transferred to the interview data sheet. The opinions of three selected graduate students were utilized when the analysis of a particular response required a judgment. These responses were tallied so that responses in all of the designated categories could be analyzed according to percentage of response for the population interviewed. Transcriptions were kept and sample interviews or pertinent portions were included. A sample interview scoring sheet is included in the Appendix.

The report of the percentage of response and

analysis of data, as it is representative of the population interviewed, was written and recorded in narrative and tabular form. This included a narrative description of the study with comments upon any patterns relating to the use and value of educational research as identified in the perceptions of teachers in this sample.

Suggestions for further study were included which could add to the usefulness of such information as this study may reveal concerning educational research.

Summary

Teachers' perceptions of educational research were explored in an effort to identify certain characteristics or factors related to the use and value of educational research by teachers in the classroom.

A pilot study was conducted in which five teachers were interviewed. This afforded five sample tape-recorded interviews with teachers. Following this initial trial, 50 teachers were interviewed. The interview provided data concerning the above mentioned areas. Responses were tallied and analyzed in percentage form so that observations could be made in relation to the teachers' perception of various factors they described in the interview.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This study is concerned with teacher perception of several factors related to educational research in the teaching-learning process. Descriptive data were gathered concerning the educational background, the particular school setting, and certain other information relevant to describe the teacher population. The first ten tables present the data which describes the teachers in this study. The teachers' perceptions of various factors related to the six general areas--professional attitude, classroom change, experimentation, dissemination of research, leadership, and improvement of practices--were also secured. These data are presented in tabular and narrative form. Certain elements of the teachers' perceptions relating to patterns, trends, or particular responses are commented upon.

Information Concerning the Teacher Population

The 50 teachers interviewed represented 47 schools

in 31 school systems. Thirty-two were county schools and 18 were city schools.

Of the 50 teachers interviewed, all were certified to teach with 100 per cent having a minimum of a Bachelors degree. As noted in Table 1, 50 per cent held a Bachelors degree; 42 per cent held a Masters degree; and 8 per cent held a A.A. certificate.

TABLE 1
EDUCATION OF TEACHER POPULATION

Degree (highest held)	Number of Teachers	Per Cent
B.S.	19	38
B.A.	2	4
A.B.	4	8
M.A.	21	42
A.A.	4	8

The level of teaching and area of specialization were assessed and shown in Tables 2 and 3; 22 per cent of the teachers interviewed were elementary school teachers and 78 per cent were secondary school teachers.

TABLE 2
 DESCRIPTION OF AREA AND
 LEVEL OF TEACHING

<u>Elementary</u>		
Grade Taught	Number of Teachers	Per Cent
1	2	4
2	1	2
3	1	2
5	4	8
6	3	6

Of the 22 per cent elementary school teachers interviewed, 4 per cent of these taught first grade; 2 per cent taught second grade; 2 per cent taught third grade; 8 per cent taught fifth grade; and 6 per cent taught sixth grade.

Of the 78 per cent secondary school teachers interviewed, 18 per cent taught English; 16 per cent taught science; the largest group, 20 per cent, taught social studies; 6 per cent taught mathematics; 2 per cent taught foreign languages; 10 per cent taught business education;

TABLE 3

DESCRIPTION OF AREA AND LEVEL OF TEACHING

<u>Secondary</u>		
Subject Taught ^a	Number of Teachers	Per Cent
English	9	18
Science	8	16
Social Studies	10	20
Mathematics	3	6
Foreign Languages	1	2
Business Education	5	10
Industrial Arts	1	2
Distributive Education	1	2
Special Classes	4	8
Home Economics	1	2
Art	2	4
Physical Education	4	8
^a Combinations of Two Subjects:		
English-Social Studies	3	
Science-Mathematics	1	
Science-Social Studies	1	
Social Studies-Business Education	1	
Social Studies-Physical Education	1	
Science-Physical Education	2	
Home Economics-Special Class	1	

2 per cent taught industrial arts; 2 per cent taught distributive education; 8 per cent taught special classes; 2 per cent taught home economics; 4 per cent taught art; and 8 per cent taught physical education. All these percentages equal more than 78 per cent due to the fact that 10 of the secondary school teachers taught combinations of two subjects, and in that case both subjects were given credit. The combinations are identified in Table 3 footnote.

Years of experience were assessed for this population and as shown in Table 4, 36 per cent of the teachers had taught from 3 to 5 years; 34 per cent had taught from 6 to 10 years; and 30 per cent had taught for more than 10 years.

Due to the similarity of the procedures followed in research studies and in school-wide self-studies in relation to Southern Association of Colleges and Schools accreditation, teachers were assessed on the factor of participation in a self-study. Table 5 illustrates that 32 per cent had participated in a self-study and 68 per cent had not participated in a self-study.

TABLE 4
YEARS OF TEACHING EXPERIENCE

Number of Years Taught	Number of Teachers	Per Cent
3 - 5	18	36
6 - 10	17	34
Over 10	15	30

Degree	Average Number of Years Experience
B.S.	6.5
B.A.	4.0
A.B.	9.3
M.A.	8.9
A.A.	9.8

TABLE 5
DESCRIPTION OF TEACHER POPULATION
PARTICIPATION IN SELF-STUDY

Response	Per Cent
Yes	32
No	68

Teachers were assessed as to whether they had completed a college course in research methods, tests and measurements, educational statistics, or the equivalent. As Table 6 illustrates, 52 per cent had completed such a course and 48 per cent had not.

TABLE 6

DESCRIPTION OF TEACHER POPULATION HAVING HAD COURSE
IN RESEARCH METHODS, TESTS AND MEASUREMENTS,
EDUCATIONAL STATISTICS, OR THE EQUIVALENT

Response	Per Cent
Yes	52
No	48

Of the 50 teachers interviewed, 100 per cent subscribed to some type of professional journal. As noted in Table 7, 100 per cent of the teachers subscribed to one or more general professional journals such as the National Education Association Journal and the Alabama Education Association Journal. It is interesting to note that 54 per cent of these teachers who subscribed to one or more professional journals of a general nature also subscribed

to one or more professional journals in their teaching fields.

TABLE 7
DESCRIPTION OF TEACHER POPULATION SUBSCRIPTION
TO PROFESSIONAL JOURNALS

Type of Journal	Number of Teachers	Per Cent
General	50	100
Teaching Field	27	54

Certain factors were gathered concerning the school and/or school system as they related to the problem and the teacher population interviewed. Of the 50 teachers interviewed, 98 per cent indicated they participated in an in-service program. As pointed out in Table 8, two per cent of the teachers indicated they did not participate in an in-service program. It was of interest to note that 16 per cent of the teachers responding "yes" had only a system-wide in-service program and no program within their individual schools.

TABLE 8

DESCRIPTION OF TEACHER POPULATION PARTICIPATION
IN IN-SERVICE PROGRAM

Participated	Number of Teachers	Per Cent
Yes	49	98
System-wide program only	8	16
No	1	2

An inquiry about professional libraries produced the following results. As noted in Table 9, 48 per cent of the teachers interviewed reported they had access to professional library facilities; 32 per cent reported access to limited professional library facilities; and 20 per cent reported access to no professional library facilities. Of the 48 per cent reporting "yes," 26 per cent were both in-school and system-wide facilities; 18 per cent were system-wide facilities only; and 4 per cent were in-school facilities only. Of the 32 per cent reporting limited facilities, 6 per cent had system-wide facilities only; and 16 per cent had in-school facilities only.

The availability of supervisors of curriculum or curriculum areas was assessed for this population and as

TABLE 9

DESCRIPTION OF TEACHER POPULATION SCHOOLS AND/OR SYSTEMS
WITH PROFESSIONAL LIBRARY FACILITIES

Professional Library Facilities Available	Number of Teachers			Per Cent
	In-School Facilities	System-Wide Facilities	Both In-School and System-Wide Facilities	
Yes	2	9	13	48
Limited	8	3	5	32
No	--	--	10	20

shown in Table 10, 70 per cent specified they had general supervisors and 30 per cent indicated they had no supervisors at all. Of the 70 per cent having general supervisors, 18 per cent also had supervisors in the special subject areas.

TABLE 10

DESCRIPTION OF TEACHER POPULATION AVAILABILITY
OF SUPERVISORY PERSONNEL

Response	General Supervisors		Subject Area Supervisors	
	Number of Teachers	Per Cent	Number of Teachers	Per Cent
Yes	35	70	9	18
No	15	30	41	82

Teachers' Perceptions of Factors in Six
General Areas as They Relate
to Educational Research

The teachers' perceptions of the factors in the six general areas of professional attitude, classroom change, experimentation, dissemination of research, leadership, and improvement of practices, as they relate to educational research, are presented in percentage form. Careful

attention was given to note when there was no comment. This could be a very significant response on some of the factors. It should be noted that teachers were not limited to a single response on many of the items since most of them were open-ended items.

