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THE EFFECTS OF RACE AND DATA COLLECTION
TECHNIQUES ON THE RESPONSE RATES
OF INNER-CITY RESIDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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** ** ** **

The Ohio State University

1979

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Faculty of Educational Foundations
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This work is dedicated to
Mrs. Frances D. Ransom, Mrs. Nannie P. Harris
and
Ms. Rashida Maisha Ransom
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CHAPTER I
INTRODUCTION

Today, public school system administrators are being challenged by all segments of society to make education more accountable to the public's needs. There is a growing amount of frustration, on the part of the public, being displayed toward education in general, and toward their local schools in particular. Weinstein and Mitchell (1975, p. 2) state "the extent of citizens' frustration with the schools comes as no surprise. Significantly, however, everyone connected with education is frustrated and all agree that some new solutions must be found to alleviate the continued erosion of public confidence in American schools."

The fact that school decision makers are being forced to become more receptive to their publics is evidenced in a report prepared for the secretary of the Department of Health, Education, and Welfare, by a task force in 1968. The report states:

The need for involvement by parents and family is particularly great in public programs which serve children and youth. Parents have the same goals for their children as the agencies which administer these services. They want their children to be as free as possible from disease and disability, to get all the education they can absorb, and profit from, and to live a useful and rewarding life. Often, however, they don't know how to reach these goals for their children. Public agencies, on the other hand, have not been as responsive as they should be, because they have often neglected to involve the parents as planners and participants in their programs. The time has come to break down these walls of separation. Public agencies have a responsibility to open up the opportunities for participation, particularly for poor people and members of minority groups.
The need is all the more urgent in today's complex world in which huge organizations, impersonality, and fragmented and specialized services seem to threaten the individual's sense of significance and self-esteem (p. vii).

In answer to the question of why communities have assumed a posture of increased interest in the school experience, Dobson and Dobson (1975) cite the following possible reasons for the increase.

First there appears to be an almost total lack of communication with parents in regard to educational purposes as they relate to the curriculum of the school and to known states of child development.

Second, there appears to be a lack of open communication between the educational system and public, concerning the purposes of education.

Third, there seems to be a total absence of public schools working in full partnership with families, particularly low income families.

Fourth, there seems to be a lack of recognition on the part of universities and colleges of the need for educationally related services to fit the realities of the communities they serve.

Fifth, in rural areas, small elementary schools located in isolated communities serve as 'feeder' schools for larger high school districts. The further the attendance center is from the student's immediate community, the less sensitive the curriculum and instructional program is to the student's personal and/or educational needs, interests, and concerns.

One of the most significant conclusions resulting from an analysis of these five possible reasons for increased public concern with education is that they all seem to revolve around a lack of communication between educational decision makers and the publics they serve.
In order for educational decision makers to better serve their communities, they are finding that they must be aware of the public's needs in order to institute policies that satisfy those needs. School decision makers are faced with the problem of obtaining valid and reliable data concerning the public's aspirations for public education.

Today, school decision makers are employing a number of different techniques to collect information from their community residents. However, the majority of these techniques are not employed in a way which would allow valid and reliable decisions to be made. In a study of the information-seeking procedures of Ohio school district superintendents conducted by the author in 1974, the superintendents were questioned as to what procedures they used for obtaining information from the public and the manner in which they disseminated information to the public. The results indicated that over 75 percent of the respondents (N=88) used methods such as "small public meetings," "PTA's," "special citizen committees," and other similar techniques. Only 24 percent indicated they employed some form of questionnaire survey technique. Among the 24 percent who said they use surveys and questionnaires to gather information from the public, a significant number indicated they administered their questionnaires during PTA meetings and other school-related gatherings.

There are some school decision makers who realize the need for having more sophisticated methods of collecting information. Of the school decision makers who recognize the need for having more sophisticated methods of collecting information, the mail questionnaire is the primary method used. The idea of obtaining information concerning
education from the public via a mail questionnaire is certainly not a
new phenomenon. One of the first educators to employ the mail question-
aire technique to gather data concerning the public's attitudes re-
garding education was Horace Mann, in the early 1800's. Mann used the
mail questionnaire in his efforts to convince both the poor and wealthy
American publics of the need and importance of having universal educa-
tion. Another pioneer in the use of the mail questionnaire technique
in educational psychology was the American psychologist, G.S. Hall in
his investigations of the learning patterns and behaviors of school-age
children.

The mail questionnaire technique has definite advantages for use
in educational research. However, it is also well documented that the
mail questionnaire technique still suffers from many problems. Accord-
ing to Rummel (1958) the mail questionnaire method has not only been the
most popular in extent of usage in research work, but it has also been
the most misused method.

The principal objection to, or criticism of, the mail questionnaire
technique has been directed at its low rate of returns, i.e., the non-
response bias. If a sufficient proportion of questionnaires are not re-
turned by the subjects, valid conclusions cannot be made about the opin-
ions of the population under study. Another major problem associated
with the mail questionnaire technique is errors in response. Errors in
response can stem from a number of factors such as, question content,
ambiguous questions, and prestige bias. Also, two other problems of
the mail questionnaire are the length of completion time and the over-
all cost of using the technique.
In addition to these problems, school decision makers using this technique may not be reaching all of the representative residents of their communities. As indicated earlier from the results of the study of Ohio school district superintendents, a major proportion of their questionnaires were administered to only those residents that had some direct involvement with the local school system (i.e., parents and other members of the PTA). By employing the data collection technique in this manner, the school decision makers are excluding the important opinions of the residents who may not be parents at the present time, but may be future parents of children in the local schools, and more importantly, those property owners without children who support the local schools through taxes. Because of this, school decision makers who are setting policies and making programming decisions based on this type of data collection process may not be reflecting the opinions and wishes of their total communities, and are leaving themselves open for more criticisms from the public regarding the local educational system.

Today, a significant part of the many large urban public school system's clientele live within the inner-city. Inner-city residents usually represent a high proportion of today's low income families and consist of a more diversified group of clients to be served than rural or suburban school communities.

Inner-city residents are becoming more vocal in expressing their dissatification with the local school system. It is this diversified group of the public school system's clients that is demanding to have a piece of the action in determining all educationally related policies.
Thus, this is one of the major populations for which school decision makers need to employ the best techniques available for collecting information. Hoyle and Wiley (1971) in an article entitled, "What Are the People Telling Us?" have concluded that educators today are lacking the very skills that might save them, namely, "the proper methods of analysis." The authors suggest that educators use practical and useful research techniques to assess the will and sentiments of their publics at the local levels in order to better deal with the new demands.

**Purpose**

The purpose of this research study was to determine the effects of data collection techniques, race of survey director, and race of subject on the response rates of inner-city residents. More specifically, this research employed a controlled experimental design to measure the effects of three separate data collection techniques employing Black and White survey directors on the response rates of Black and White inner-city residents. The three data collection techniques investigated were: (1) telephone interview; (2) hand-delivery, self-administered questionnaire; and (3) mail questionnaire. These three techniques were selected for testing because it was felt that each is employable by a typical public school system. There are other data collection techniques that can provide valid and reliable community data such as personal interviews. However, these techniques usually require more expense as well as extensive social science research knowledge.

The telephone interview data collection technique has a number of advantages for collecting community information. The telephone
Interview technique is generally considered to be the least expensive technique, particularly if little training of interviewers is needed. It also tends to achieve a relatively high rate of response. The advantage of personal contact over the telephone with respondents also allows for more indepth probing of responses.

The hand-delivery, self-administered questionnaire technique has had very little use in social science research in general, and particularly by educational decision makers in collecting community information. However, the technique does seem to have some advantages for collecting information from local school system residents. Lovelock (1976) states, "for lengthy questionnaires, personal delivery by lightly trained survey takers appears to yield higher response rates than mail surveys at competitive costs; it also provides for more precisely controlled samples and clearer identification of the nature of nonresponse bias."

The mail questionnaire technique has many advantages for collecting information from residents of a school system's district. It is relatively inexpensive in comparison to some of the other data collection techniques and requires less time and skill to administer to large numbers of people. According to Erdos (1970), "the mail survey is uniquely suited to gathering a large volume of information from a large, diversified and geographically scattered population at low cost compared to other forms of surveying." It has also been documented that by employing some of the recently published research techniques, the primary disadvantage of mail questionnaire surveys -- a low rate of response -- can
be overcome. (A more detailed discussion of these various techniques for improving response rates will be examined in Chapter II.)

Objective

The primary objective of this research was to investigate the effects of race of subjects, race of survey director, and data collection techniques on the response rates of inner-city Black and White residents.

In addition, two sub-objectives were: (1) to compare the costs, both in time and money, of the three data collection techniques for increasing response rates to public school community surveys, and (2) to determine if there were any systematic differences in terms of the quality of responses produced by the three data collection techniques.

Hypotheses

In order to accomplish the objectives of this research, the following hypotheses were posed:

(1) Ho: There will be no significant differences between the response rates to the mail questionnaire, telephone interview and hand-delivery data collection techniques.

Ha: The response rate of the hand-delivery data collection technique will be significantly higher than the response rates to the mail questionnaire or telephone interview data collection techniques.

(2) Ho: The race of subjects will have no significant effect on the response rates across the three data collection techniques.

Ha: The response rates of the Black subjects will be significantly higher than the response rates of the White subjects across the three data collection techniques.
(3) Ho: The race of the survey director will not have a significant effect on the response rates across the three data collection techniques.

Ha: The response rate achieved by the Black survey director will be significantly higher than the response rate achieved by the White survey director across the three data collection techniques.

(4) Ho: There will be no significant first-order interactions between the data collection techniques, the race of survey director, and the race of subjects.

Ha: There will be a significant first-order interaction between the data collection techniques and the race of survey director.

Distinctiveness and Utility

In order for school decision makers to begin to deal with the public's concerns and aspirations for education, they must have better ways of assessing their attitudes. The local public school system has not been successful at gathering community information from all segments of their publics in a systematic way that allows it to institute policies that reflect the public needs in order to gain their support. The major distinctive and utilitarian features of this research were that it proposed to provide educational decision makers and other social science researchers with knowledge of:

(1) What technique is most effective (in terms of return rate and cost) for collecting information from all inner-city residents concerning their attitudes and opinions about the local school system.
What technique is most effective for collecting information from certain races within the inner-city, concerning their attitudes and opinions about the local school system.

Limitations

The three techniques employed in this study are not the only techniques available for providing local school decision makers with data from inner-city residents. However, the decision to use the techniques employed in this study were reached as a result of a review of the most pertinent literature concerning successful techniques used for gathering data of the type needed by a typical local public school system and some considerations for a typical public school system's capabilities for conducting scientific research.

Definition of Terms

To facilitate the understanding of this research, a glossary of important terms has been compiled. Where possible, these standardized definitions were provided by A Comprehensive Dictionary of Psychological and Psychoanalytical Terms (English and English, 1958), and The Dictionary of Education (Good, 1973). The terms are:

1. Attitude - enduring, learned predisposition to behave in a consistent way toward a given class of objects.
2. Community - a group of people living fairly close together in a more or less compact, contiguous territory, who are coming to act together in the chief concerns of life.
3. Decision Makers - those persons in school systems who are primarily responsible for making decisions, affecting community educational needs.
4. Opinion – a belief that one holds to be without emotional commitment or desire.

5. Public – a more or less ephemeral group of persons, not necessarily physically assembled, but united by one or more common interests, and some means of communication.

6. Public Opinion – the average judgment or concensus of the individuals of a society regarding certain social problems or objects.

7. Survey Research – the investigation of public opinion, using scientific sampling methods and carefully planned methods of questioning.

8. Inner-City – a geographical area located within a city that is a predominantly low socioeconomic area.

9. Resident – a person who resides in a fixed and permanent area of a school's district.

10. Questionnaire – a list of planned written questions related to a particular topic.

11. Useable – a questionnaire returned containing 50 percent or more of total items completed.
CHAPTER II

REVIEW OF LITERATURE

The major objective of this research was to investigate the effects of race of subjects, race of survey director and data collection techniques on the response rates of inner-city Black and White residents. The overall review examined four pertinent bodies of literature:
(1) school decision makers needs for community data, (2) data collection techniques, (3) techniques for increasing response rates, and (4) race of interviewer effects on response rates.

Decision Makers Needs for Community Data

A number of educators have indicated the need for school decision makers to have and employ new and improved methods for both communicating with, and receiving feedback from, their publics. According to Nancy Stark (1971) "schools today need a much more authoritative and timely indicator of public feeling in order to conduct their affairs in a businesslike and practical way." Another educator sensitive to this problem is Kenneth K. Muir (1972). Muir feels that school decision makers need to know something about the habits of their publics if they are going to make it convenient for them to get information. He proposed that a public opinion survey is one of the methods that decision makers can use.

In an unsigned American School Board Journal article entitled, "How To Tell What Your Public Really Thinks" (1973), the author indicated
that determining those factors that contributed to public understanding of the school was related to achieving a smooth running and accountable school system. He described the factors which comprise public understanding as (1) public opinion, (2) public knowledge, and (3) public vision. The author concluded that a good survey could measure the level of public understanding in a district, and at the same time, establish the kinds of communication channels between schools and the public necessary to raise that level.