1. Professional Attitude Toward Research

One factor worth pointing out here is that all of the teachers interviewed were enrolled in summer school for additional professional training. As noted earlier, 100 per cent of the teachers subscribed to at least one professional journal and 100 per cent of the teachers reported they read professional literature. (See Table 11.)

When the interviewees were asked to react to the word research, 78 per cent gave a positive and enthusiastic response; 12 per cent gave a response which was rather mixed or neutral which was termed undecided; and 10 per cent gave a negative response.

From the responses given, 88 per cent of the teachers interviewed viewed research as being helpful and useful in their work; 10 per cent were undecided; and 2 per cent did not view research as being helpful and useful.

TABLE 11

DESCRIPTION OF TEACHERS' PROFESSIONAL
ATTITUDE TOWARD RESEARCH

Factors	Per Cent of Response			
	Yes	Undecided	No	No Comment
1. Additional Professional Training	100	0	0	0
2. Subscribes to Professional Journals	100	0	0	0
3. Reads Professional Literature	100	0	0	0
4. Is Enthusiastic Toward Research	78	12	10	0
5. Views Research as Helpful and Useful	88	10	2	0
6. Believes In-Service Program is Providing Professional Growth	52	16	30	2
7. Satisfied With Present In-Service Program	18	14	66	2
8. Mention In-Service Program is Providing New Ideas, Research Results, and/or Information on Problems	64	4	30	2

When given the opportunity to talk about their in-service program, 52 per cent of the teachers reported the in-service program is helping them to grow professionally; 30 per cent responded negatively; and 16 per cent were undecided and 2 per cent gave no comment.

The teacher population interviewed revealed that 66 per cent were not satisfied with their present in-service program. Eighteen per cent of the teachers were satisfied; 14 per cent went undecided; and 2 per cent gave no comment.

Sixty-four per cent of the teachers mentioned that the in-service program is providing new ideas, research results, and/or information on problems. Thirty per cent of the teachers gave a negative response; 4 per cent were undecided; and 2 per cent gave no comment.

In discussing their perception of the role of research in the future, 74 per cent of the teachers, as shown in Table 12, predicted research will play a larger role in education in the years ahead; 30 per cent believed research will involve teachers more; 22 per cent stated research will: (1) give us better methods; (2) give us more knowledge about the student; and (3) place more

TABLE 12

DESCRIPTION OF TEACHERS' PERCEPTIONS OF THE
ROLE OF RESEARCH IN THE FUTURE

Response	Per Cent
1. Play larger role in education	74
2. Involve teachers more	30
3. Give us better methods	22
4. More knowledge about the student	22
5. More emphasis on dissemination, understanding, and application	22
6. Will be basis for decisions	20
7. Change will force more research	16
8. Will specialize more	8
9. Better materials	4
10. Emphasis will change from time to time	2
11. Provide better prepared teachers	2
12. Benefit students	2
13. Will depend on the situation	2
14. I don't know	2

emphasis on dissemination, understanding, and application of research. Twenty per cent believed research will be a basis for decisions while 16 per cent believed that change will force more research. Other responses with smaller percentages can be obtained from Table 12.

The teachers expressed a positive attitude toward research and several factors related to the profession of teaching. Educational research is perceived by the teachers as being an important part of our educational endeavor. In a discussion of the in-service program, the teachers reported that they believed research should be a more integral part of our professional growth.

2. Classroom Change

The teachers in the sample were asked to think about a change they had made in their classroom and to describe that change.

When the teachers described a classroom change, the following data were collected. Of the 50 teachers interviewed, 60 per cent reported the nature of the change as being a change in teaching method. Other responses, as shown in Table 13, revealed that 28 per cent reported the change as a learning activity; 26 per cent as classroom

organization; and 24 per cent as teaching materials and aids. Classroom environment, classroom management, and content were the other areas of change identified by the teachers.

TABLE 13
NATURE OF CLASSROOM CHANGE
DESCRIBED BY TEACHERS

Nature of Change	Per Cent Reporting Particular Change
1. Teaching Method	60
2. Learning Activity	28
3. Organization	26
4. Teaching Materials and Aids	24
5. Classroom Environment	4
6. Classroom Management	2
7. Subject Matter Content	2

The most significant reason for change was their own decisions. As shown in Table 14, 92 per cent of the teachers reported that it was their decision to make a change, but they did not give any reasons for the change

other than, "I thought it was a good idea," or "I thought there was a need for the change." It was of interest to note that 18 per cent made the change as a need to help the student. Faculty and administrative decisions were less pertinent, reporting 2 and 4 per cent respectively. Other reasons for change mentioned by the teachers were curriculum enrichment, new materials, poor textbooks, and economy of time.

TABLE 14

REASON FOR CLASSROOM CHANGE
DESCRIBED BY TEACHERS

Reasons for Change	Per Cent of Response
1. Teacher's decision	92
2. Recognition of student needs	18
3. Administrative decision	4
4. Enrich curriculum	2
5. Faculty decision	2
6. New materials	2
7. Poor textbooks	2
8. Save time	2

The teachers found it difficult to determine the source of the idea for the change. When asked to decide, many (40 per cent) stated that it was their idea, recognizing that their ideas came from a variety of sources. Table 15 shows further sources of ideas for change.

TABLE 15

SOURCE OF IDEA FOR CLASSROOM CHANGE
DESCRIBED BY TEACHERS

Source of Idea	Per Cent of Response
1. Teacher himself	40
2. College classes	22
3. Literature	18
4. Other teachers	14
5. Can't determine	10
6. Supervisory personnel	2
7. Professional meetings	2
8. Students	2
9. School practice	2
10. Newly developed curriculums	2

Twenty-two per cent said that ideas for change came from college classes; 18 per cent from literature; 14 per cent from other teachers; and 10 per cent could not determine the source of the idea. Other sources receiving a 2 per cent response were supervisory personnel, professional meetings, students, school practice, and newly developed curriculums.

The teachers described the implementation of the change in various responses. These responses were derived from the description of the change by the teachers, which were categorized into four areas. Forty-two per cent of the teachers utilized an orderly process of implementation of the change. Also, 42 per cent indicated organization but did not seem to follow through from planning to evaluation. Fourteen per cent implied some organization from what they described and 2 per cent reported no organization in implementing the change.

When the teachers described the successfulness of the change, 72 per cent reported the teacher as being satisfied; 42 per cent reported that the pupils were interested; 32 per cent reported an increase in pupil achievement; and 30 per cent determined success through

self-evaluation. Six per cent of the teachers responded in such a way that the writer was unable to determine the successfulness of the change. (See Table 16.)

TABLE 16
TEACHERS' PERCEPTION OF SUCCESSFULNESS
OF THE REPORTED CHANGE

Response About Success	Per Cent
1. Teacher satisfied	72
2. Student interest	42
3. Pupil achievement	32
4. Self-evaluation	30
5. Can't determine from given responses	6

When the teachers described factors which prevent change, a wide range of responses were recorded as shown in Table 17. Three or four factors seemed to receive some degree of agreement of opinions, but as a whole the teachers failed to agree on the real factors which prevent teachers from making more changes in the classroom.

As shown in Table 17, 26 per cent of the teachers reported laziness and lack of initiative and lack of

TABLE 17

TEACHERS' PERCEPTION OF FACTORS
PREVENTING CHANGE

Response	Per Cent
1. Lazy and lack of initiative	26
2. Lack of equipment and supplies	26
3. Autocratic administration	22
4. Insecurity and fear of failure on the part of the teacher	20
5. Fear of change	12
6. Lack of training and/or knowledge	10
7. Fear of administration	8
8. Lack of time	8
9. Lack of encouragement by administration	8
10. Inaccessibility of teaching aids	6
11. Class size too large	6
12. Lack of awareness of community resources	4
13. Criticism by other teachers	4
14. Classroom design	4
15. Classroom and school environment	2
16. Depends on the teacher	2
17. Lack of supervision	2
18. Lack of openness to new ideas	2
19. Lack of a strong in-service program	2
20. Community pressure	2
21. Attitudes of teachers	2
22. Class schedules	2
23. Too much clerical responsibility	2
24. Emphasis to cover content	2
25. Don't see need to change	2
26. Can't think of anything	2

equipment and supplies as being factors which prevent change. Twenty-two per cent reported autocratic administration; 20 per cent reported insecurity and fear of failure; 12 per cent reported fear of change; 10 per cent reported lack of training and/or knowledge; and 8 per cent reported fear of administration, lack of time, and lack of encouragement by the administration as change preventing factors. There were 17 other responses ranging from 2 to 6 per cent response which are shown in Table 17.