An article by Carithers (1973) provides three important reasons why school decision makers today should conduct frequent surveys of their publics:

First, is the trend to long-term planning and the development of the technology and systems approach that makes long-term planning possible. Keeping a finger on the pulse of constituent populations is a necessity for making changes that are politically or socially acceptable and for campaigns involving financial support.

Second, is the change in the social structure and the informal communications systems of that social structure in the cities, towns, suburbs, and rural areas in which we work.

Third, is the emotional climate of our time. We call its various manifestations 'student unrest,' 'teacher militancy,' 'voter resistance,' and 'parent concern.' This emotional climate may very well be created or affected by the attrition of the informal communications systems and its function in resolving conflicts before they reach dangerous intensity.

John Phillips (1972) conducted a survey to measure the community's attitudes toward the local school system, and concluded that the community wanted to be more active in school affairs. One of the most
positive points resulting from this study is indicated in the following statement by Phillips. "I feel certain that a survey such as the one conducted in this district could help in uncovering problems in other school districts. It is inexpensive and relatively uncomplicated to administer. Also, experience has shown that civic-oriented groups lend their support willingly, and that an adequate percentage of questionnaires will be returned to furnish a reliable representation of the community's opinion."

The fact that some decision makers are employing data collection techniques to collect community information, but that this information may not be valid and reliable, is indicated from the results of a study conducted by Douglas Norman and Charles Achilles (1973). The authors report on a survey conducted to determine the public information practices and techniques used by a national sample of 441 school systems. One of the major findings of the study was that while more than 40 percent of the systems reported collecting feedback from public groups and making this available to top administrators, the comments provided by the respondents suggested that this feedback collection process often was informal rather than scientific in nature.

Data Collection Techniques

The telephone technique. Today the telephone has become one of the most widely used methods for collecting data from almost any population. The major problem in employing this method in the past was not being able to collect data from those members of the population that did not have telephones. But, this problem has been overcome by the
fact that 94 percent of the households in the United States today have telephones (U.S. Bureau of the Census, 1973). Thus, the technique has become very reliable for reaching a representative sample of any population.

Even though this technique is widely used, there is still some question as to whether it is the best technique for collecting data from specific populations, and whether it presents any special problems over other methods of collecting data. One study conducted by Theresa Rogers (1976) investigated these various questions.

Rogers conducted a study of New York residents to measure the effects of alternative interviewing strategies on the quality of response and on field performance. Data were collected from 95 White, 95 Black, and 57 Hispanic respondents, that were randomly assigned to be either interviewed by telephone or in person. The interview questionnaire was 35 pages long and consisted of both open and closed-ended items. One of the questions that the author was concerned with was whether the interviewer could ask complex questions and get the answers just as well on the telephone as in person.

The author found no statistically significant difference between the methods on an item-by-item comparison, and the results indicated that the quality of data obtained by telephone was comparable to that which was obtained through a personal interview. The author stated, "a comparison of interviewing methods from the perspective of field operations shows that the telephone is highly desirable. Response rates, ability to conduct a long interview (50 minutes), number of
contacts required, and suitable times for interviewing all compare favorably." The author further concluded that, "the interviewer's style whether judged "cool" (task-oriented) or "warm" (person-oriented) appears to intrude somewhat on the quality of response whether obtained in person or on the telephone, and the data suggest it may be less of a factor on the telephone."

In answering the question "do respondents have a preference for one or another interviewing strategy?" the author indicated 50 percent had no preference, 26 percent favored an interview in person, and the remaining 24 percent favored a telephone interview. Some of the reasons given for the preference were: telephone interview, "I don't open my door to no stranger," and personal interview, "I can understand and give better answers in person."

Some other interesting findings from this study were that the Black respondents were more likely than the other respondents to be indifferent to any of the interviewing methods, while the White respondents were more likely to prefer the telephone interview method. The older respondents were more likely to prefer a telephone interview over the other method. Respondents who worked parttime or fulltime did not indicate a preference for either interviewing method.

Hand delivery—self administered questionnaires. The process of delivering a questionnaire to the respondent's door and personally coming back to collect it when it has been completed, is a relatively new technique for collecting data from the general public. Since it is a new technique, there has been very little published (to this author's knowledge) on its effectiveness for producing valid and reliable data.
In the published reports found concerning this technique, Christopher Lovelock, and others (1976) attempted to evaluate the effectiveness of the Drop-off Questionnaire Delivery technique. Over a two-year period, the authors collaborated on three different research projects that dealt specifically with various aspects of the data collection method.

To the question of response rates and cost effectiveness, Lovelock discussed a study by Kaufman and Stiff, which compared three alternative questionnaire delivery methods in a suburb of Chicago. A random sample was selected to test each of the three methods: (1) a single questionnaire was mailed to each household, (2) two questionnaires were mailed to a single household with a request that they be completed by two adults, if possible, and (3) two questionnaires were delivered to a household, with the survey-taker briefly describing the survey, obtaining the subject's cooperation, and arranging to return in two days to collect the completed questionnaire.

The results of this experiment revealed that the two mailing approaches produced similar response rates; 34 percent from the single questionnaire household, with 38 percent of the twin questionnaire households responding. For the drop-off approach, 74 percent of the households responded, making it the most cost-effective approach, with an average cost of $0.87 per completed response.

As a result of the study, Lovelock indicated that by using personal delivery and collection in conjunction with detailed logsheets it was possible to identify three different categories of new respondents. The three categories were: (1) those households where no one can
be reached at home, (2) those households which are reached but decline to participate, and (3) those individuals who receive the questionnaire but fail to return it in any usable form. Of the total nonresponses in Lovelock's study, he reported they accounted for 36, 39, and 25 percent respectively for each of these categories.

Lovelock summed up his evaluation of the personal delivery and collection of self-administered questionnaire techniques by stating that, "the indications are that personal delivery by lightly-trained survey takers can be expected to yield higher response rates than mail delivery at competitive cost per completed response." He further stated that "another appealing aspect of this approach is the greater control it gives over sample design. It permitted tight, complete, and up-to-date identification of subjects outside the predefined locations as well as selective elimination of subjects outside the predefined sample frame on demographic behaviors, or object ownership criteria." Lovelock also felt that information such as respondent characteristics, attitudes toward the survey, and reasons for nonparticipation can be gained by this technique, through the use of logsheets, evaluation forms, and direct feedback from data collectors.

The other article that directly dealt with the hand-delivery self-administered questionnaire data collection technique was by Robert V. Stover and Walter J. Stone (1974). The authors conducted two surveys, one in Madison, Wisconsin and the other in Boulder, Colorado. The Madison survey employed two samples of 150 adults ages 21 years or older. One sample consisted of upper-middle-class residents while the other was
made up of working-class residents from the U.S. Census tract. The authors utilized a seventy-item questionnaire consisting of both closed-ended and open-ended questions.

Of the 239 respondents that were contacted and agreed to participate in the Madison survey, more than 70 percent completed the questionnaire by the agreed pick-up time. Useable questionnaires were obtained from 211 of the 239 respondents yielding a total response rate of 88 percent. The same basic data collection method was used in the Boulder survey, with one exception being each potential respondent received an advance letter in the mail informing the respondent of the upcoming survey. In this survey a total of 304 useable questionnaires were collected from 360 potential respondents, for an 84 percent response rate. The authors indicated that the technique of sending an advance letter may have been partially responsible for this study's superior response rate.

One of the most interesting points revealed as a result of these two studies was that "some respondents, when first contacted, thought they were about to be interviewed and refused on grounds that they did not have the time." The authors stated that, "when informed that they were only being asked to fill out a questionnaire at their convenience, most of these persons agreed to take part in the study."

The authors concluded that, "personal delivery of questionnaires may also be more valid than low-cost interviewing since inexperienced personnel probably introduce less error in the course of delivering questionnaires than while conducting interviews. They further indicated that some advantages of personal delivery over mailing is that
"warnings against receiving outside help can be made both orally and in writing" and "the person picking up the questionnaire may check with the respondent to make sure he has answered all the questions himself."

Mail questionnaire. The procedure of collecting information through the mail has been used for quite some time. According to Erdos (1970) this procedure can be traced back to 1577, when the King of Spain conducted a census of his new world possessions and used an official courier. Erdos considered this, in effect, a mail survey by official courier, since mail service in our sense was not, as yet, known. Today the mail survey is the technique employed by the U.S. Census Bureau as well as other governmental offices. The Bureau made extensive use of the mail technique in conducting the 1960 census. Erdos, provided an evaluation of the current mail technique from the U.S. Bureau of the Census:

Between 1960 and 1965, the Bureau made additional trial runs using the mail approach in four cities of varying sizes and a major metropolitan area -- results were gratifying. As a result of these pretests, the Bureau concluded that a census by mail was practical for most parts of the country and that the use of this method in the 1970 census would result in a better census than one taken by traditional methods, and including the nonrecurring cost of developing the new system, would cost less than the 1960 census when allowances were made for price and workload increases.

Probably one of the most attractive features of the mail technique is in its ability to reach large and/or specific groups in any part of the continental United States, as well as other non U.S. countries. Today, the U.S. postal service is effective in routing mail
to its assigned destination. According to Erdos, "there are no special problems in sending the mail to rural as well as highly urban homes, or different countries." The mail can be sent to all kinds of people as long as they have some place to be reached, that is recognizable by the U.S. postal department.

Even though the U.S. postal service may have some special requirements regarding the form of materials that can be sent through the mail, in a general mail survey, the researcher has a number of options available for the transmission of questionnaires, both those outgoing as well as those incoming. The primary options available to the general researcher are first class and bulk rate mailings. First class is more expensive, but it has been found to be more flexible and in some ways better in terms of response rate. However, the bulk rate option can be employed quite effectively in certain situations. And, if it's a question of speed, both first class and bulk rate mail seem to move through the system at the same rate of speed. (A more extensive discussion of the merits of these options will be covered later in this chapter.)

The final decision about the appropriateness of the mail questionnaire technique will depend upon the research problem, and its requirements in regard to (1) the type of information needed, (2) the type of respondents needed, and (3) the accessibility of the respondents.

The mail technique has been used to collect all types of information from the public regarding their attitudes, opinions, and behaviors as well as levels of general and specific knowledge. As was
indicated, the U.S. government makes extensive use of the mail to
gather information from the public regarding their attitudes and opin­
ions about governmental matters. Politicians make use of this method
to ascertain the opinions and wishes of their constituents regarding
major political decisions. This process is also employed today by
business and industry for gathering all types of information from con­
sumers and clients.

The mail technique can be used to collect information from almost
any respondent, even if they are geographically, widely dispersed. The
respondents can be of differing nationalities, races, sexes, and edu­
cational levels, social economic stages, as well as languages. The
only minimum necessities of the respondents are the ability to read
and write, and the willingness to answer and return the questionnaire.

Erdos (1970) provided the following ten (10) advantages that
the mail technique has over other techniques of data gathering:

(1) Wider distribution (i.e., geographic locations)
(2) Less distribution bias in connection with the neighborhood
(3) Less distribution bias in connection with the type of family
(4) Less distribution bias in connection with the individual
(5) No interviewer bias
(6) Better chance of truthful reply
(7) Better chance of thoughtful reply
(8) Time-saving (under certain circumstances)
(9) Centralized control
(10) Cost-saving, resulting in more flexibility per dollar spent
Probably the most widely echoed concern with the mail technique of data gathering is the question of what is an acceptable response rate for questionnaire studies. The question of nonrespondents is not an inherent problem to the mail data collection technique only. Erdos indicated this point when he stated, "many people using research fail to realize that this difficulty exists in connection with all types of data gathering, whether it be personal interviews, telephone interviews, or mail surveys." The question of what is an acceptable return rate for the mail data collection technique is still, today, somewhat unanswered.

While the question of what is an acceptable rate of response is somewhat dependent upon the purpose of the research study and the level of confidence that the researcher wants to have in the results, Babbie (1973) stated the following as some rules of thumb that might be followed in regard to acceptable response rates. "I feel that a response rate of at least 50 percent is adequate for analysis and reporting. A response rate of at least 50 percent is good. And a response rate of 70 percent or more is very good." Babbie concluded by pointing out that, "the reader should bear in mind, however, that these are only rough guides, they have no statistical basis, and a demonstrated lack of response bias is far more important than a high response rate."

The rules of thumb pointed out by Babbie, are also echoed by Erdos (1970) in terms of acceptable response rates when he stated, "today no responsible researcher would consider a return of less than 50 percent as very good, and returns of 75 percent and higher are not unusual."
Erdos goes on to conclude that "mail surveys, like other data gathering methods, can result in better than 80 percent response if proper care is given to the planning and execution of the survey and if the sponsor is willing to spend the time and money to get this high rate of response."

Since the validity of the mail data collection technique depends on achieving a high rate of response, the following section contains a review and synthesis of the literature concerning procedures for increasing the response rate to mail surveys.