Three of the response categories related to administration with a total response of 38 per cent, second only to the teacher himself. Nine response categories centered around the teacher, with a total response of 78 per cent.

As described earlier, the major changes were teaching methods based on the decision of the teachers themselves. The success of the change was based on teacher satisfaction and pupil interest.

3. Experimentation in the Classroom

Teachers were asked to comment on several factors relating to experimentation in the classroom. Of the 50 teachers interviewed, 88 per cent, as shown in Table 18,

reported that more experimentation is needed; 8 per cent were undecided; and 4 per cent made no comment. Ninety-four per cent of the teachers reported they see experimentation as part of their job of teaching and 6 per cent were undecided.

TABLE 18
TEACHERS' PERCEPTION OF FACTORS
RELATED TO EXPERIMENTATION

Stimulus and Responses	Per Cent of Response
1. Need more experimentation	
Yes	88
Undecided	8
No	0
No Comment	4
2. See experimentation as part of job	
Yes	94
Undecided	6
No	0
No Comment	0
3. Perceive ability in making changes, experimenting, and/or applying research	
Confident	40
Need experience and training	38
Insecure	6
No Comment	16

When the teachers described their ability to make changes, experiment, and/or apply research findings, 40 per cent stated that they felt confident; 38 per cent reported they needed more experience and training; 6 per cent reported they felt insecure; and 16 per cent gave no comment. The teachers revealed that they think more experimentation is needed, they see experimentation as part of their job, but only 40 per cent are confident in conducting and applying research.

Teachers gave various responses to the areas of time, financial support, and facilities to experiment in the classroom. Table 19 shows that 32 per cent of the teachers interviewed reported that time was adequate for experimentation. Many teachers expressed the idea that lack of time was the result of inadequate planning and/or misuse of time. It must be noted, however, that 52 per cent of the teachers reported an inadequate amount of time for experimentation. As mentioned earlier, teachers do see experimentation as part of the job of teaching, but they do not have adequate time during regular teaching hours to experiment. Fourteen per cent gave no comment to the stimulus.

TABLE 19

TEACHERS' PERCEPTION OF TIME, FINANCIAL SUPPORT,
AND FACILITIES AS FACTORS OF EXPERIMENTATION

Factors	Responses and Per Cent of Response				
	Adequate	Inade- quate	No Comment	Depends on Teachers Needs	Depends on School System
1. Time	32	52	14	0	2
2. Financial Support	44	40	12	2	2
3. Facilities	42	38	16	2	2

The teachers were divided very evenly on both financial support and facilities as being adequate or inadequate. This could be a situational factor which could vary from one school system to another. Forty-four per cent reported adequate financial support and 42 per cent reported adequate facilities for experimentation. The responses were 40 per cent inadequate financial support and 38 per cent inadequate facilities. This implies that financial support and adequate facilities are somewhat interdependent with this group of teachers.

The teachers were very undecided about what would motivate teachers to experiment more in the classroom. As shown in Table 20, teachers gave similar responses in only a few cases. Encouragement by administrators was the response given by the most teachers. This was identified by 34 per cent of the teachers interviewed.

Teacher growth and improvement was another very recognized area which could motivate teachers to experiment more in the classroom. Other responses receiving sizeable recognition were better understanding of ideas by 30 per cent; 18 per cent identified going back to school; 18 per cent identified feeling more secure; 14 per cent identified encouragement by other teachers; 14 per cent identified more time; and 10 per cent identified more money, dedicated to the job of teaching, and visitation and observation. Many other choices of smaller percentages were revealed, as shown in Table 20.

The teachers perceived a need for more experimentation and reported it as part of their job, but when asked about their ability to experiment, two-fifths reported confidence and an additional two-fifths reported that they needed experience and training. Over one-half of the

TABLE 20

TEACHERS' PERCEPTION OF MOTIVATIONAL FACTORS
WHICH COULD ENCOURAGE EXPERIMENTATION

Response	Per Cent
1. Encouragement by administrators	34
2. Better understanding of new ideas	30
3. Go back to school	18
4. Feel more secure	18
5. Encouragement by other teachers	14
6. More time	14
7. More money	10
8. Dedicated to job of teaching	10
9. Visitation and observation	10
10. See the need for experimentation	8
11. Good in-service program	6
12. Consultant help	6
13. Encouragement by parents	6
14. Free from fear of criticism	4
15. Depends on the teacher	4
16. Reward and recognition	2
17. Secretarial and clerical help	2
18. Self-evaluation	2
19. Place to experiment	2
20. Encouragement by supervisor	2
21. I don't know	2
22. Open mind	2
23. Smaller classes	2
24. Equipment available	2
25. Good health	2
26. Establish himself as a leader	2
27. School public is willing to grow	2
28. Less non-teaching duties	2

teachers reported that time was inadequate and 4 percentage points separated adequate and inadequate responses on financial support and facilities. When asked about motivational factors to encourage research and experimentation, administrative encouragement and better understanding of new ideas by the teacher were given priority.

4. Dissemination of Research

Research, being an imperative part of education, influences the process of education only to the extent it is put into practice. This places a demand on getting the information of research to practitioners in the field.

When the teachers in this study were asked how they acquired or kept up to date with new ideas, they reported that reading journals, going back to school, and talking with others were most successful for them.

As shown in Table 21, 84 per cent of the teachers mentioned reading journals as one of the means through which they kept up to date; 66 per cent mentioned going back to school; and 60 per cent mentioned talking with others. These three means seemed to be the overwhelming choices of the teachers. Of somewhat less importance were

professional meetings, 14 per cent; reading books, 12 per cent; and in-service programs, 10 per cent.

TABLE 21

DESCRIPTION OF MEANS THROUGH WHICH
TEACHERS ACQUIRE NEW IDEAS

Response	Per Cent
1. Reading journals	84
2. Going back to school	66
3. Talking with others	60
4. Professional meetings	14
5. Reading books	12
6. In-service programs	10
7. Workshops	4
8. Manuals and materials from publishers	4
9. Visitation and observation	4
10. File of useful articles	2
11. Newsletters	2
12. Television	2
13. Research	2

Workshops, manuals and materials from publishers, and visitation and observation each received a 4 per cent response. A file of useful articles, newsletters, television, and research each received a 2 per cent response.

When teachers described the means employed for dissemination, an overwhelming consensus seemed to be that the means are inadequate and lack enough variability. Other responses were not as definite and clear cut, but the trend seemed to be that teachers' access to research information is limited and probably needs improvement in adaptability and understandability for classroom use. As shown in Table 22, 80 per cent of the teachers in the sample reported that the means employed for dissemination are inadequate; 6 per cent reported them as being adequate; and 14 per cent did not comment.

Variability of means utilized for dissemination was described by the group as being inadequate by 88 per cent; 2 per cent responded adequate; and 10 per cent did not comment.

Teacher access to means employed for dissemination was described as limited by 44 per cent of the teachers interviewed. Thirty-six per cent reported access to

research information as good; and 26 per cent reported access as poor. The teachers as a group appeared to be somewhat undecided about their access to research information.

TABLE 22

TEACHER DESCRIPTION OF MEANS EMPLOYED
FOR DISSEMINATION

Means Factors	Response and Per Cent of Response		
1. Adequate	Yes-- 6	No-----80	No Comment-14
2. Enough Variability	Yes-- 2	No-----88	No Comment-10
3. Teacher access to	Good-30	Limited-----44	Poor-----26
4. Adaptable form for classroom use	Yes--38	Needs Improvement-48	No-----14
5. Understandable form	Yes--42	Needs Improvement-46	No-----12

The form of the research information seemed to be adaptable and understandable to a degree that it could be utilized by teachers. Thirty-eight per cent reported that the research is in adaptable form; 48 per cent reported that it needs improvement; and 14 per cent reported that

research reports are not in adaptable form for classroom use.

When teachers were asked if the research was in understandable form, 42 per cent responded "yes" and 46 per cent responded that it needs improvement. Twelve per cent responded that research reports are not in understandable form.

As a final phase of this area of exploration, teachers were asked to identify some ways through which they thought dissemination of research information to teachers could be improved. The method which received the highest per cent of response was the utilization of speakers and resource people (40 per cent). In-service programs received a 28 per cent response. The other methods were spread, as shown in Table 23, from 22 to 2 per cent as follows: demonstrations, 22 per cent; films, 20 per cent; visiting and observing and educational television, 18 per cent; involve teachers in research, 16 per cent; talk with others and supervision, 14 per cent; teacher education programs and filmstrips, 12 per cent; journal articles and recordings, 10 per cent; research quarterly, 8 per cent; workshops, 6 per cent; back to

school, tapes, improve state department, books, and communication among schools, 2 per cent; and 2 per cent did not comment.

TABLE 23

TEACHERS' PERCEPTION OF WAYS TO IMPROVE
DISSEMINATION OF RESEARCH

Method	Per Cent of Response
1. Speakers and resource people	40
2. In-service programs	28
3. Demonstrations	22
4. Films	20
5. Visiting and observing	18
6. Educational Television	18
7. Involve teachers in research	16
8. Talk with others	14
9. Supervision	14
10. Teacher education programs	12
11. Filmstrips	12
12. Journal articles	10
13. Recordings	10
14. Research quarterly	8
15. Workshops	6
16. Back to school	2
17. Tapes	2
18. Improve state department	2
19. Books	2
20. Communication among schools	2
21. No comment	2

5. Leadership for Research

Teachers' perception of leadership for research in the classroom provided responses which could cause some concern for school administrators. Of the teachers interviewed, as shown in Table 24, 58 per cent reported that no leadership was provided for improving or trying new ideas in the classroom. Forty-two per cent reported that leadership is provided. When those who stated that leadership was provided were asked to identify the source of the leadership, 38 per cent identified the principal; 8 per cent identified other teachers; 4 per cent identified the in-service program and the supervisor; and 2 per cent identified the Parent Teacher Organization. (This equals more than the 42 per cent responding due to the fact that some of the teachers identified more than one source of leadership.)

Forty-eight per cent of the teachers interviewed reported that they were never encouraged to try new ideas; 32 per cent reported seldom; 18 per cent reported regular encouragement; and 2 per cent did not comment.

When they described the climate in their school toward experimentation, 20 per cent described the climate

as one of facilitation and encouragement of research.

Seventy-four per cent described it as one of laissez-faire.

TABLE 24

TEACHERS' PERCEPTION OF LEADERSHIP
FOR CLASSROOM RESEARCH

Response	Per Cent
1. Leadership is provided	
Yes	42
No	58
2. Is provided by whom	
No one	58
Principal	38
Other teachers	8
Supervisor	4
In-service program	4
Parent Teacher Association	2
3. Teachers encouraged to try new ideas	
Regular	18
Seldom	32
Never	48
No Comment	2
4. School climate toward experimentation	
Facilitating	20
Laissez-faire	74
Restricted	6

The teachers mentioned that the climate was free and it was left up to them. It was all right if they did experiment;

it was all right if they did not. The climate was described by 6 per cent of the group as being restrictive toward experimentation.

Next the teachers' perceptions of a specially trained research person or a research director were explored. When they were asked if a trained research person was needed and/or desired in their school, 72 per cent said definitely "yes" and an additional 20 per cent said "yes" with a conditional statement, as shown in Table 25. Six per cent were undecided and 2 per cent did not comment. When they were asked if they thought the teachers in their school would accept and utilize the services of such a person, 32 per cent replied definitely "yes" and an additional 14 per cent responded "yes" with a conditional statement. Forty-four per cent were undecided, 8 per cent replied "no," and 2 per cent did not comment. One-half, or 50 per cent of the teachers, gave additional comments on the role of the research person. At the present time, 30 per cent reported the research person should work system-wide; 12 per cent in the individual schools; 6 per cent on a teacher to research person ratio basis; and 2 per cent in both the individual schools and system-wide.

TABLE 25

TEACHERS' PERCEPTION OF TRAINED
RESEARCH DIRECTOR

Response	Per Cent
1. Person needed and/or desired	
Yes	72
Yes with condition	20
Undecided	6
No	0
No Comment	2
2. Teachers would accept and utilize services of person	
Yes	32
Yes with condition	14
Undecided	44
No	8
No Comment	2
3. Teachers specified he should work	
Individual schools	12
System Wide	30
Individual school and system wide	2
Teacher to research person ratio	6
No Comment	50

6. Improvement of Practices

The last area explored with the teachers interviewed was that of the role of research in the improvement of practices. When teachers were asked to identify some areas or ways in which research has helped them improve

classroom practices, 40 per cent identified teaching methods; 38 per cent identified content improvement; 34 per cent identified teaching materials; 30 per cent identified information about the nature of the learner and learning; and 24 per cent identified curriculum change. These were the responses receiving the highest per cent of response. Areas receiving less response were: pupil adjustment, 14 per cent; pupil achievement, 10 per cent; classroom management, 6 per cent; and both decision making and in-service programs, 4 per cent. Sixteen per cent did not comment; while an additional 4 per cent responded, "I can't think of anything." (See Table 26.)

Next, the situation was approached from a different angle and the teachers were asked to identify some problem areas or identify some ways in which they thought research could help improve classroom practices. The two areas receiving the highest percentage response (22 per cent) were the nature of the learner and learning and teaching methods. Eighteen per cent identified dissemination and implementation of research. Other areas identified were: decision making, 14 per cent; content improvement, curriculum changes, and resources and materials, 12 per cent

TABLE 26

TEACHERS' PERCEPTION OF THE ROLE OF RESEARCH
IN THE IMPROVEMENT OF PRACTICES

Response	Per Cent
A. Research has helped improve classroom practices in terms of:	
1. Teaching methods	40
2. Content improvement	33
3. Teaching materials	34
4. Nature of the learner and learning	30
5. Curriculum change	24
6. No comment	16
7. Student adjustment	14
8. Pupil achievement	10
9. Classroom management	6
10. Decision-making	4
11. In-service programs	4
12. Can't think of anything	4
B. Research can help improve classroom practices by providing more information on:	
1. No comment	28
2. Teaching methods	22
3. Nature of the learner and learning	22
4. Dissemination and implementation	18
5. Decision-making	14
6. Resources and materials	12
7. Curriculum changes	12
8. Content improvement	12
9. Teacher training	10
10. Attitudes	8
11. Better communications	8
12. Can't think of anything	4
13. School environment	2
14. Follow-up studies	2
15. Released time for teachers	2

each; teacher training, 10 per cent; attitudes and better communications, 8 per cent; school environment, follow-up studies, and released time for teachers, 2 per cent. Twenty-eight per cent did not comment and an additional 4 per cent responded, "I can't think of anything."

Summary

The teachers interviewed expressed perceptions about several factors related to professional attitude toward research and teaching in a positive manner. In areas of dissatisfaction, a desire for professional growth and improvement was expressed.

The teachers perceived experimentation as their responsibility, but they point to various factors which restrict experimentation. They accepted the challenge that more research and experimentation is needed in our schools.

Changes are made in the classrooms for various reasons and are evaluated in various ways. The teachers recognized that certain factors do prevent change, but find it difficult to isolate these factors.

The various means utilized for the dissemination of research ideas to teachers were considered with the

teachers identifying the most effective means for their particular situation. The teachers agreed that the present means of dissemination are inadequate and the form in which the data is reported needs improvement.

Leadership is not provided in over one-half of the schools except by the principal. The school climate seems to be laissez-faire toward experimentation. The teachers reported that a person trained in research techniques is needed to help them in the area of research and experimentation in the classroom, but they are not sure if the teachers will accept and utilize these services if they are provided.

When teachers talked about the ways research had helped them improve classroom practices, many of them identified teaching methods, content improvement, teaching materials and information about the student. When asked to identify some areas or ways in which research could provide some help in improving classroom practices, the teachers experienced difficulty.

What was the meaning of the positive attitude of the teachers toward research and teaching? This meant that teachers thought that research was a useful and

helpful tool in their work and would, with certain guidance and assistance, utilize research in the classroom. The teachers are ready to grow and improve with regards to research. They see it as part of their job and think more of it is needed. One way this growth and improvement can be facilitated is through professional literature. All of the teachers in this study read professional literature and reported reading journals as one of the better ways of acquiring new ideas. One problem was that teachers do not have access to journals which report research findings. They have access to general professional journals primarily. Schools and school systems need to provide teachers with access to research journals.

Another way classroom improvement through research can be facilitated is to provide leadership for research on the local level. The teachers are ready and willing to use research, but not without leadership. They want to be encouraged and also recognized. They would like to have suggestions from the administration and their fellow teachers. Even though the climate is laissez-faire and facilitating in terms of research, the teachers are not going to take the initiative without leadership from some

source, preferably the principal, research director, supervisor, and/or fellow teachers. When teachers described ways in which they thought dissemination of research could be improved, they gave speakers and resource people as their first choice. In-service programs were second on the list. These are a form of leadership for the teachers. The teachers are not just interested in what research reports, but they are interested in the development aspect of research--in what this means to their classroom and how they can use it. Many teachers stated that research is not reported in an adaptable form for classroom use. This is placing an additional demand on research which many of our recent projects, such as the United States Office of Education Cooperative Research Program, are assuming at the present time.