**Procedures for Increasing the Response To Mail Surveys**

Since this research was primarily concerned with increasing the rate of response to school community surveys, an attempt was made to identify those techniques and procedures which have been experimentally shown to be effective in achieving this goal. Since one of the principal objections or criticisms of the mail data collection technique has been directed at its low rate of response, it was not surprising to find that a majority of those studies found in the literature were directed at the mail data collection technique. Very little research was found concerning techniques or procedures for increasing response rates to telephone or hand-delivery types of data collection techniques.

It was felt that by reviewing these techniques and incorporating the findings where applicable, each of the three data collection techniques employed in this research could be better evaluated for its
effectiveness in providing school decision makers with responses from their communities.

A number of techniques and procedures have been employed to motivate respondents to complete and return mail questionnaires. Primarily, these have been (1) the use of various forms of advance notification, (2) manipulation of the structure or content of the cover letter, (3) length of questionnaires, (4) use of various forms and types of premiums and/or incentives (5) types of postage, and (6) various types and numbers of follow-up.

**Advance Notification**

One of the approaches that is presently being employed to increase subject response to mail surveys is the advance notification form. Its use is based on the belief that if subjects have advance notification of being asked to participate in a study, the chances are greater that they will respond. The literature revealed a number of research studies that provide some experimental data on this hypothesis.

Ford (1967) in a community survey, found that the use of an advance notification letter significantly increased the number of returns from the experimental group over the control group. Similarly, in an automobile buyers survey conducted by Heaton (1965) the use of a preliminary letter more than doubled the rate of response. Stafford (1966) found that an advance telephone call produced a significantly higher response rate than an advance notification letter in his study. The only case in which the use of an advance notification letter was
not found to produce a significant increase in response rates was reported by Kephart and Bressler (1958) in their survey of nurses.

Cover Letter

Usually, the first item in the mailing that the subject reads is the cover letter. It serves both to introduce the survey, and to motivate a response. Considering its importance to the overall survey effort, it is not surprising to find considerable discussion in the literature as to its form and content. Primarily, researchers have been interested in trying to increase the response rates of mail surveys by experimenting with the cover letter in terms of personal versus impersonal greetings, the content of the letter, types and uses of postscript, types of signatures, letter printing, and the letter's length and letterhead.

Moore (1941) and Scott (1961) are just a few of the researchers who have investigated the question of whether a personalized letter would increase the response rates in mailed questionnaire surveys. In a study reported by Moore (1941) of 494 superintendents of schools in Colorado, Nebraska, Utah, and Wyoming, to evaluate courses offered to superintendents by institutions of higher education, half of the superintendents received a cover letter which had been personally typed, while the other half of the superintendents received the same letter in a nonpersonalized duplicated form. After the initial mailing, 62 percent of those superintendents receiving personally-typed letters had returned the questionnaire, while only 52 percent of the subjects receiving the duplicated letters returned the questionnaire. All
nonrespondents were mailed a follow-up (in duplicated form) resulting in an 81 percent return from the superintendents receiving personally-typed letters, compared to a 65 percent return from the other group. This difference was found to be significant.

Concerning the question of whether a personally-typed cover letter would bring a higher response rate than a form cover letter, studies by Simon (1967) and Andreasen (1970) indicated that there was no significant difference in return rate between the two methods. In a study by Martin and McConnell (1970) of a randomly selected group of 240 persons, which compared the effectiveness of a personally-typed cover letter with the same letter in mimeographed form, no significant difference between the response rates of the two groups was found.

Scott (1961) in a study of motorcycle owners, found no significant differences between printed and duplicated initial cover letters, follow-up letters, or questionnaires. Sample size, percentage of response, etc., were not reported in the study.

Linsky (1965) reported a study which included a handwritten salutation and signature on half of the cover letters to one group, and mimeographed salutation and signature to the other half. Questionnaires were returned significantly more often from the group that received the more personalized cover letters than those who received the mimeographed form. Unfortunately, there was no evidence as to whether this difference can be contributed to the signature alone or the handwritten salutation.

A nonrespondent's follow-up study by Clausen and Ford (1947) reported no significant differences among the response rates of four
groups which received follow-ups having varying degrees of personalization in the salutation and signatures. The different types of personalization included; (a) impersonal salutation, personal signature, (b) impersonal salutation, facsimile signature; (c) personal salutation, personal signature; and (d) personal salutation, facsimile signature.

Kawash and Aleamoni (1971) also found no significant differences in response rates from two groups of faculty members at the University of Illinois. In this study half of the cover letters accompanying the questionnaires were personally signed by the researcher conducting the study, while the other half of the cover letters had mimeographed signatures.

The use of various types of postscripts is also a factor that has been studied in the literature. Scott (1961) reported that Hoppe (1952) conducted an experiment involving the use of a postscript in the cover letter urging a reply. Both groups were urged to reply, but for one group, the postscript was handwritten. The response rate was 32 percent for the group receiving the handwritten postscript and 20 percent for the other.

Frazier and Bird (1958) reported a study conducted in two counties in Idaho to test the effectiveness of a handwritten postscript. Half of the respondents in each county received mimeographed cover letters with a handwritten signature, while the other half of the respondents received the same cover letter, but with a handwritten postscript requesting the respondent's cooperation. The questionnaires that were accompanied by letters with the postscripts were returned significantly more often.
There is some research evidence which indicates that type of sponsorship can affect motivation to respond. Scott (1961) found that persons were more likely to respond to a survey which was sponsored by the government. He compared the effects of three different types of sponsoring organizations — government, university, and commercial, in a radio and television survey. The same questionnaire and accompanying letter, differing only in sponsorship, were sent to three groups of approximately 1,000 persons each. Scott reported that after four weeks, and with the use of follow-up techniques, the response rate was significantly higher for the government-sponsored survey than for the other two. Erdos (1970) affirmed that the high prestige of an organization, in combination with other favorable factors, can result in an unusually high rate of response, even to a lengthy questionnaire.

Roeher (1963) reported on a study conducted to discover attitudes toward the physically handicapped. A sample of 400 persons (randomly chosen) from a group who had contributed to a Saskatchewan-wide appeal for funds for disabled persons was used. All factors in the mailing were kept constant except the signature on the cover letters. In three-fourth of the cover letters, "Director of Rehabilitation" was included after the signature, and no title after the signature for the remaining fourth of the letters. Fifty-five percent of the persons who received a letter with no identifying title responded, while 81 percent of those who received a letter with a title after the signature responded. There was no test of significance reported.

To dispel any feelings of uneasiness or threat that the respondent may experience, it has become standard survey practice to assure
anonymity of response. Erdos (1970) suggested that it is reassuring for respondents to be told that their replies will be used in statistical tables in combination with the answers of other respondents. Erdos also reported a respondent preference for the use of the word "confidential" rather than "anonymous". He reports on a study in which the same short questionnaire and accompanying letter, differing only in the use of these two words, were sent to two groups (N=250 each) of airline passengers. Results indicated a 6.8 percent higher response rate for the group who received the mailing using the word 'confidential'. (Response rates were 72.4 and 65.6, respectively.)

Scott (1961) reported on an experiment conducted by Hoppe (1952) to investigate the effect of respondent anonymity on response rates. In this study, postcard questionnaires were sent to motorists who had passed an observation point, asking age and sex of driver, number of passengers, and number of miles driven. While it was stated that all replies would be confidential, serial numbers were used for identification. However, in half the cases the serial numbers were written in invisible ink. The results indicated that there was no appreciable (significant) difference in response rates where invisible ink was used.

Discussion

While the experimental evidence did not indicate that the use of some form of advance notification increases the response rates to mail surveys, the evidence is still inconclusive as to which method is best. There seems to be some confusion as to whether a personally-typed cover letter is significantly better than a nonpersonalized version.
At best, the evidence is inconclusive. Similarly, there was no evidence that personalizing the salutation has produced a greater response rate in mail surveys. The question of whether to use a personal, handwritten signature or a simulated one is also unanswered. However, the one study reviewed indicated that use of the simulated signature is just as good as a personal handwritten type.

The literature did, however, provide some evidence that a handwritten postscript will significantly increase the mail response rate. The type of sponsorship noted on the cover letter has also been found to result in a higher increase in the rate of response. While the literature is unclear as to the relative advantage of the use of offering anonymity to respondents, some evidence is given for employing the term confidential. However, no conclusive evidence is provided for one over the other. It would seem that one of the best approaches regarding these various techniques would be to pretest each of them on a sample of the survey population before their inclusion.

**Questionnaire Length**

The literature did reveal considerable concern about the length of survey questionnaires and response rates. A number of researchers have indicated that a short questionnaire will usually receive a higher response rate. On the other hand, there are those who do not agree that this is always true.

Several studies which analyzed a large number of mail surveys have concluded that short questionnaires did elicit a higher response than longer ones. For example, Erdos reported on a comparison made of
the response rate of 330 separate studies and mail surveys conducted by his commercial market research organization. Of the mail surveys which were directed to subscribers, businessmen, professionals, consumers, and others, 116 surveys used one-page (one side) questionnaires, 140 used two-page (one leaf, two sides) questionnaires and 74 used four-page questionnaires. The median response rate (of all surveys using that particular type of questionnaire) was 63 percent, 56 percent, and 54 percent, respectively.

Other studies have found that increasing the length of the questionnaire did not result in an appreciable drop in response. Scott (1961) reported on an experiment he conducted on questionnaire length in a radio and television survey. He found no significant difference between the responses of two short questionnaires containing different questions and a longer one consisting of the combined two short questionnaires. The mean response rate of the two short ones was 90.5 percent, and for the longer one, 89.6 percent.

The National Education Study (1930) found no relationship between length and response for questionnaires between 6 and 100 items in length. A study by Clausen and Ford (1947) found that the addition of one or two pages of supplementary questions did not appreciably affect responses to a three-to-six page questionnaire. In another study, Sletto (1940) found no appreciable difference when he compared the response rate of 300 college alumni to questionnaires of 10, 25, and 35 pages. The longer questionnaire which combined the two shorter ones had a response rate of 63 percent, and the two shorter ones, 68 percent and 30 percent.
Champion and Sear (1969) conducted a study with a questionnaire that had a fixed number of items and divided it up into three different forms: three, six, and nine pages each. They found that in both the initial mailing and the follow-up, the six and nine page questionnaires were returned more frequently. The difference in response rates between the longer questionnaires and the three-page one were statistically significant. A total of 900 respondents in each group received the questionnaire. There was no significant difference in the response rates between the six and nine page questionnaires.

In addition, Ford (1967) tested the effects of a printed, folder type questionnaire versus a simple, mimeographed type, and the results revealed no significant difference between the two forms of the questionnaire.

Discussion

The results of the literature search appeared to indicate that the old criticisms against using long questionnaires are not valid. From the evidence provided by those researchers that have conducted experimental studies concerning the relationship between response rate and questionnaire length, the shorter questionnaire does not significantly increase response rates more than longer ones. In fact, the questionnaire's length has very little to do with completion rates, as long as other tested techniques for improving response rates are employed.

Finally, research findings concerning the effectiveness of various forms of printed questionnaires and questionnaires printed with
different colors of paper is inconclusive at this point. Again, the practice of extensive, pretesting is advisable.

**Premiums and/or Inducements**

The use of such incentives as money and other premiums have been found to be one of the most effective methods for increasing the response rates in mail surveys. However, most of the research concerning incentives have been directed at finding out which types of incentives produce the best response rates.

Kephart and Bressler (1958) tested the relative effects of different coins including a penny, nickel, dime, and quarter, on a population of graduate nurses. The larger coin was found to be more effective in eliciting response. Erdos (1970) found that an enclosed dollar bill was even more effective than a quarter. He stated, "money seems to be the most effective and least biasing incentive, the easiest to obtain, and the most useful to recipients."

In a study reported by Maloney (1954) one group of 74 received 25¢ in the initial mailing, while the other 74 persons received no money in the initial mailing. The response rate from the first group was 86% and from the second group, 58%. No statistical tests were reported as to the significance level of the difference. Also, there may be some confounding effects due to the differential follow-up procedures used.

It should be noted that not all of the incentives offered to get respondents to return questionnaires have been coins. Erdos (1948) used war savings stamps as incentives in a survey conducted during the
last months of World War II. Samples were chosen from among the persons who had responded to advertisements in a national magazine. One of the groups received a 10¢ war stamp with their questionnaires, another group received a 25¢ war stamp, and the third group received a 50¢ war stamp. It was reported that the groups receiving the 25¢ and 50¢ war stamps had approximately equal response rates, but the 10¢ stamp group had a definitely lower response rate.

Pucel (1970) tested the effects of various types of small incentives in combination with the use of multiple incentives in a first-year follow-up field test of approximately 1,100 post high school vocational graduates. The incentives included an inscribed golf pencil, a cup-size packet of coffee, a colored questionnaire, and a pre-letter. Of the various subgroups, one control group received no incentives and the others received one, two, and three incentives, respectively. Results of the study reported for the initial mailing with no reminders, found the percent of response lowest for the control group and an increasing response associated with the number of incentives offered.