Teachers experienced difficulty in relating research to many of the things they were doing in the classroom. Most of the changes and improvements were in the form of teaching methods and materials. This is probably as it should be, since these are two factors closely related to a good learning situation. The problem arises when the

teachers make a change, as 92 per cent of the teachers did in this study. They can not give a reason for making the change. Does this mean that they jump from one idea to another or is there a reason for the change which they are unable to identify? The data in this study does not provide an answer to the question.

A similar situation was evidenced when teachers identified the source of the idea for the change. They identified themselves as the source, but recognized that many past experiences probably resulted in the idea. Ten per cent of the teachers could not identify any source at all. Does this mean that they play hunches or that the ideas emerge as the need arises? College classes and professional literature are two sources mentioned. Probably more attention needs to be given to new ideas for classroom use.

Less than one-half of the teachers followed an orderly process of implementing the change described. The same was true in terms of evaluation to determine success. Success was usually determined by teacher satisfaction and pupil interest. This implies that the teachers do not understand the scientific process; or that they do not use

the scientific process; or that they use only the parts they can understand and utilize successfully. Possibly there are reasons for this action. Two reasons pointed out by the teachers were a need for experience and training with more teacher involvement in research, and more time for experimentation.

There are certain implications for the college. Eighteen per cent of the teachers mentioned going back to school as a means to motivate teachers to experiment. Twenty-two per cent of the teachers gave college classes as a source of ideas for classroom change. Sixty-six per cent of the teachers reported going back to school as a means of acquiring new ideas and keeping up-to-date.

In the final analysis, the whole problem seems to narrow down to the idea that it is a problem of dissemination and communication of research to the teachers. This seems very general, but all of the data in this study seem to point to this area. If improvement could be made in this area in terms of the variety of methods used for dissemination, the understandability and adaptability of form, in which research is reported, and the accessibility to the ideas by teachers, then one could take these results

along with the necessary leadership and could anticipate marked improvements in the use of research to improve classroom practices.

CHAPTER V

GENERAL SUMMARY, CONCLUSIONS, AND SUGGESTIONS FOR FURTHER STUDY

General Summary

The purpose of this study was to explore teachers' perceptions of several factors in six general areas as these factors relate to educational research. The teachers were given the opportunity to discuss the factors in the areas of professional attitude, classroom changes, experimentation, dissemination of research, leadership, and improvement of practices through tape-recorded interviews. The major emphasis of this study was intended to relate to the basic area of research and dissemination. The study is centered around the problems which exist as a result of the lag or gap between the areas of research and application.

A pilot study of five sample interviews was conducted to test the proposed interviewing procedure.

The interview consisted of the initial period during which the purpose of the study was given. A general discussion with the teacher during which the information concerning the teacher population was obtained, comprised the second phase of the interview. The third phase was the actual data gathering phase during which general stimulus questions were introduced and, where necessary, more specific questions to elicit responses not given spontaneously.

Each interview was transcribed and data sheets were kept for the responses of each teacher. The interviews were tallied after all 50 interviews were completed in order that responses in all six areas could be analyzed according to percentages of response for the population interviewed.

Each transcription was filed with the scoring sheet attached to it so that all information for each interview was immediately available for reference and for the final tally in which the percentage of response for the total group was combined.

In some cases the total percentage of response did not equal 100 per cent because many of the items were open-ended and the teachers were not necessarily limited to one

response. A careful attempt was made to identify a lack of response on an item as this may have some significance. In most cases, once the teachers were involved in the warm-up part of the interview, they tended to respond readily to the stimulus questions. The degree of probing or eliciting responses varied from person to person. Only one teacher expressed concern about the fact that a tape-recorded was involved, but with careful explanation of confidence, it did not seem to restrict the response.

Principal Findings and Conclusions

Certain characteristics of the population included in this study may have some bearing on their perception of educational research. The following statements are presented as descriptive of the teachers interviewed.

The majority of the teachers in the study were enthusiastic when they talked about educational research.

The conclusion is illustrated in the following excerpts from two interviews:

Sometimes when I think of research, I think of studies that have been made; then again, I think of a particular set-up in the classroom where you have something planned that they are really looking for.

I don't get one image. One is the professional researcher; another is the classroom teacher as a researcher who is trying to develop new methods for herself.

The teachers perceived research as being helpful to them in the profession of teaching. This conclusion was expressed by 88 per cent of the sample. One teacher described it this way:

As applied to the schools, I like to think of it as being action research in the classroom; something that is fundamentally useful in the classroom.

Research is perceived to play a much larger role in education in the future. The teachers will tend to become more involved in the process of research. One teacher expressed it in these words:

I feel it will play a more important role. I think we are just beginning in this area now. I think most teachers just don't know what research is going on and we need to get this across to them.

The teachers stated that they receive help and professional growth from their in-service meetings; however, they expressed dissatisfaction with the quality of their present in-service program and suggested that the program needs improvement. Assuming that in-service programs make use of research and research findings, more needs to be done in the way of providing information and

conducting research as a means of improvement. There was not overwhelming agreement on the benefit received from the program, but a majority of the teachers expressed the idea that they thought they were being helped professionally from the program. This is explained by the following excerpts:

I would say that it is very beneficial. It not only helps us to grow professionally, but I think it helps us to do a better job in the classroom.

Some of these lectures and demonstrations were very good; some of them were not. They consisted of listening part-time and discussion part-time. There was a survey made to see what the teachers thought about it. I think most of them did get a few good ideas from it.

The meetings are not as effective as they could be and I think this is the general consensus of opinion of the other teachers.

When the teachers in the study described a classroom change, the majority described a particular teaching method. A physics teacher gave this description:

In physics we started the new program of PSSC physics and in order to teach it they recommended that you major in physics and further you should have attended one summer institute where they teach you how to teach it. I have tried to think of something I have done in school and I tried to use this to improve my classes. One of the major things is in the area of lab work. We had the big work books which were nothing more than a recipe book. This doesn't teach any research techniques

to the students. So I started using things of constructive use which I learned while I was in college. Also I tried things I read and tried open-ended experiments, problem-solving kind of activities. Here is a principle--here is the material--now you figure it out kind of thing. I served as a guide.

The teachers made their own decisions about making changes in the classroom. Ninety-two per cent reported that it was their decision to make the particular change which they described. This was described by two teachers as follows:

I think that too many times I get in a rut and the students forget what is to happen next. The teacher will stand there and lecture and talk to them. I felt personally a need for variety and some meaningful techniques.

We would have experiments and I would call up one child to help me and by the time we got started the room would be literally crawling over things trying to get to the experiment so they could see what was going on. They were so interested.

The teachers themselves were the most identified source of ideas for a change. They identified themselves, but recognized the fact that their ideas are a result of their experiences. Some were able to identify other sources after further probing. This could have personal implications due to the fact that the teachers were free to select and describe the change of their choice. A

hypothesis is that they would describe a change with which they had experienced success. One teacher described it in these words:

I don't know where it came from. I remember it came in the middle of the year after I had been struggling all year with this reading problem. Preceding this we used a lot of visual aids. I think it was their interest. I had space available and it sort of grew. I don't know where I got the idea. I think it sort of just happened. It was sort of a conglomeration of things that came together as a result of teacher and pupils working together trying to find a better way to progress.

Certain elements of implementation from planning through evaluation were evidenced in a majority of the changes described by the teachers. Eighty-four per cent of the teachers made comments to support the above conclusion; while one-half of these seemed to follow a systematic plan or an orderly process of curriculum change and development. One teacher made the following comment:

I tried an individual study program for advanced math students. This was structured primarily in advanced algebra and geometry. The students were out on their own, more or less, to work at their own rate and at the same time this rate was encouraged, with individual testing and individual instruction. I had instruction from student to student. Of course it is needless to say that this was a small class in which I could control my own activities and I found it very successful. I found the students who had not been overly interested

taking a larger interest, primarily from their own initiative, not from mine. Of course it didn't work with some students, probably from my shortcomings.

Teacher satisfaction was the most frequently used measure of the success of a change by these teachers.

Pupil interest, student achievement, and self-evaluation were other noticeable measures of success that received a lower per cent of response than teacher satisfaction.

This is best described by the following excerpts:

I felt that it was very successful and the children really enjoyed it.

I felt that the better students liked it because they were more creative and had more interest. I sent out a rating scale and got a variety of answers.

I think it was quite successful. . . . I liked this because they were speaking German actually without my putting words in their mouths for them. I think this is one of our big goals in teaching is to get usage. The students enjoyed this. They had more prompt than I had seen them have. They went out and told other classes about it. They enjoyed it and I feel that they learned much from this particular type of situation.

The teachers were unable to isolate, with any degree of success, the factors which prevent changes in the school. There was approximately a 20 to 25 per cent response on the following four areas: (1) lazy and lack

of initiative, (2) lack of equipment and supplies, (3) traditional administration, and (4) insecurity and fear of failure. A description is expressed in the following excerpts:

We think of so many things we want to try out in our classes and so many times when I sit down to plan it out, we don't have the materials available.

I think teachers are just a little bit lazy. They say they don't have the time, but I don't think they are just willing to give the time it takes to do something.

I think fear of administration; that they are afraid the administration will think they don't know what they are doing if they are always experimenting. Teachers get in a rut. You get something that will work, you hesitate to change. A lot of teachers are lazy.

It goes back to the psychological field that I am afraid of this thing and I don't know why, so it is easier not to do it. In a school system, the administration would have to lead in this situation.

I feel there is a lack of sincere desire on the part of many teachers to do these things. The administration can also play a major part in whether new things are tried or not. Some people are well in intention, but others are lazy. We have a tendency to be afraid of new things.

The teachers in this study perceived experimentation as a part of the job of teaching. This idea was expressed by 94 per cent of the teachers in the sample.

Two teachers described it as follows:

I think this is a very valuable part of teaching and one of the best ways of evaluating what they have been doing and what they can do better. If they want to try things, they can keep records and judge improvements. They don't have to be as precise as research on higher levels.

I think experimentation is part of their job and it is good to try new ideas.

Two-fifths of the teachers expressed confidence in their ability to make changes, experiment, and/or apply research. An additional two-fifths expressed a need for more experience and training in this area. The above conclusion is supported by the following excerpts from the interviews:

I feel confident if I have time to spend and study the change before I implement it into the classes. I feel we should try because we will not know until we do. Yes, I have had some things I tried to blow-up or backfire in my face, but many things I try work well.

I think I feel fairly confident. I don't go into something I haven't planned thoroughly, and I go in with the feeling that it will work and it may not. So I don't feel I am held back by feelings of insecurity.

I am always anxious to try it out, but I am a little afraid I will not carry it out in the best way. I don't have the fear of not getting anything across. I do feel like I can do something with it. I try a lot of things. I hardly do the same thing twice. I always wonder after it is over if I actually did what I wanted to do to help the children.

The majority of the teachers did not have adequate time for experimentation. One-third of the teachers reported that they had adequate time to experiment. Inadequate time for experimentation was described by two teachers as follows:

There is definitely a need for more time for planning. You work in a school day. I have never had any time except my own for planning. I think we need planning time.

I would say that I just don't have enough time to take care of what the school expects. The time factor and preparing for new ideas is a problem.

The teachers are very evenly divided on whether there is adequate or inadequate financial support and facilities for experimentation. The responses may be governed by situational factors which are determined by the particular school system in which they teach. The following excerpts will describe both adequate and inadequate as responses to the stimulus question.

They may not have the facilities. If they are lucky, they have a classroom they can stay in five periods a day.

. . . They may not have the facilities, but you can always make things do. I don't see this as a problem.

In my own particular set-up, I don't think we could say money is a problem. We do get money, but

we have to be careful to use it wisely. We can get almost any teaching aid we want.

I think this has been and still is a problem, but I think we are overcoming this.

Money is always a problem. I think we are coming to a point where we think we can't teach without elaborate teaching materials. I think these things help, but I think the thing for a good teacher is to adapt and utilize his potential. Most professional people can adapt, and if he can't, he is in a poor situation. Size, money, and facilities doesn't necessarily insure you good teaching.

It could be a problem, but many of these new ideas are not as expensive and they can be put in with a minimum of expense. Methods don't cost much.

The teacher population interviewed expressed a need for more experimentation. They commented that the way to learn, grow, and develop professionally was to have more experimentation. This is emphasized in the following excerpts:

I think they should find better ways to do things. We need more teachers to try out new ideas.

I think we need to do a lot more trying out new ideas, because I think that is one thing that is one of the reasons why some teachers are having problems; they don't experiment or try out new things.

To me experimentation is growth if you go about it in the right way. I think to stay alive

the teacher has to continue to try new things. So if the teacher is not alive, her teaching is not alive.

The teachers as a group were undecided as to what would motivate teachers to experiment more in the classroom. Encouragement by administration and better understanding of new ideas were the two most frequently identified factors. Their inability to define motivational factors was illustrated by the range of 28 different motivational factors identified by the teachers. The following excerpts describe the conclusion above:

If ideas could be implanted. If there was a class from which they could get ideas to work from.

Possibly it goes back to the basic philosophy of the school you are in; if they encourage teachers to improve themselves; to do research. I believe that an administrator who could show teachers that this could be to their advantage; they would possibly want to do something about it.

Well, it is like I said, knowledge of research and sure of support of the administration.

The teachers identified three major ways through which they acquired or kept up to date with new ideas. They were: (1) reading journals, (2) going back to school, and (3) talking with others. Better understanding is provided by the following excerpts:

I think coming back to school for the past three summers, and during the year I spend time in the school library reading journals. I talk with other people.

Generally from reading professional journals and from coming back to summer school and talking with other teachers.

The teachers described the means which are presently employed for dissemination of research as being inadequate and that the means are not varied enough to reach all teachers. One teacher stated:

I have often thought about how to get these different ideas. I have often thought about visiting. I think the possibility of being able to visit a teacher and an exchange of ideas is a great thing. I never had the opportunity to do as much of it as I would like to do. I think if there was some way to promote the exchange of ideas among teachers in different school systems and buildings would be helpful. Possibly TV; having time available and knowing what is being done and how they approach this. I think you can read about it, but I feel the need for actual game type situations.

The teachers were very divided on the teacher's access to disseminated information. The largest per cent (44) responded that access was limited. Eighty per cent reported that they had access to professional libraries in their school and/or system. Of this group 32 per cent stated that these libraries had limited holdings. The following statements made by the teachers will illustrate

the point:

I feel it is pretty good and much of it is written where most teachers can understand it. The problem is access to and not having time to dig it out of the literature.

We get some professional journals at the school. The school has no books and etc. They have some at the county office, but I am not familiar with them.

The school, no; the principal has some; the central office has a few.

The professional library is what I consider one of the strong points of our school system. We have a more than adequate library at the central office and also one at each individual school.

The teachers were divided on whether the disseminated information was in understandable and adaptable form. Many responded "yes" but the largest per cent stated that the form needs improvement. Three teachers described it as follows:

Some of them seem to be practical, but some of them though seem to be idealistic and rather remote from classroom situations.

I think most everything now is written in a very readable way. You can sit down and not only look for something to use, but really read something and enjoy it. If you enjoy it, it is really understandable.

I consider this one of my real pet peeves about education. Not that I don't want to be professional minded, but I think too many times

this professional jargon is carried to the extreme. By the time they have made their statements, it is so long and so windy it doesn't make any sense. I think a better job can be done and it is expected.

The teachers identified speakers and resource people as one of the best ways to improve the dissemination of research to teachers. A large group of ideas were identified with in-service programs being named the next best way. Two teachers commented:

I think sometimes the in-service program could through the consultants bring us more practical ideas. After all, seeing something helps. I think sometimes you understand better after being shown.

I may be way out, but I think if I had someone who is doing research to go to an individual school and visit with teachers and tell them about what the research deals with. You can win the battle on paper, but until you get out into the field, you don't know what is going on.

A majority of the teachers reported that leadership for research, improvement, and trying new ideas is not provided in their schools. This was reported by 58 per cent of the teachers interviewed. Forty-eight per cent of the teachers reported that they were never encouraged to try new ideas. This is described by these comments:

We feel free to try things. We don't have any encouragement. No one comes around and asks

what you are doing in your classes. We try to do the things we are required to meet the needs.

We are encouraged to do our best, but I have never had my principal suggest anything new or ask if you have tried anything new or ask have you tried this or what do you think about it.

Nobody seemed to be too interested in the programs I have worked on. Many times the principal does not know what is going on.

When leadership is provided in the schools, it is provided by the principal. This is evidenced by the following comments:

In our school we have a real fine administrator. I believe anything you wanted to try that he understood would be fine. He wants you to do different things. He encourages it. He suggests different things teachers might try.

We are encouraged by the principal and by the teachers to try new things. . . . Teachers feel free to try if they so desire.