Brennan (1958) used trading stamps in his study of 456 randomly selected households. A two-page questionnaire and 50 trading stamps were mailed to 235 of the households, with only the questionnaire mailed to the remaining 221 households. The results indicated a 29% response rate for the first group and a 22% response rate from the households receiving only the questionnaire. No other statistics were reported.

Discussion

The evidence that premiums do improve response rates in mail surveys is quite conclusive. Various amounts of money have been found to
provide the greatest amount of returns. Quarters and dollars are the most successful incentives reported. Smaller amounts seem to still be more effective than nothing at all. Also, other types of premiums, such as trading stamps, pens, and coupons have resulted in greater response rates. It seems that if it is at all possible, some form of premium should be included in the original mailing to provide an incentive for respondents to complete and return the questionnaires. Again, money produces the best results. Since the evidence indicates that the use of premiums works equally well in increasing the returns from follow-up mailings, this may be a good way of getting nonrespondents to return their follow-up questionnaires. As always, the use of any knowledge about the specific populations under study can be helpful in determining to some extent what premiums will work best.

**Postage**

There is some research evidence which suggests that respondent motivation may be influenced by the type of postage used. In the radio and television inquiry, Scott (1961) reported a small but significant difference in favor of stamped versus a metered envelope. In a study of the effects of varying types of motivating factors, Kephart and Bressler (1958) found that air mail and special delivery stamps were effective in increasing responses.

Hammond (1959) provided support for this point from the results of a study he conducted. The study consisted of two groups of more than 1,000 subjects in each group. The two groups received the same questionnaire and cover letter. One group received a business reply
envelope, while the other received a stamped return envelope. Response rates for the first group (business reply envelope), were 33 percent with response rates of 42 percent from the group receiving the stamped return envelope. Hammond, reported the difference in response rates as being significant at the .001 level.

Gullahorn and Gullahorn (1963) reported finding a significant difference in response rates from their study of Fulbright and Smith-Mundt grantees. Half of the subjects received a business reply return envelope and the other half received a stamped, return envelope.

The question of effect of postage on response rates was also researched in a study conducted by Martin and McConnell (1970). The authors mailed questionnaires to 240 persons randomly selected from the Spokane, WA. telephone directory. Half of the sample received the questionnaire with a return envelope with franking, and the other half received return envelopes with a commemorative stamp affixed. The authors reported a significant difference in response rates from the group receiving the commemorative stamp.

Two studies by Gullahorn (1963) and Gullahorn (1959) provided some data concerning the different classes of mailing procedures. In one study they tested whether first class mail would have greater response than third class mail. They reported results indicating a small but significant difference in favor of the first class mail. In their study of return envelopes, a significant increase in response rate was found when special delivery return envelopes were compared with first class mail return envelopes.
Follow-Up

There is unanimous agreement that follow-up mailings are highly effective for increasing response rates to mail surveys. However, there is little agreement among researchers, as to the number, or timing of follow-up, which will generate the highest response rates.

Bressler and Kephart (1958) concluded that from their study, the follow-up was the most economical, most effective way to increase response rates in mailed questionnaire surveys.

In a survey of the British general adult population, reported by Scott (1961), one subsample received a follow-up soon after the questionnaire was mailed and another reminder after two weeks, while the other subsample received only the final reminder after two weeks. The response rate reported for the first group was 93.2 percent and 85.9 percent for the second group. The difference of 7.3 percent was significant.

One study by Nichols and Meyer (1966) provided some data to the question concerning the timing of follow-up mailings and response rates. The results of their study of students indicated that a follow-up reminder mailed three days after the questionnaire, was just as effective in increasing the rate of response as a card mailed 16 days after the original mailing.

Sirken, Pifer, and Brown (1960) in a survey of physicians, varied the type of follow-up for each group. They reported that a certified mail follow-up with one group yielded an additional 32 percent return, whereas a regular mail follow-up yielded only an additional 21 percent return.
Discussion

Based on the evidence from the literature search concerning the use of stamps versus metered envelopes, it seems that the use of stamps will, indeed, improve the amount of returns. It also, appears that the use of stamps on follow-up return envelopes also produces significant increases in returns. Special delivery class mailing seems to produce better results than air mail or regular class mailings. In addition, first class mail is better than either third class or bulk rate mail. There is some evidence that certified mail can also increase the rate of returns.

The belief that follow-up mailings are highly effective for increasing response rates is documented in the literature. The evidence is quite conclusive that some form of follow-up, whether it is postcards, letters, and/or telephone calls, should be used for increasing the rate of returned questionnaires. However, evidence is still inconclusive as to whether the much less expensive postcard follow-up is as effective as the follow-up letter with another questionnaire enclosed.

The literature provided no scientific guidelines to follow in planning the number or timing of follow-ups, which would generate the highest response rates. The number of follow-up mailings depends to a great extent, on the time and cost constraints of the survey along with the specific needs for obtaining a high rate of response.

Race of Interviewer Effects on Response Rates

Although none of the techniques evaluated in this research was of the personal interview type, two of the techniques did involve either
direct or indirect contact between the survey director and the respondents. Since one of the major concerns in this research was whether the race of the survey director has any biasing effects on the response rates of the data collection techniques, an effort was made to review recent literature concerning this question.

A number of studies (Hyman (1954), Williams (1964), and Athey (1966)) in the past has been concerned with race-of-interviewer effects on respondents. However, the majority of these studies has been only concerned with what the effects were of White interviewers on Black respondents. In general, most of these studies investigated the effects of White interviewers on Black respondents, by examining responses to those questionnaire items that dealt specifically with opinions concerning racial issues. Also, the studies were conducted at times and in areas where there was an obvious increase in racial tension between the races.

For example, Schuman and Converse (1971) conducted a study to examine the race-of-interviewer effects in terms of two concerns: (1) the type of question most affected and (2) the type of respondent most affected. A representative Black sample in a major northern city was drawn one year after the urban riots of 1967. They employed both Black and White middle-class men and women as interviewers. The results of their study indicated that race-of-interviewer effects were found across fifteen questions that concerned, overt hostility toward Whites, suspicion of Whites, and/or identification with Black militancy. The results further indicated that those questions concerning matters of personal and family background, general living
conditions, and even social status, revealed no significant race-of-interviewer effects.

A study by Hatchett and Schuman (1976) concerned the effect of race-of-interviewer on 106 white Detroit residents. The respondents were personally interviewed by nine Black and seven White interviewers, with 55 of the sample being interviewed by Black interviewers and 53 by White interviewers. Again, the major comparisons for the effects of the race of the interviewer were made across four items in the questionnaire that dealt with racial attitudes.

The results of this study also indicated that the race of the interviewer affects the quality of responses. The respondents tended to provide more liberal or favorable opinions when the race of the interviewer was different than their own. One interesting finding from this study was that the White respondents having more education seemed to be more sensitive to the race of the interviewer. The authors indicated that this has been found to be directly opposite of those studies of Black respondents. That is, the lower-educated Blacks tended to be more sensitive to the race of the interviewer. However, there was no conclusive evidence to indicate what the reasons were for this pattern.

The authors concluded that, "the process for both races seems to be one of avoiding responses that might offend the interviewer of the "opposing" race, and of being frank (or at least franker) with interviewers of one's own race." At most, there seemed to be an effort on the part of both races of respondents to try and diminish the amount of tension when the interviewer was of the opposite race.
Even though the results of the studies conducted have indicated that the race of the interviewer does have some biasing effects on the quality of responses, there is, as of yet, no conclusive evidence that the race of the interviewer has affected the rate of responses. In the Schuman and Converse study, they indicated that there was a slightly higher response rate from the Black respondents. However, they indicated that this difference was probably not due to any race-of-interviewer effect and attribute the difference to the fact that student interviewers usually achieve a lower response rate than professional interviewers do.

The authors stated, "we believe that at least in 1968, equally trained Black and White interviewing staffs would have produced quite similar response rates in a metropolitan area such as Detroit." They further concluded, "in general, we suspect that any problem regarding response rate today has more to do with White reluctance to enter Black areas than to Black reluctance to be interviewed by Whites."

Summary

The evidence resulting from the review of the literature indicated that even though there are some school systems that collect information from their publics, some of the methods and techniques used may not be providing them with data that can be considered valid and reliable in a scientific sense. There is also some evidence that school systems may not be ascertaining the opinions and attitudes of all segments of their communities by virtue of the methods and procedures that they are employing.
Concerning the three techniques of data collection, the literature indicated that each can be employed to collect data from community residents regarding their opinions and attitudes concerning the local educational system. However, the one question that the literature did not answer, which this research attempted to answer, was which of the three techniques would produce the highest response rate for this specific population?

The literature indicated that there are a number of techniques which have been experimentally found to significantly increase the rate of questionnaire returns. Among these are some form of advance notification, handwritten postscripts, providing monetary incentives, types of sponsorships, and various kinds of special mailing techniques. Some other factors which survey practitioners consider important are contents of the cover letter, follow-up communications, and enclosing stamped, addressed return envelopes. Other techniques which have been highly recommended by practitioners, but, have not as of yet been supported by research evidence include, printing of questionnaires, color of questionnaires, and various types of personalization of the salutation on cover letters.

While there is some experimental research being conducted on almost all phases of surveys, a large percentage of the findings is still inconclusive, and thus, prohibit one from generalizing their findings to all populations and research situations. Further experimental research is needed concerning a number of the various techniques used for increasing response rates.
However, it was concluded, based on the review of the literature, that a number of these techniques can be employed to increase the effectiveness of each of the three data collection techniques employed in this research.

The results of the reviews of those studies concerning the effects of the interviewers race on responses, together with the findings from other studies not included here, have all indicated that the race of the interviewer may have some effects, in certain cases, on the quality of responses. However, none of the major studies has found any conclusive evidence that race-of-interviewer affects response rates. The effects of the interviewer's race have been found to only produce biases in responses to those items that concern highly threatening racial issues.

Since the questionnaire used in this study was concerned with general attitudes toward the local educational system, the race-of-interviewer was not expected to bias the responses. The major concern was to determine whether the race of the survey director affects the rate of response among any of the data collection techniques.
CHAPTER III

METHODOLOGY

The objective of this research was to investigate the effects of race of subjects, race of survey director and data collection techniques on the response rates of inner-city Black and White residents. This chapter identifies the methods and procedures employed to collect and analyze the data necessary to achieve this objective. More specifically, a discussion of (1) the research design, (2) research population and sample, (3) independent variables, (4) questionnaire construction, (5) data collection activities, and (6) statistical treatment of the data are included in this chapter.

Research Design

In order to test the research hypotheses posed in Chapter I, this research utilized a 3 x 2 x 2 factorial design shown in Figure 1. According to Kerlinger (1973, p. 351), a "factorial design is the structure of research in which two or more independent variables are juxtaposed in order to study their independent and interactive effects on the independent variable".

The independent variables studied in this research were: (A) data collection techniques (mail questionnaire, telephone interviews, and hand-delivery questionnaire), (B) race of survey director (interviewer/deliverer (Black and White)), and (C) race of subjects (Black and White). The effects of these three independent variables, singly and
in combination, on the dependent variable, rate of response, were examined.

<table>
<thead>
<tr>
<th>Data Collection Techniques</th>
<th>Race of Subjects</th>
<th>Survey Director</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black (B1)</td>
<td>White (B2)</td>
</tr>
<tr>
<td></td>
<td>Black (C1)</td>
<td>White (C2)</td>
</tr>
<tr>
<td>Mail Survey (A1)</td>
<td>A1 B1 C1</td>
<td>A1 B1 C2</td>
</tr>
<tr>
<td>Telephone Interview (A2)</td>
<td>A2 B1 C1</td>
<td>A2 B1 C2</td>
</tr>
<tr>
<td>Hand-Delivery (A3)</td>
<td>A3 B1 C1</td>
<td>A3 B1 C2</td>
</tr>
</tbody>
</table>

Figure 1
Research Design and Treatment Groups

Research Population and Sample

All of the voting wards in the inner-city of Columbus, Ohio were examined to obtain estimates of the percentages of Black and White registered voters. Two of the wards, one predominantly Black and the other predominantly White, were chosen to serve as the sampling frame. This was done solely to facilitate the drawing of a systematic sample from each ward.

There were approximately 360 registered voters listed in an ordered form for each ward. A systematic sample of size 90 was selected from each ward by picking a random starting point between the first and fourth registered voter, and then selecting every fourth registered voter after that. That is, the registered voting lists were \( N = nk \) voters long where \( N \) represented the total number of voters in each ward, \( n \) = the required sample size, and \( k \) was equal to four.
**Data Collection Techniques**

*(Independent Variable)*

A two-page questionnaire was utilized in the evaluation of the three data collection techniques (mail questionnaire, telephone interview, and hand-delivery questionnaire) evaluated in this research. Each data collection technique was tested under the following conditions:

**Mail.** A list was compiled containing the names and addresses of each subject randomly assigned to receive the questionnaire in the mail. From this list each subject was mailed a stamped packet containing the questionnaire, cover letter, and a stamped return envelope. The cover letter was printed on letterhead stationery from the College of Education, Faculty of Educational Foundations and Research at The Ohio State University, and explained the specific purpose of the research and emphasized its significance. The cover letter also stressed the importance of each subject's response to the research. The subjects were provided an assurance of anonymity. A research log was kept concerning the date the first questionnaire packets were mailed, the date of the first returns, and date of follow-ups attempted.

**Telephone Interviews.** The telephone interviews were conducted by both Black and White female interviewers (representing the two survey directors). A training session was conducted for both interviewers concerning how to introduce the study, how to use the questionnaire, and how to record the responses. Each interviewer noted on the questionnaire, the amount of time spent on the interview, whether the interview was completed, and reason(s) given by the
respondent for not participating or completing the interview. Each of the interviewers received a list containing the subject's name and telephone number. They were not informed as to the race of the particular subjects. The number of calls (follow-ups) made to each subject was also noted by the interviewer.

Hand-Delivery. Black and White females (representing the two survey directors) were employed to deliver the questionnaire to the subjects. Both participated in a training session consisting of procedures on how to introduce themselves and the study, as well as how to establish a date/time for picking up the completed instrument. They were provided with a list containing the names of the subjects and their addresses, again having no indication as to the race of the subjects. A detailed log was kept by each deliverer concerning whether they were able to deliver the questionnaire and if not, the reason(s). The number of follow-ups required to deliver and to pick up the questionnaire was also recorded.

Race of Survey Directors
(Independent Variable)

One of the concerns of this research was to determine if the race of the survey director had an effect on the response rates across the three data collection techniques. Only one of the data collection techniques (hand-delivery) required face-to-face contact between the subjects and the deliverer, thus clearly indicating the race of the particular deliverer to the subject.

It was assumed that a subject could determine the race of the interviewer in the telephone interview technique. Therefore, an attempt
was made to balance this effect in the mail questionnaire by employing two different names of survey directors in all correspondence with subjects. Two names were chosen for the survey directors which, it was believed, would serve as an indication of the race of the survey director. A study by Scott (1961) indicated that subjects do, in fact, notice who sponsors a study and, thus, this may have the same effect on participation as would the face-to-face contact of the hand-delivery technique.

The two names were Sam S. Johnson, representing the Black survey director, and Alexander VanVoorkis, as the White survey director of the study. The names were fictitious, and did not represent anyone known by the researcher.

The survey director's name was used in all correspondence with subjects assigned to that treatment group. In other words, a White subject who had been randomly assigned to receive a questionnaire in the mail by a Black survey director, received an advance notice postcard and cover letter signed by the psuedo name of the Black survey director, Sam S. Johnson. All follow-up materials were also signed by the same survey director.

**Questionnaire Construction**

The questionnaire employed in this research was designed and tested specifically for collecting information about the general concerns of any school system from that school system's residents. The construction of this questionnaire was guided by consultations with various social scientists, educational specialists, and a review of pertinent literature.
The resulting information from these discussions was listed and categorized into subject areas which were relevant to the public information needs of school decision makers. The categories included the following subjects or topic areas: community opinions concerning the local community, its officials and services, community opinions concerning the local public schools, community opinions concerning school budget expenditures, and opinions concerning major problems in education. Each of these four subject areas was used to formulate the questions included in the final questionnaire.

A survey of Ohio school district superintendents conducted by Ransom (1974) served as the formative evaluation of the proposed questionnaire. In addition to a request for information as to needs for, and perceived needs of, information from their publics, the superintendents were also requested to review and give their comments and/or evaluation of the questionnaire's construction and overall objectives. The purpose of this request was to solicit information from the respondents in order to determine whether the questions being asked in the questionnaire were relevant to the information needs of school decision makers. They were also asked to identify areas of concern which may have been overlooked in the design of the instrument along with information pertaining to the questionnaire's layout, design, and the wording of the questions.

A number of the comments received from the respondents indicated that they most certainly needed such an instrument, and that the proposed questionnaire would provide community feedback that they needed to aid decision making. Concerning the questionnaire, one respondent stated, "I filled out the form to help me get a feel for it --
conclusions — fine job as a survey instrument." Another respondent commented by stating, "In response to your request for my reaction to your proposed community survey, let me speak affirmatively ... I feel it is a good statement of your purpose and a very comprehensive opinionnaire ... the resulting data should prove very interesting."

The single general criticism concerning the relevance of the questionnaire came from a decision maker from a rural school district. The respondent simply stated that the questions were not relevant to rural school districts without an explanation.

Data Collection

The procedures employed for distributing the questionnaire to subjects and the general sequence of activities during the study are discussed in this section.

Advance Notice

All Ss (n = 180) were mailed an advance postcard approximately four days prior to the beginning of data collection, informing them that they had been selected to participate in an important survey of Columbus residents' opinions and feelings concerning the local public school system (App. B). The postcard informed the subjects that in a few days they would be contacted or would receive a short questionnaire which would only take a few minutes to complete. This postcard stressed the importance of their participation and was personally signed by the survey director.

Mail Questionnaire. The initial mail questionnaire packets containing a cover letter, questionnaire, and stamped, addressed, return
envelope were mailed first class early in January, 1979, to the Black and White subjects randomly assigned to the mail data collection technique. The cover letter was printed on letterhead stationery from the Faculty of Educational Foundations and Research, and explained the specific purpose of the survey (App. C). The letter also contained an assurance of confidentiality and the announcement of a deadline date for return. In addition, a 25 cent premium was taped to each cover letter, with a postscript stating that the premium was not meant to be in payment for their valuable time, but only a token of the survey director's appreciation for their kind cooperation.

Approximately two weeks later, a follow-up packet was sent by first class mail to all nonrespondents. This follow-up packet contained another copy of the questionnaire, a cover letter, and stamped, addressed return envelope. This cover letter was slightly different than the first (App. C). While it again explained the specific purpose and emphasized the significance of their response to the study with an assurance of confidentiality, no return deadline date was given.

**Hand-Delivery**

At the same time the mail questionnaires were distributed, in early January, 1979, Black and White female deliverers began delivering the questionnaires to those subjects who had been randomly assigned to the hand-delivery data collection technique. Each deliverer received a set of 3 x 5 cards (15 Black subjects and 15 White subjects each) containing the subjects' addresses along with a survey packet for each. The survey packet contained a cover letter, questionnaire,
and a plastic envelope for placing the completed questionnaire on the outside doorknob for pick up by the deliverer.

This cover letter, also printed on letterhead stationery (App. C) explained the purpose of the study and the importance of participation. Assurance of confidentiality was also given. It was indicated to the subjects that they should use the enclosed plastic envelope for their completed questionnaire to be picked up by the deliverers if they did not want to be disturbed or were not going to be home at the time of pick up. Also, a 25 cent premium was taped to the cover letter with the same postscript used on the cover letter for the mail data collection technique.

The deliverers were instructed to make contact with the subject and briefly introduce themselves and explain the purpose of the study. In addition, they noted the plastic enclosed envelope and established a time to pick up the completed questionnaire. In those cases where the deliverers did not make contact with an adult (18 years old and over) member of the family, they inquired as to when the best time would be to contact them. If a subject could not be reached at this time, a second attempt was made to deliver the survey packet two days later. If a subject still could not be reached, a final attempt was made before the subject was considered a nonrespondent.

For the hand-delivery data collection technique, a follow-up was determined as being any time a deliverer had to return to pick up the questionnaire other than on the preestablished date/time. If a subject had agreed to complete and return the questionnaire (either by personal contact or by leaving it on the door) by a certain date but
had failed to do so, the next attempt was considered a follow-up. The
questionnaire deliverers were instructed to complete two follow-up at-
ttempts before the subject was considered a nonrespondent. Also, on
each follow-up where contact was made, the deliverer offered to leave
another copy of the questionnaire in case the subject had misplaced
the first one.

Telephone Interviews

Subjects who were randomly assigned to the telephone interview
data collection technique were also contacted early in January, 1979.
Subjects were contacted between the hours of 6:00PM and 8:30PM on all
days except Sunday. Each interviewer was provided with a questionnaire
containing the identification code number and telephone number of each
subject (15 Black subjects and 15 White subjects). Once contact had
been made with an adult member of the family, (interviewers were in-
structed to ask to speak to an adult if the telephone was answered by
a child) the interviewers would briefly introduce themselves and the
purpose of their call by reading a prepared introduction (App. A).

The questionnaire employed in the telephone interview (App. A)
was identical to the content of the questionnaire employed in the other
two data collection techniques. However, it was slightly altered in
terms of structure to better facilitate a response on the telephone.
Those cases where a subject could not be reached after three attempts
or where the interviewer was requested to call back were considered
and recorded as follow-ups. For those cases where no one would answer
the telephone on two attempts at approximately the same time of day,
the third attempt was conducted at a different hour (e.g., if no contact
at either time between 6:00PM and 8:30PM, then the third attempt was conducted at either morning or early afternoon). Three attempts were made before a subject was considered a nonrespondent. The final cut-off for accepting all returns was February 2, 1979.

Replacement of Subjects

Since it was possible that some subjects listed in the Columbus registered voter's records may have moved, disconnected their telephones, or died, it was recognized that there would be a problem with questionnaires being returned as undeliverable or telephones being disconnected. For these possibilities, a pool of replacement names, addresses, and telephone numbers was maintained. This list was divided and maintained by subject race. Approximately 10 to 12 subjects (both Black and White) could not be reached across the three data collection techniques. These included undeliverable mailings returned by the post office, houses either vacant or completely removed, or telephones disconnected. In these cases replacements were drawn randomly and assigned to the treatment cells from which each no-contact came by use of a random numbers table. These subjects were contacted in the same manner as those original subjects.

Processing of Returns

All returns were recorded on a master list as they were received. It should be noted that for those subjects randomly assigned to the mail data collection technique, a marking procedure (although they were supposedly confidential) was employed so that nonrespondents could be identified and mailed a follow-up. However, after returns had been
checked off, all forms of identification were removed so that none of the actual responses could be traced to a particular respondent.

All returns were reviewed for completeness as they came in both from the mail, the survey interviewers, and hand-deliverers. For this study, since individual item response was not the major concern, any questionnaire returned having 50 percent or more of the items completed was counted as a useable response. After this review, questionnaires were coded by identification numbers according to the treatment cell in which they were assigned, and then all data were coded and keypunched. All forced-choice types of item (closed-ended) responses were coded first. Open-ended responses were categorized first and then coded along with the remaining data.

Statistical Treatment of the Data

A regression analysis was used to analyze the data in order to test the four hypotheses of this experiment. The stepwise multiple correlation program, BMDP2R, Dixon (1977), and the Amdahl 470V/6 computer at the Instructional and Research Computer Center (IRCC), Ohio State University, were employed to perform the analysis.

Each of the three categorical independent variables (A, B, C), were coded separately by using values 1, 0, -1. For each independent variable, it was necessary to create a number of coded vectors which was equal to the number of levels in the variable minus one. Thus, independent variable A (data collection technique) was represented by two vectors. In vector 1, subjects receiving the mail questionnaire were assigned 1's, subjects in the telephone interview treatment were assigned
0's, and subjects receiving the hand-delivery questionnaire were assigned -1's.

The second vector of independent variable A, was created by assigning 0's, 1's, and -1's to subjects in the mail questionnaire, telephone interview, and hand-delivery questionnaire treatments, respectively. This coding procedure is referred to as effect coding, Kerlinger and Pedhauzur (1973).

The other two independent variables representing race of survey director, B, and race of subjects, C, required one vector for each (number of levels minus one) independent variable. Vectors 3 and 4 were created by assigning 0's and 1's to the two races (Black and White) of each of these independent variables.

Thus, four vectors were created to represent the main effects of the three independent variables. The vectors for the first-order interactions were obtained by cross multiplying, in succession, each coded vector of one independent variable, by each of the coded vectors of the other independent variables. That is, 1 x 3, 1 x 4, 2 x 3, 2 x 4, and 3 x 4. For the dependent variable (response or nonresponse), the subjects were assigned numbers 1 and 0 respectively. The coding of the independent variables for the regression analysis are contained in Table 1.

In the regression analysis, the order of entry of the independent variables (vectors) into the regression equation was specified so that the first four vectors representing the main effects were entered first. That is, they were forced into the regression equation such that the dependent variable, Y, was regressed on vectors 1 through 4. Then the
first-order interaction vectors were entered into the regression to evaluate the statistical significance of the proportion of variances they added to the regression equation. The level of significance was set at the .05 level.