We were encouraged, very strongly encouraged, to keep up with the new ideas, to try new ideas, and try to improve constantly. The principal's attitude was one of encouragement. Other teachers encouraged me.

The school climate toward research and experimentation is laissez-faire. The teachers reported that it was their decision as to whether they would experiment. They stated that it was all right if they did experiment and it was all right if they did not. This is expressed in the following excerpts:

I would say a laissez-faire situation. If you want to try something new, that is all right. There is no pressure put on you to do it. It is up to the individual. If you do all right; if you don't all right.

No emphasis on trying new things; it is sort of a laissez-faire situation. We are free if we so desire to try something new, probably we are too free and not enough direction and control.

I think that there is an atmosphere in our school that is conducive to change if the individual teachers work this change out themselves. I don't think there is too much emphasis from the principal. I don't think he helps or attempts to help, but I think the atmosphere is there if they want to change.

The teachers stated that a trained research person is needed and/or desired in the schools, but they were divided as to whether teachers would accept and utilize the services of a research person. Forty-six per cent said "yes" while 44 per cent were undecided about teacher use of the services. This is described by the teachers in the following excerpts:

We need such a person, but our teachers won't use them. There must be a good selling job done first so that they will see how useful they can be. Then some would need force before accepting them. This person would probably be better working out of the central office.

Yes, we very definitely need a trained research person and I think most of our teachers would be thrilled to accept this person and to

just work with him. I think if he was just for the whole county it would be wonderful, because we need new ideas.

The teachers experienced difficulty in relating research to what they were doing in the classroom and to improvements made and problems experienced. The teachers mentioned the following five areas most frequently as areas in which research has helped improve classroom practices. They were, in this order: (1) teaching methods, (2) content improvement, (3) teaching materials, (4) nature of the learner and learning, and (5) curriculum change. One teacher described it this way:

It has helped in the methods of teaching because many areas are illy defined. Language arts seem to be jumping now. Facilities, equipment, and materials are being improved.

The teachers identified a wider range when they talked about how they thought research could help with problem situations and improve classroom practices. The three major areas identified were: (1) teaching methods, (2) the nature of the learner and learning, and (3) dissemination and implementation of research information. A point worth mentioning is that 28 per cent of the teachers did not comment on this phase of the question. They were unable to see the relationship of research as a

means of solving problems which they were experiencing in the classroom.

Teachers had a positive professional attitude toward their profession. These teachers recognized the need for continued professional growth and improvement. Research was accepted by the teachers as a phase of this process.

In-service programs would be of more benefit to teachers if the program provided aid in the areas of teacher interest and needs. Involvement, through more active and less passive activities, on the part of all seemed to be a prerequisite for successful in-service programs.

The teachers made many decisions about changes in teaching methods. They were unable to identify the source of the ideas in many cases, except that it was something that they had internalized and that had become a part of them. These changes were implemented with varying degrees of success, but seldom was a systematic plan of evaluation pursued to determine if this change was an improvement over previously used methods.

Factors which prevented and/or motivated teachers

to change were difficult to identify and generalize to all teachers. The factors seemed to be a personal and individual matter with each teacher. Some environmental factors could be generalized with some degree of success.

Research was important to teachers. The teachers thought more experimentation was needed, but they were hesitant to venture into an experimental situation. Even though adequate provisions are not made for research in most school budgets, the teachers reported that the administration was usually willing to provide aid in terms of time, money, and facilities.

Reading journals, going back to school, and talking with other professional educators, being their chief means of communication of ideas, are inadequate. More varied means of communication with an improved, understandable, and more adaptable form is needed. The best way to diffuse knowledge was difficult to identify. The best way varied with each individual which would necessitate a wide variety of means of diffusion.

There was a lack of leadership for experimentation on the local school level. The teachers were free to experiment, but they require some leadership and

encouragement. A trained research person is needed to work with teachers and principals on the local level. This research person could be the motivation necessary to properly insure the utilization of research and research findings in the classrooms of our schools.

Teachers experienced difficulty when they tried to relate research to the things they did in the classroom. Some help is needed to enable teachers to relate classroom practices, which they perform every day, to research and what it has to offer.

Teachers wanted to do a better job of teaching. The desire to grow and improve professionally was present, but because of the personal factors involved in making changes or trying something new, the teachers must have support, leadership, and encouragement. The evidence indicated that great strides in implementation and application will not occur incidentally or accidentally to any great degree. The way to insure effective use of research is for a conscious effort to be made by the people involved in research and education.

The purpose of the study was to explore and analyze teachers' perceptions in conducting and using educational

research. The exploration was to examine three phases of educational research which are identified along with supporting data from the study and presented one at a time.

The first phase was to explore teachers' perceptions of the usefulness of new ideas which have been reported as helpful research findings. The teachers were enthusiastic toward research and viewed it as being helpful and useful in their teaching duties. The teachers subscribed to professional journals and read professional literature which denotes some degree of acceptance or striving for new ideas. The teachers mentioned that their in-service programs were providing new ideas, research results, and/or information on problems which they believed resulted in professional growth. Many of the new ideas have not been used by the teachers because of limited access to the ideas. Some of the new ideas have not been used because of the form in which they have been reported to the teacher. Forty-eight per cent of the teachers stated that the research ideas needed improvement in adaptability, while 38 per cent stated that the ideas were adaptable for classroom use. Forty-six per cent reported

that the research ideas needed improvement in understandability while 42 per cent reported that the ideas were in understandable form.

The above responses imply that research from the teachers point of view is good and useful. There is a need for improvement in better communication and dissemination of research ideas to the teachers in a developmental form which would be more susceptible to classroom implementation.

The second phase was to explore teachers' perceptions of the value of conducting original research or testing new ideas in the classroom. The teachers believed research to be of value. They thought we needed more experimentation in the classroom. The teachers also perceived research to be a part of the job of teaching. Forty per cent of the teachers stated that they felt confident to experiment in the classroom, but an additional 38 per cent needed experience and training to perform the duty they accepted. The teachers perceived research to be valuable enough to need a trained research person to work with them in conducting research. They were not positive about the acceptance of this person by teachers, but

they thought that in time, he would be accepted and utilized. The teachers also desired leadership for research from the administration. The teachers pointed out the value of research by identifying ten areas (see Table 26) in which research has helped improve classroom practices. As noted in the same Table, the teachers also indicated the value of conducting research by identifying thirteen areas in which research can provide assistance. The value is also indicated in the description the teachers gave in regards to research such as: it will give better methods, materials, and more knowledge about the student; it will be a basis for decisions; it will provide better prepared teachers; and it will benefit the student.

All these comments imply the value of conducting original research or testing new ideas in the classroom. Two essential ingredients which seem necessary for the conducting of research on the part of the teachers are leadership and adequate time. In some cases financial support and facilities may be a problem. While the teachers valued research in the classroom, the changes made by many of the teachers did not follow the research or scientific process in the implementation of the change.

The above data indicate that research is valued by the teachers. Research is accepted and held by the teachers as being something important. What is needed is an effort to help this valuing become more of a practical reality than is presently being experienced.

The third phase was to explore teachers' perceptions of ways to promote the increased use by teachers of research and research findings for curriculum improvement. The teachers were unable to agree, to a certain degree, on ways to promote the increased use of research and research findings. This was exemplified by the wide range of responses given by the teachers. Table 20 identifies 27 ways to encourage experimentation with encouragement by administrators and a better understanding of new ideas receiving top priority in terms of the highest percentage of response.

The teachers identified reading journals, going back to school and talking with others as their best means of acquiring new ideas. This suggests more of all three of these activities by teachers to promote the increased use of research and research findings.

Another way to promote the increased use of

research and research findings is through improved diffusion of knowledge. Again a wide range of responses (see Table 23) were given by the teachers. The highest percentage of response identified speakers and resource people and in-service programs as the best ways to improve the dissemination of information to teachers. Other factors related to dissemination and communication which are applicable here have been pointed out previously under the other phases.

As pointed out earlier, good leadership is necessary for the use of research and research findings by teachers. A proper reminder here is that the research should not only provide new ideas for teachers to try, but also ideas which are related to the teachers' needs and problems at the present time.

With the risk of being redundant, the above data point again to many of the same factors for success:

(1) diffusion of information to teachers; (2) leadership for research; and (3) time, support, and facilities to conduct research.