**TABLE 1**
CODING OF THE INDEPENDENT VARIABLES FOR 3 x 2 x 2 DESIGN

<table>
<thead>
<tr>
<th>Cells (Treatment Groups)</th>
<th>Data Collection Techniques</th>
<th>Race Survey Director</th>
<th>Race Subjects</th>
<th>First Order Interaction Vectors</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>n A₁ A₂ B C A₁XB A₁XC A₂XB A₂XC BXC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A₁ B₁ C₁</td>
<td>15 1 0 1 0 0 0 0 0 0</td>
<td></td>
<td></td>
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<tr>
<td>A₃ B₁ C₁</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A₁ B₂ C₁</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<tr>
<td>A₁ B₁ C₂</td>
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<tr>
<td>A₃ B₂ C₂</td>
<td>15 -1 -1 0 1 0 -1 0 -1 0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cost and Quality Analyses

In an effort to aid local school decision makers in their selection of the most appropriate data collection technique for their needs, two additional analyses were performed. First, a comparison of the cost per subject contacted and the cost per response was made for each of the different data collection techniques. Initial determinations of costs were conducted by the following procedures (a) totaling postal, material, production, and labor charges for each of the data collection techniques, (b) multiplying that cost by the number of subjects contacted by each technique, and (c) dividing this cost by the number of returns received for that data collection technique. Second, an attempt was made to try and make some qualitative assessments between the number and types of responses received across data collection techniques. Analyses were performed by comparing the responses to selected items by data collection techniques.

Summary

This chapter established the procedures and methodologies employed to carry out the research reported in this document. The first section explained the research design employed for this experimental study. The second section explained the three types of data collection techniques tested in the study. The third section provided an account of the general sequence of experimental activities carried out in the study. The final section examined the statistical procedures that were employed to analyze the data. The results of all analysis are reported in the following chapter.
CHAPTER IV
RESEARCH RESULTS

The primary objective of this research was to investigate the effects of race of subjects, race of survey director and data collection techniques on the response rates of inner-city Black and White residents. The results of the analysis of data are presented in this chapter according to the hypotheses tested. Also, the findings relative to the quality of the information collected by the three data collection techniques and the relative costs of the three techniques are presented.

A stepwise regression analysis was performed in order to test the four hypotheses of this experiment. As outlined in the previous chapter, three of the hypotheses focused on studying the main effects of the independent variables; data collection techniques (A), race of survey director (B), and race of subjects (C) on the dependent variable, rate of response. The fourth hypothesis was an evaluation of the first-order interactions of the independent variables.

The regression analysis consisted of forcing the four vectors representing the independent variables (A, B, and C) into the regression solution. That is, the order of entry was specified so that the main effects entered first, followed by a stepwise procedure for the vectors representing the first-order interactions. The criterion for entry of an interaction vector was that its increment in proportion of variance added to the regression solution must be statistically significant at the .05 level. The regression procedure was terminated when the
increment failed to attain the specified significance. (Table 3 represents only those vectors that entered the regression solution. The other four interaction vectors did not meet the criterion for entry.)

Hypothesis One:

Hₐ: There will be no significant differences between the response rates to the mail questionnaire, telephone interview, and hand-delivery data collection techniques.

Hₐ: The response rate of the hand-delivery data collection technique will be significantly higher than the response rates to the mail questionnaire or telephone interview data collection techniques.

The overall proportion of returns obtained across the three data collection techniques was .62. An examination of the data in Table 2 indicated that the highest rate of return (.77) was obtained by the telephone interview. The hand-delivery data collection technique followed with a proportion of .65 returns and the mail questionnaire had the lowest proportion of returns, .45.

Table 2

Proportion of Returns Across the Three Data Collection Techniques

<table>
<thead>
<tr>
<th>Data Collection Techniques</th>
<th>n</th>
<th>f</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mail Questionnaire</td>
<td>60</td>
<td>27</td>
<td>.45</td>
</tr>
<tr>
<td>Telephone Interview</td>
<td>60</td>
<td>46</td>
<td>.77</td>
</tr>
<tr>
<td>Hand-Delivery Questionnaire</td>
<td>60</td>
<td>39</td>
<td>.65</td>
</tr>
</tbody>
</table>

n = sample size; f = number of returns
An examination of Table 3 indicated that the proportion of variance accounted for by independent variable A, data collection techniques, was .0727. This yielded an F ratio of 7.00 which was significant at the .01 level. Therefore, there was a statistically significant difference between the return rates of the data collection techniques.

Independent variable A, data collection techniques, was represented in the regression analysis by two coded vectors (effect coding). The proportion of variance and regression sum of squares were calculated for each vector. As shown in Table 3, both vectors were found to be statistically significant. Vector 1 with an obtained $F = 5.47$ (df = 1, 174) was significant at the .05 level and vector two with an obtained $F = 8.53$ (df = 1, 174) was significant at the .01 level.

Post hoc comparisons using the Scheffe method were made between individual mean proportions of the three data collection techniques. These contrasts found both the hand-delivery questionnaire and telephone interview techniques obtained significantly higher response rates than the mail questionnaire. ($p < .05, \ D = .32 > S = .21, \ df = 2, 174$) Kerlinger and Pedhazur (1973). However, there was no significant difference between the rates of response of the hand-delivery questionnaire and the telephone interview.

Therefore, the null hypothesis was rejected in favor of a partial alternative hypothesis that the hand-delivered questionnaire had a significantly higher response rate than the mail questionnaire. Additionally, it was found that the telephone interview yielded a significantly higher response rate than the mail questionnaire. There was no significant difference between the telephone interview and the hand-delivered questionnaire.
Table 3

Summary of Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Proportion of Variance</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Regression</td>
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<td>4.0871</td>
<td>.8174</td>
<td>3.72</td>
<td>.01</td>
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</tr>
<tr>
<td>Due to Vector 2</td>
<td>1</td>
<td>.0443</td>
<td>1.8743</td>
<td>1.8743</td>
<td>8.53</td>
<td>.01</td>
</tr>
<tr>
<td>Factor B</td>
<td>1</td>
<td>.0000</td>
<td>.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor C</td>
<td>1</td>
<td>.0000</td>
<td>.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Order Inter-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>action Vector (A x B)</td>
<td>1</td>
<td>.0239</td>
<td>1.0112</td>
<td>1.0112</td>
<td>4.60</td>
<td>.05</td>
</tr>
<tr>
<td>Residual</td>
<td>174</td>
<td>.9034</td>
<td>38.2231</td>
<td>.2197</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>179</td>
<td>42.3102</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

aOnly one interaction vector met the significance level of .05 to enter the regression solution.
Hypothesis Two:

Ho: The race of subjects will have no significant effect on the response rates across the three data collection techniques.

Ha: The response rates of the Black subjects will be significantly higher than the response rates of the White subjects across the three data collection techniques.

The subjects chosen for this experiment were Black and White adult (eighteen years old and over) registered voters living in two voting wards within the inner-city area of Columbus, Ohio. A systematic sample of 90 Black and 90 White subjects was selected from each ward. With the use of a random numbers table the Black subjects were randomly assigned to six groups consisting of 15 subjects per group. The White subjects were assigned to six groups by the same procedure. These groups were then randomly assigned to the treatment cells (12) of the $3 \times 2 \times 2$ factorial design employed in this research.

The total number of returns across the three data collection techniques for both Black and White subjects was the same, 56, or a proportion of .62. An examination of the data in Table 4 revealed that Black subjects assigned to the mail questionnaire technique returned a total of 11 questionnaires to a total of 16 for White subjects assigned to this technique. Those Black subjects assigned to the telephone interview technique completed a total of 24 interviews to a total of 22 for White subjects. A total of 21 and 18 hand-delivery questionnaires were returned by the Black and White subjects, respectively.
Table 4
Proportion of Returns from Black and White Subjects by Data Collection Techniques

<table>
<thead>
<tr>
<th>Data Collection Techniques</th>
<th>Black</th>
<th></th>
<th>White</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f/n</td>
<td>Proportion</td>
<td>f/n</td>
<td>Proportion</td>
</tr>
<tr>
<td>Mail questionnaire</td>
<td>11/30</td>
<td>.37</td>
<td>16/30</td>
<td>.53</td>
</tr>
<tr>
<td>Telephone Interview</td>
<td>24/30</td>
<td>.80</td>
<td>22/30</td>
<td>.73</td>
</tr>
<tr>
<td>Hand-Delivery Questionnaire</td>
<td>21/30</td>
<td>.70</td>
<td>18/30</td>
<td>.60</td>
</tr>
<tr>
<td>Totals</td>
<td>56</td>
<td>.62</td>
<td>56</td>
<td>.62</td>
</tr>
</tbody>
</table>

The results from the regression analysis (Table 3) of the data relating to hypothesis two showed that the race of the subjects (C) had no effect on the rate of returns across the three data collection techniques (Table 3 indicated that the proportion of variance explained by the race of subject was zero). The null hypothesis was not rejected.

Hypothesis Three:

Ho: The race of the survey director will not have a significant effect on the response rates across the three data collection techniques.

Ha: The response rate achieved by the Black survey director will be significantly higher than the response rate achieved by the White survey director across the three data collection techniques.

One of the objectives of this research was to determine whether or not the race of the survey director would have an effect on the response rates across the three data collection techniques. In order to determine
the race of survey director effect, two different races of survey directors were employed, Black and White. Since only one of the data collection techniques (hand-delivery) required face-to-face contact between the subjects and the deliverer, an attempt was made to balance this effect across the other two techniques by employing two different names of survey directors in all correspondence with subjects (i.e., advance postcards and cover letters). Two names were chosen for the survey directors which, it was believed, would indicate the particular race of each survey director and thus, this would have the same effect on subject participation as would the face-to-face contact of the hand-delivery questionnaire technique. There was also the assumption that a subject could determine the race of the telephone interviewer.

Based on these results and the findings from the regression analysis related to hypothesis three, the race of survey director had no significant effect on the rate of returns across the three data collection techniques. Therefore, the null hypothesis of no significant difference was not rejected.

Hypothesis Four:

\[ H_0: \text{There will be no significant first-order interactions between the data collection techniques, the race of survey directors and the race of subjects.} \]

\[ H_a: \text{There will be a significant first-order interaction between the data collection techniques and the race of survey director.} \]

The results of the regression analysis concerning the first-order interactions between the different levels of the three independent variables revealed that there was a significant first-order interaction
Table 5
Number of Returns Achieved by Black and White Survey Directors Across the Three Data Collection Techniques

<table>
<thead>
<tr>
<th>Data Collection Techniques</th>
<th>Race of Subjects</th>
<th>Survey Director</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>Mail Questionnaire</td>
<td>Black White</td>
<td>Black White Total</td>
</tr>
<tr>
<td></td>
<td>4 8</td>
<td>7 8</td>
</tr>
<tr>
<td>Telephone Interview</td>
<td>11 10</td>
<td>13 12</td>
</tr>
<tr>
<td>Hand-Delivery Questionnaire</td>
<td>13 10</td>
<td>8 8</td>
</tr>
<tr>
<td>Total</td>
<td>28 28</td>
<td>28 28</td>
</tr>
</tbody>
</table>

between the data collection techniques (A) and the race of the survey director (B) at the .05 level ($F = 4.60, df = 1,174$). To simplify the interpretation of the significance of the first-order interaction, a graphic representation of the return rates achieved by the two different survey directors across the three data collection techniques is presented in Figure 2.

An examination of Figure 2 indicated that there is a disordinal interaction between the race of the survey director across the telephone interview and hand-delivery data collection techniques. While an analysis of this graphic representation indicated that the race of the survey director has no significant effect on the return rates to either the mail questionnaire or telephone data collection techniques, it did
Proportion of Returns According to Data Collection Techniques and Race of Survey Director

Figure 2
reveal that the race of the survey director had a significant effect on the rate of returns of the hand-delivery data collection technique. The rate of returns achieved by the Black survey director was significantly higher than the rate of returns achieved by the White survey director for the hand-delivery data collection technique. As a result of these findings, the null hypothesis was rejected in favor of the alternative hypothesis of a significant first-order interaction between the data collection techniques and the race of survey director.

While none of the other first-order interactions between the independent variables was significant, the interaction between the data collection techniques (A) and the race of subjects (C) approached significance. Even though this first-order interaction was not significant, it was decided that a graphic representation of the return rates resulting from the two races of subjects across the three data collection techniques would aid in understanding the interaction of these two independent variables.

An examination of Figure 3 indicated a disordinal interaction with White subjects having a higher proportion of returns to the mail questionnaire but lower response rates to the other two data collection techniques. The magnitude of the differences between proportions of responses between Black and White subjects was largest for the mail questionnaire.

Cost Analysis

The question of cost has been, and probably will remain, an important factor in determining which data collection technique to employ in conducting opinion research. For the local school decision maker,
Proportion of Returns According to Data Collection Techniques and Race of Subjects

Figure 3
the cost may determine whether or not a study will be attempted. In order to aid decision makers in making a determination and to increase the benefits of this research on data collection techniques, an attempt was made to provide an analysis of the cost involved in employing the three data collection techniques.

An estimated cost breakdown of the various expenses involved in employing the three data collection techniques studied in this research is presented in Table 6. After the total cost estimates were computed for each data collection technique, a computation was performed to determine the cost for each individual receiving the questionnaire by that data collection technique. For example, the $2.37 cost per contact for the mail questionnaire data collection technique (see Table 7) represents the total cost involved in contacting (e.g., advance postcard, survey packet, etc.) one subject out of the 60 subjects assigned to this technique.

The estimated cost per return was computed by dividing the total number of returns received by the total cost of that treatment group. Thus, the higher the return rate for a particular treatment group, the lower the cost per individual return for that group. For example, the cost per return was estimated at $8.87 for cell A which returned a total of four completed questionnaires, compared to $4.43 for cell C which returned a total of seven questionnaires. Therefore, the difference between the cost per return within and across the three data collection techniques is a function of the total cost of employing a particular technique and the number of returns. Table 7 provided an
### TABLE 6

Breakdown Of Estimated Cost Involving The Three Data Collection Techniques

<table>
<thead>
<tr>
<th>Items</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mail Questionnaire Technique</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Printing/Supplies</strong></td>
<td></td>
</tr>
<tr>
<td>60 cover letters (one page letterhead stationery)</td>
<td>$4.80</td>
</tr>
<tr>
<td></td>
<td>$ .08 each</td>
</tr>
<tr>
<td>60 postcards</td>
<td>$4.80</td>
</tr>
<tr>
<td></td>
<td>$ .08 each</td>
</tr>
<tr>
<td>120 questionnaires</td>
<td>$28.80</td>
</tr>
<tr>
<td></td>
<td>$ .06 each</td>
</tr>
<tr>
<td>120 envelopes</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>$ .05 each</td>
</tr>
<tr>
<td><strong>Postage</strong></td>
<td></td>
</tr>
<tr>
<td>60 advance postcards</td>
<td>$6.00</td>
</tr>
<tr>
<td></td>
<td>$ .10 each</td>
</tr>
<tr>
<td>60 questionnaire packet</td>
<td>$18.00</td>
</tr>
<tr>
<td>envelopes</td>
<td>$ .30 each</td>
</tr>
<tr>
<td>30 follow-up mailing</td>
<td>$9.00</td>
</tr>
<tr>
<td>questionnaire packet</td>
<td>$ .15 each</td>
</tr>
<tr>
<td>envelopes</td>
<td></td>
</tr>
<tr>
<td>30 follow-up mailing</td>
<td>$4.50</td>
</tr>
<tr>
<td>return envelopes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$ .15 each</td>
</tr>
<tr>
<td><strong>Premium</strong></td>
<td></td>
</tr>
<tr>
<td>60 premiums</td>
<td>$15.00</td>
</tr>
<tr>
<td></td>
<td>$ .25 each</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated at $3.00 per hour for 12 hours</td>
<td>$36.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$141.90</td>
</tr>
<tr>
<td><strong>Telephone Interview</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Printing/Supplies</strong></td>
<td></td>
</tr>
<tr>
<td>60 questionnaires</td>
<td>$14.40</td>
</tr>
<tr>
<td></td>
<td>$ .06 each</td>
</tr>
<tr>
<td>60 postcards</td>
<td>$4.80</td>
</tr>
<tr>
<td></td>
<td>$ .08 each</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated at $3.00 per two completed interviews</td>
<td>$90.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$109.20</td>
</tr>
</tbody>
</table>

**Hand-Delivery**

<table>
<thead>
<tr>
<th>Items</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Printing/Supplies</strong></td>
<td></td>
</tr>
<tr>
<td>60 cover letters (one page letterhead stationery)</td>
<td>$4.80</td>
</tr>
<tr>
<td></td>
<td>$ .08 each</td>
</tr>
<tr>
<td>60 postcards</td>
<td>$4.80</td>
</tr>
<tr>
<td></td>
<td>$ .08 each</td>
</tr>
<tr>
<td>90 questionnaires</td>
<td>$21.60</td>
</tr>
<tr>
<td></td>
<td>$ .06 each</td>
</tr>
<tr>
<td>90 envelopes</td>
<td>$7.20</td>
</tr>
<tr>
<td></td>
<td>$ .08 each</td>
</tr>
<tr>
<td>90 plastic doornob envelopes</td>
<td>$2.00</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Premium</strong></td>
<td></td>
</tr>
<tr>
<td>60 premiums</td>
<td>$15.00</td>
</tr>
<tr>
<td></td>
<td>$ .25 each</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated at $3.00 per hour delivery and pick-up</td>
<td>$90.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$145.00</td>
</tr>
</tbody>
</table>
estimate of the cost involved in contacting a subject and the cost per return for each of the twelve treatment groups.

Quality of Data

Although the quality of the data gathered by the three data collection techniques was not a main concern of this experiment, it was decided that a qualitative review of the data would aid school decision makers in determining the most effective (in terms of the highest return rate at the lowest cost) technique for their needs. The purpose of the review was to determine if there were any systematic differences between the types and amounts of responses elicited by the three data collection techniques. In order to achieve this objective, the following comparisons were made between the three data collection techniques:

1. the number of responses (suggestions) offered to items one and two,
2. the number of correct responses to item number 23, concerning local officials (knowledge item), and
3. the total number of items completed in the questionnaire.

Items one and two of the questionnaire schedule (see Appendix A) specifically asked the subjects to indicate those things about their community that they particularly like (item 1), and those things about the community which were major problems needing correction (item 2). The rationale for making a comparison between the number of responses elicited by these two items was based on the assumption that for the mail survey and hand-delivery data collection techniques, a subject would have more time to consider a response, and also request additional help (suggestions) from other individuals, thus increasing the number
TABLE 7
Estimated Cost Per Subject Contacted and Cost Per Return for Each Treatment Group Across the Three Data Collection Techniques

<table>
<thead>
<tr>
<th>Race of Respondent</th>
<th>Survey Director</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
</tr>
<tr>
<td><strong>Data Collection Techniques</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Mail</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Subjects Contacted</td>
<td>A 15</td>
</tr>
<tr>
<td>Proportion of Respondents</td>
<td>.27</td>
</tr>
<tr>
<td>Cost per Contact</td>
<td>$2.37</td>
</tr>
<tr>
<td>Cost per Respondent (return)</td>
<td>$8.87</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Subjects Contacted</td>
<td>E 15</td>
</tr>
<tr>
<td>Proportion of Respondents</td>
<td>.73</td>
</tr>
<tr>
<td>Cost per Contact</td>
<td>$1.82</td>
</tr>
<tr>
<td>Cost per Respondent (return)</td>
<td>$2.48</td>
</tr>
<tr>
<td><strong>Hand-Delivery</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Subjects Contacted</td>
<td>I 15</td>
</tr>
<tr>
<td>Proportion of Respondents</td>
<td>.87</td>
</tr>
<tr>
<td>Cost per Contact</td>
<td>$2.42</td>
</tr>
<tr>
<td>Cost per Respondent (return)</td>
<td>$2.79</td>
</tr>
</tbody>
</table>
of suggestions provided for each item. Whereas, in the telephone interview a subject would not have as much time pondering the question, and would not likely get additional suggestions from other persons, thus limiting the number of responses listed for each item.

A review of Table 8 indicated that those subjects interviewed by telephone identified a total of 71 positive points about their community. The hand-delivery subjects identified a total of 65, with the mail survey subjects identifying a total of 44. Concerning the question "what, if anything, would you say are the major problems in this community, things that need correction or action?", those subjects responding in the mail questionnaire technique to this item provided a total of 50 problems to a total of 67 from those subjects in the telephone interview technique. The subjects in the hand-delivery data collection technique listed a total of 68 problems in response to this item.

Item 23 required the subjects to provide the names of a number of local community officials (knowledge item) such as the mayor of Columbus, and the name of any school board member. The rationale for using this item for a qualitative comparison between the three data collection techniques was based on the assumption that subjects responding to the mail questionnaire and hand-delivery data collection techniques would have the opportunity either to look up the correct names of the officials and/or seek assistance from other individuals, thus achieving more correct responses to this item. The subjects responding to a telephone interview were not afforded the opportunity to either look up the correct official's names or get assistance from others, thus, possibly resulting in fewer correct responses to this item.
TABLE 8

Number Of Suggestions Offered To Items One And Two, By Data Collection Technique

<table>
<thead>
<tr>
<th>Items</th>
<th>Mail (n=26)</th>
<th>Telephone (n=42)</th>
<th>Hand-Delivery (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) What, if anything, are the things about this community that you particularly like?</td>
<td>44 (1.69)</td>
<td>71 (1.69)</td>
<td>65 (1.86)</td>
</tr>
<tr>
<td>(2) What, if anything, would you say are the major problems in this community, things that need correction of action?</td>
<td>50 (1.92)</td>
<td>67 (1.60)</td>
<td>68 (1.94)</td>
</tr>
</tbody>
</table>

(1.69) = values refer to the average suggestion per return

The proportion of correctly-named officials by subjects across the three data collection techniques is presented in Table 9. The subjects were to name the following officials: (1) the local Ward Committee Chairperson, (2) any Columbus School Board member, (3) the U.S. Senators from Ohio, (4) the Columbus School Superintendent, and (5) the Mayor of Columbus, Ohio. A review of Table 9 indicated that all subjects across the three data collection techniques were extremely less knowledgeable about the correct name of the person who held the position of the local Ward Committee Chairperson than they were on the whole about the names of the other officials representing their community. Overall, there appears to be no difference in the number of officials correctly named by the subjects across the three data collection techniques.

The returned questionnaires from each of the data collection techniques were analyzed in terms of the total number of items com-
completed. This analysis was conducted to determine if any particular data collection technique tended to produce a greater amount of item responses. The total proportion of items completed across the three data collection techniques was .84 for the telephone interview, .87 for the mail questionnaire and .89 for the hand-delivery technique. Based on the results of this comparison, combined with the results of the other two comparisons, namely, (1) and (2), there appeared to be only negligible differences between the quality of data resulting from the three data collection techniques.

TABLE 9

Proportion Of Correct Responses To Knowledge Item #23

<table>
<thead>
<tr>
<th>Name of Officials</th>
<th>Telephone (n=46)</th>
<th>Mail (n=27)</th>
<th>Hand-Delivery (n=39)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Ward Committee Chairperson</td>
<td>.02</td>
<td>.04</td>
<td>.02</td>
</tr>
<tr>
<td>Columbus School Board Member</td>
<td>.35</td>
<td>.52</td>
<td>.54</td>
</tr>
<tr>
<td>U.S. Senator from Ohio</td>
<td>.54</td>
<td>.74</td>
<td>.64</td>
</tr>
<tr>
<td>Columbus School Superintendent</td>
<td>.65</td>
<td>.74</td>
<td>.61</td>
</tr>
<tr>
<td>Mayor of Columbus</td>
<td>.87</td>
<td>.96</td>
<td>.85</td>
</tr>
</tbody>
</table>

Effectiveness of Follow-Up Procedures

There is general agreement that the use of some form of follow-up procedure(s) can be effective in increasing response rates to mail
surveys. While testing various follow-up procedures was not a main concern of this experiment, it was decided that an analysis of the effects of the three different follow-up techniques used may also aid school decision makers in determining which data collection technique would be most effective for their purposes. The follow-up procedures used in this experiment were:

1. **Mail questionnaire technique**: one follow-up mailing of the complete survey packet,

2. **Telephone interview technique**: a second or third telephone call to those subjects who were not available at the time or requested to be called back (e.g., I am eating dinner now, would you please call later),

3. **Hand-delivery questionnaire technique**: having to return (i.e., a second or third time) to pick up the questionnaire on a date/time that was not the original date/time agreed upon between the deliverer and subjects.

The number of returns that were provided by the follow-up procedures employed by the three data collection techniques is shown in Table 10. A review of the data showed that the hand-delivery data collection technique produced the largest number (23) of returns from the follow-up contacts. Eight (8) of the total returns from the mail questionnaire technique were the result of second mailings, with the follow-up telephone call resulting in seven (7) additional returns to the telephone interview data collection technique.
TABLE 10

Number Of Returns Resulting From Follow-Up Attempts Across The Three Data Collection Techniques

<table>
<thead>
<tr>
<th>Data Collection Techniques</th>
<th>n</th>
<th>First Returns</th>
<th>Follow-Up Returns</th>
<th>Total Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mail Questionnaire</td>
<td>(60)</td>
<td>19</td>
<td>8</td>
<td>27 (.45)</td>
</tr>
<tr>
<td>Telephone Interview</td>
<td>(60)</td>
<td>39</td>
<td>7</td>
<td>46 (.77)</td>
</tr>
<tr>
<td>Hand-Delivery Questionnaire</td>
<td>(60)</td>
<td>16</td>
<td>23</td>
<td>39 (.65)</td>
</tr>
</tbody>
</table>

Discussion and Interpretation

The results of this study suggest that the probability of obtaining a high return rate from inner-city Black and White residents is a function of the data collection technique used. Based on the results of this research on the effectiveness (in terms of return rates and overall cost) of different data collection techniques for collecting general educational information from inner-city residents, a telephone interview would be the preferred technique to use. Overall, the telephone interview technique produced a significantly higher return rate than the mail questionnaire data collection technique. In addition, the cost per return for the telephone interview was substantially lower than the cost per return for the mail questionnaire technique.