Suggestions for Further Study

As a result of the data obtained in this exploratory

study, the following suggestions for further study seem appropriate:

1. A replication of this study, with a larger, more specifically-chosen sample of teachers, might prove valuable in a more thorough identification of certain factors in each of the six general areas; especially the factors which had such a wide range of responses.
2. Should some of the same factors appear to be equally important in the perceptions of the new sample, a similar study or studies, taking only one of the six general areas might be warranted. The findings of the previous studies could be used as a guide for probing in depth into some of the responses in order to gain more insight.
3. Should some of the factors relating to the lag between research and practice, after thorough study and analysis, continue to be identified by the teachers as problems and/or solutions, procedures might then be developed accordingly to attempt to reduce the lag to see if they do indeed indicate an approach to better use of

- research and research findings in the classrooms.
4. A study which involved teachers in a research and development program could be very effective in determining the success of involvement as an aid to the application of research. Should involvement denote success in the application of research, the degree of involvement on the part of the teacher to insure acceptance and application of research findings would warrant identification.
 5. A study of preventative and/or motivational factors related to the acceptance and the application of research findings in the classroom should warrant careful attention.
 6. A study to identify the best methods for the diffusion of research knowledge to teachers could provide valuable information. Communication and dissemination of research warrants further study and investigation.
 7. A study could be designed to utilize some of the factors, as revealed in the conclusions of this study, which were found to facilitate change. These factors could be used as catalysts in a

study of the psychological factors when there is an effected change in people.

8. A study which would develop and test models of ways to aid teachers in conducting and applying research could provide valuable information. The change process could be illustrated by the development of models identifying both environmental and psychological change factors and their relationships. The models could be tested to determine their adequacy in the reduction of the time lag between research and practice.

APPENDICES

APPENDIX A

INTERVIEW SCORING SHEET

Personal Data of Teacher

Degree held	BS	MA	AA
Teaching level	Ele.	Sec.	
Area of specialization	English	Science	Math
	Ele. Ed. Soc. Stud.	For. Lang.	Other
Years experience	0-5	6-10	Over 10
Participated in self-study	Yes	No	
School has in-service program	Yes	No	
School or system has professional library	Yes	No	Limited
School size	Less 500	500-1000	Over 1000

Personal Data of Teacher--Continued

School system	City	County	
Has had course in research methods, tests and measurements, and/or statistics.	Yes	No	
Subscribes to professional journals	General	Yes	No
	Teach. Fld.	Yes	No
School has supervisors	General	Yes	No
	Subj. Area	Yes	No

Professional Attitude

Subscribes to professional journals	Yes	No	
-----	-----	-----	-----
Reads professional literature	Yes	No	
-----	-----	-----	-----
Is enthusiastic	Yes	No	Undecided
-----	-----	-----	-----
Teachers believe in-service program is helping them grow professionally	Yes	No	Undecided
-----	-----	-----	-----
Teachers are satisfied with present in-service program	Yes	No	Undecided
-----	-----	-----	-----
Teachers mention in-service program is providing new ideas, research results and/or information on problems	Yes	No	Undecided
-----	-----	-----	-----
Views research as helpful and useful	Yes	No	Undecided

Role of research in the future:

- Play larger role in education
 Will specialize more
 Give us better methods
 More knowledge about the student
 Will be basis for decisions
 Emphasis will change from time to time
 More emphasis on dissemination, understanding, and application
 Provide better prepared teachers
 Change will force more research
 Better materials
 Involve teachers more
-

Classroom Change

Nature of change	Teaching Method	Organization	Classroom Environment
	Content	Learning Activity	Other
Reason for change	Your Decision	Faculty Decision	Administrative Decision
	Legislated	Help Student	Other
Source of idea	Literature	Teachers	Yourself
	Supervisory Personnel	Professional Meetings	College Class
	Workshop	Institute	Other
Idea was implemented	Orderly Process	Organization Indicated	No Organization
How do you know change was successful	Teacher Satisfied	Pupil Achievement	Pupil Interest
	Helped Achieve Goals	Self-evaluation	Other

Classroom Change--Continued

Factors preventing change:

- Lazy and lack of initiative
 - Fear of administration
 - Fear of change
 - Insecurity and fear of failure
 - Lack of time
 - Classroom and school environment
 - Traditional administration
 - Lack of equipment and supplies
 - Location of and access to teaching aids
-

Experimentation

See it as part of job	Yes	No	Undecided
Perceive ability in making changes, experimenting, and/or applying research	Confident	Need Experience and Training	Insecure
Time for experimentation	Adequate	Inadequate	
Financial support for experimentation	Adequate	Inadequate	
Facilities for experimentation	Adequate	Inadequate	
Need more experimentation	Yes	No	Undecided

What would motivate teachers to experiment more in the classroom?

- Go back to school
- Encouragement by administrators
- Encouragement by other teachers
- See the need for experimentation
- Feel more secure
- Free from fear of criticism
- Better understanding of new ideas
- More time
- More money
- Reward and recognition
- Dedicated to job of teaching

Experimentation--Continued

- _____ Secretarial and clerical help
 - _____ Good in-service programs
 - _____ Consultant help
 - _____ Involve teachers in research
 - _____ Self-evaluation
-
-
-

Dissemination of Research

Means through which you acquire or keep up to date with new ideas:

- Reading journals
 - Reading books
 - Going back to school
 - Talking with others
 - Professional meetings
 - In-service program
 - Workshops
 - Speakers and consultants
-
-

Means employed for dissemination are:

Adequate	Yes	No	
-----	-----	-----	-----
Enough variability	Yes	No	
-----	-----	-----	-----
Teacher access to	Good	Limited	Poor
-----	-----	-----	-----
Adaptable form for classroom use	Yes	No	Needs Improvement
-----	-----	-----	-----
Understandable form	Yes	No	Needs Improvement
-----	-----	-----	-----

Dissemination of Research--Continued

Ways to improve dissemination:

- Visiting and observing
 - Demonstrations
 - In-service programs
 - Workshops
 - Speakers and resource people
 - Talk with others
 - Involve teachers in research
 - Teacher education programs
 - Journal articles
 - ETV
 - Films
 - Research quarterly
 - Supervision
 - Filmstrips
 - Recordings
-
-
-

Leadership

Leadership for improving and trying new ideas is provided	Yes	No	
Is provided by whom	Supt.	Supervisor	Principal
	In-Service Program	Local Teacher Organization	Other Teachers
You are encouraged to try new ideas	Regular	Seldom	Never
School climate toward experimentation	Facilitating	Laissez-faire	Restricted
Trained research person needed and/or desired	Yes	No	Undecided
Teachers would accept and utilize services of research person	Yes	No	Undecided
Teachers specified he should work	Individual schools	System-wide	Teacher-ratio

Improvement of Practices

Teachers say research has helped improve classroom practices in terms of:

- Decision-making
 - Curriculum Change
 - Pupil Adjustment
 - Pupil Achievement
 - Classroom Management
 - Teaching Methods
 - Teaching Materials
 - In-service Programs
 - Nature of Learner and Learning
 - Content Improvement
-
-

Teachers think research can help improve classroom practices by providing more information on:

- Nature of Learner and Learning
 - Better Communications
 - Content Improvement
 - School Environment
 - Curriculum Changes
 - Resources and Materials
 - Decision-making
 - Teaching Methods
 - Teacher Training
 - Attitudes
 - Dissemination and Implementation
-
-

APPENDIX B

INTERVIEW GUIDE CHECKLIST

Background Data

Where you received degree
Degree you hold
Teaching level
Area of specialization
Years experience
Additional training--last 5 years
Participated in self-study
School has in-service program
School has professional library
School size
Kind of system
Course in research methods, tests and measurements,
and/or statistics
Subscribes to professional journals
School has supervisor

Professional Attitude

What comes to your mind when you hear the word research?
Reads professional literature.
In-service program is helping teachers.
Role of research in the future.

Changes

Think about a change you have made in your classroom and
tell me about it.
 Why you made change?
 Where you got idea?
 How implemented?

How you know it was successful?
Has been modified? How?
Factors that prevent change?
Under what conditions would more change be made
and/or accepted by teachers?

Experimentation

What do you think about teachers conducting research and trying out new ideas in the classroom and/or reading and implementing successful studies reported in the literature?

Part of job?
How you perceive ability?
Need for?
Time?
Support?
Facilities?
What would motivate teachers to experiment more?

Dissemination

Tell me how you find out about and keep up to date with new ideas and innovations in education and in your teaching field?

How would you describe the present form in which research is reported and the means of communication used to distribute these findings to teachers for use in the schools?

How could this be improved?

Leadership

Tell me about the emphasis placed on improvement, trying out new ideas, and research in your school.

Is provided?
By whom?
Encouraged? (frequency)
Trained person needed and/or desired?
To work in school or system wide?

Improvement of Practices

Tell me some ways and/or areas in which research and/or research information has helped (or can help) in improving practices in your school.

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