The hand-delivery data collection technique also produced a significantly higher return rate than the mail questionnaire technique.
However, the use of this technique would increase the cost by aproximately $2.00 per return over the telephone interview data collection technique.

Also, in employing the hand-delivery questionnaire, one must be aware of the importance of the follow-up contacts to the overall return rate. A large proportion of the overall return rate of this technique was a result of repeated follow-up attempts. Probably one of the best aspects of this data collection technique was that the subjects would readily volunteer to complete the questionnaire on the initial contact and agree to a time for pick-up. But, when the deliverer returned to pick up the completed questionnaire the subject would frequently inform the deliverer that they had either forgotten to do it or that they had not found time or some other similar excuse. The subjects would then promise to complete the questionnaire and often had it ready when the deliverer returned.

It is the opinion of this researcher, that at least for inner-city residents, the personal contact, either by telephone or face-to-face, (hand-delivery technique) was the major factor in achieving a significantly higher rate of returns than those from the mail questionnaire data collection technique. It is also the opinion of this researcher, as a result of the face-to-face contact feature of the hand-delivery technique, that for the researcher who can afford, either in terms of time and/or money, to conduct repeated follow-up attempts, the overall return rate of the hand-delivery technique can equal or surpass the return rate of a telephone interview data collection technique.

If a decision is made to employ the hand-delivery data collection technique, it is recommended that a plastic envelope for placing the
completed questionnaire on the subject's doorknob be used. The willingness to participate in the study was greatly increased when the deliverers informed the subjects about the use of the plastic envelope. Some subjects who were hesitant at first agreed to complete the questionnaire after they were informed that they would not have to be disturbed again if they used the plastic envelope. Some subjects who stated that they would not be home for the deliverers to pick up the completed questionnaire, agreed to complete it after they learned that they could use the plastic envelope. A majority of the subjects used their plastic envelopes to return the completed questionnaires.

The same number of returns was received from both Black and White subjects participating in this study. Thus, the decision to use a particular technique does not have to depend on the race of the particular subjects of interest. In other words, a local school decision maker can select one of the three data collection techniques used in this study and expect a willingness to participate in the survey from both Black and White inner-city residents. However, for the mail questionnaire technique, White subjects tended to have a higher return rate than Black subjects, but the difference was not significant.

The results of this study indicated that concern should be given to the race of the person (e.g., survey director, deliverers) interacting with the subjects. Perhaps one of the major limitations of this study was measuring the effects of the race of survey director on response rates. Since neither the traditional mail questionnaire or the telephone interview data collection technique directly required face-to-face contact with the subjects, and the hand-delivery technique did,
an attempt was made to balance this effect across the three techniques by using two names for survey directors which it was believed would clearly indicate their race. This was based on the assumption that the subjects would notice the name of the survey director and thus distinguish his particular race.

While the results did not indicate that the race of the survey director had any significant effect on the response rates to the mail questionnaire and telephone interview data collection techniques (the two which the above assumption was primarily based on), there was, however, a statistically significant first-order interaction across the race of the survey director and the data collection techniques. The Black survey director achieved a significantly higher rate of returns than the White survey director using the hand-delivery questionnaire technique. Thus, when the decision is to employ the hand-delivery data collection technique and the potential subjects are inner-city residents, the use of a Black survey director will tend to produce a higher rate of returns.

There appeared to be no apparent difference in the quality (i.e., as assessed in terms of the types and number of responses) of data produced by the three data collection techniques. The subjects tended to provide approximately the same amount of item responses whether they were interviewed on the telephone or completed the questionnaire in their own residences at their leisure. In addition, the three data collection techniques elicited approximately the same amount of item responses from both Black and White inner-city residents.
One of the initial problems encountered in this study (and possibly in others conducted in the same type of area) resulted from the fact that the inner-city area is usually made up of a highly transit population. This problem was most prevalent among the White subjects studied in this research. While the residents would not necessarily completely leave the area, they would, however, relocate in another home on the same street or some place within the community. In addition, there are problems with buildings and homes being renovated, vacated, condemned, and/or completely destroyed. Therefore, every effort should be made to obtain the most up-to-date and adequate list or source of resident's addresses and telephone numbers when surveying this type of population.

The use of a form of advance notice, either in the form of a postcard, letter, or telephone call appeared to be effective in increasing the willingness to participate in the study on the part of inner-city residents. The survey directors (telephone interviewers and questionnaire deliverers) used in this study reported a significant number of subjects who indicated that they had received the advance notice. Subjects would make comments such as, "Oh, we got your postcard, and we were wondering if you had forgotten us!" or "we have been looking for you, because we got your postcard."

Chapter Summary

In this chapter the statistical findings of this study were reported. The primary objective of the study was restated, along with
the hypotheses and an interpretation of their related statistical findings. Also, a comparison of the cost pertaining to the twelve treatment groups of the study was presented. The following chapter will include a brief summary of the study, and the findings from it along with some specific recommendations.
CHAPTER V

SUMMARY, FINDINGS, AND RECOMMENDATIONS

The main objective of this research was to investigate the effects of race of subjects, race of survey director and data collection techniques on the response rates of inner-city Black and White residents.

This chapter will include the following sections: (a) a summary of the problem objective and procedures utilized in this research; (b) major findings from this research; and (3) recommendations for school decision makers and social science researchers.

Summary

The major impetus for this research developed from a concern to provide school decision makers with information concerning the most efficient and economical technique for collecting data from a specific segment of the school's public. As was pointed out in Chapters I and II, school decision makers are currently faced with meeting increased demands on the part of the general public to make education more accountable to their needs. As a result of these demands, school decision makers are finding that they must be constantly aware of the public's needs and aspirations for education in order to institute policies that satisfy those concerns.

The primary objective of this research was to investigate the effects of race of subjects, race of survey director, and data collection techniques on the response rates of inner-city Black and White residents.
In addition, an attempt was made to evaluate the overall quality of the data gathered by the three data collection techniques along with an estimate of the relative cost of each technique. The three data collection techniques investigated were: (1) mail questionnaire, (2) telephone interview, and (3) hand-delivery, self-administered questionnaire.

A four-page questionnaire, utilizing both open-ended and forced-choice items developed specifically for this research, was employed in the evaluation of the three data collection techniques. Black and White females were employed to conduct the telephone interviews and to deliver the questionnaires to the subject's residences. The names of two different survey directors, which were believed would clearly distinguish the race of the survey director, were used in all correspondence (e.g., advance postcards and cover letters) to all subjects.

The population for this research consisted of Black and White adult (eighteen years old and over) registered voters living in two wards within the inner-city area of Columbus, Ohio. These two voting wards were chosen primarily because one consisted of predominantly Black residents and the other consisted of predominantly White residents.

A systematic sample of 90 Black and 90 White subjects was selected from each ward. With the use of a random numbers table the Black subjects were randomly assigned to six groups consisting of 15 subjects per group. The White subjects were assigned to six groups by the same procedure. These groups were then randomly assigned to the treatment cells of the $3 \times 2 \times 2$ factorial design employed in this research.

The data were analyzed by a stepwise multiple regression analysis program (BMDP2R) at The Ohio State University Instructional and
Research Computer Center (IRCC). The regression solution was used to test the four major hypotheses of the experiment. The findings are summarized according to each hypothesis.

1. The first hypothesis stated that the response rate of the hand-delivery data collection technique will be significantly higher than the response rates to the mail questionnaire or telephone interview data collection technique. The results of this study suggested that overall, the telephone interview was the most efficient and effective data collection technique for the local school decision maker to use in ascertaining the opinions of inner-city Black and White adult residents. The analysis further revealed that the response rates to both the telephone interview and the hand-delivery questionnaire were significantly higher than the response rate to the mail questionnaire.

2. Hypothesis two stated that the response rates of the Black subjects will be significantly higher than the response rates of the White subjects across the three data collection techniques. Across the three data collection techniques, the race of the subject had no effect on the response rate. However, there was a tendency for Blacks to respond at a higher rate to the hand-delivery questionnaire and telephone interview, but at a lower rate to the mail questionnaire. Overall, there was no significant difference in the response rates of the Black and White subjects.
3. Hypothesis three stated that the response rates achieved by the Black survey director will be significantly higher than the response rates achieved by the White survey director across the three data collection techniques. The race of the survey director did not have an effect on response rates across the three data collection techniques. The Black survey director produced a significantly higher rate of return than the White survey director to the hand-delivery questionnaire. The rate of responses obtained by the White survey director to the telephone interview and mail questionnaires was moderately higher than the rate of responses obtained by the Black survey director.

4. Hypothesis four stated that there will be a significant first-order interaction between the data collection techniques and the race of the survey director. There was a significant first-order interaction between the data collection techniques and the race of survey director. The findings indicated that the response rate to the hand-delivery questionnaire obtained by the Black survey director was significantly higher than the response rate obtained by the White survey director. For the telephone interview, however, the White survey director obtained a higher response rate than the Black survey director.

In addition to the evaluation of the four hypotheses formulated in this research, an attempt was made to estimate: (1) the relative costs associated with the three data collection techniques, (2) the quality of the data solicited by the three data collection techniques, and
(3) the effectiveness of the follow-up procedures employed by the data collection techniques.

5. The results of the comparison of the cost involved in employing the three data collection techniques indicated that the telephone interview data collection technique achieved the lowest cost per completed interview schedule.

6. An analysis of the quality of data collected by the three techniques was performed by comparing the types and number of responses to selected items. The results of this analysis indicated that there were negligible differences between the data collected by the different techniques.

7. An analysis was conducted to determine the effectiveness (i.e., to increase the overall return rate) of the three different follow-up procedures utilized by the three data collection techniques. The results of this analysis indicated that the follow-up procedure used with the hand-delivery data collection technique produced a substantially higher number of returns than the follow-up procedures used with the mail questionnaire and telephone interview techniques.

Recommendations

Based on the findings of this study, and the experiences gained from conducting it, the following two sets of recommendations are offered (1) for the local school decision makers, and (2) to the researcher.
Recommendations to the Local School Decision Maker

The following recommendations are offered to those school decision makers or their staffs who are interested in collecting data (via one or more of the three data collection techniques investigated by this study) from Black and/or White adult inner-city residents.

1. For the local school decision maker whose primary interest is in gathering the opinions and attitudes of a representative sample of Black and White inner-city residents at the lowest cost, the telephone interview data collection technique is recommended. It appeared (from this research) that a telephone interview should generally produce a significantly larger number of returns from both Black and White inner-city residents at a lower cost (per return) than a mail questionnaire. In addition, the telephone interview technique will produce returns at a lower cost than those returns produced by the hand-delivery data collection technique.

2. For the local school decision maker who wants to achieve a high return rate primarily from Black inner-city residents, the hand-delivery data collection technique is recommended. Because of the face-to-face contact feature of this technique, it appeared that Black inner-city residents (and possibly White inner-city residents) tended to respond at a higher rate to this technique than to the more impersonal type of technique such as the mail questionnaire.
3. For the local school decision maker whose only purpose for using the hand-delivery technique is to achieve the highest rate of return, it is recommended that Black survey workers be employed both to deliver and to collect the questionnaires. The data indicated that a Black female data collector produced significantly more returns from inner-city, Black and White registered voters than a White female data collector.

4. For the local school decision maker with limited funds to invest in a full-scale survey of inner-city residents, but with access to free, or at least low-cost person-power, the hand-delivery data collection technique may be the most effective. This technique, employing certain established groups within the school or community, such as members of the PTA, block mothers, or possibly senior high school students as volunteers, can reduce the overall cost appreciably.

**Recommendations to the Researcher**

1. It is recommended that this study be replicated with a larger sample in order to reduce the error factor and increase the efficiency of the design.

2. Further research should be conducted to investigate the specific effects of the race of survey director on response rates to mail questionnaires and telephone interviews.

3. The effect of using premiums for motivating a response should be studied on a similar inner-city Black and White population. Over one-third (33%) of the Black and White
subjects in this study who received a twenty-five cent premium returned it with their completed questionnaires.

4. Further research should be conducted with an inner-city population using a combination of different data collection techniques. For example, the hand-delivery technique could be modified to include an advance telephone call, hand-delivery of the questionnaire, but with a self-addressed return envelope enclosed for subjects to mail back the completed questionnaire. Follow-up procedures would use the telephone.

5. This study should be replicated using an inner-city population which would be considered as a more extreme inner-city area, such as the so-called "hard-core" inner-city areas. The Columbus, Ohio inner-city would not generally be considered such a population.

6. This study should be replicated using an inner-city population of unregistered voters. The fact that registered voters are considered to be more politically oriented and thus more opinionated than unregistered voters necessitates the study. The resulting data from this study would expand the generalizability of the present study's findings to the total inner-city population.

7. This study should be replicated using all of the voting wards in the inner-city as the target population. Then a two-stage cluster sampling design could be used to randomly select wards (clusters) followed by random selection of registered voters from the wards.
Community School Survey

First, we would like to ask you some general questions about your community.

1. How long have you lived in this community, or within 10 miles of here? __________ years

2. What, if anything, are the things about this community that you particularly like?

   [Blank lines for written responses]

3. What, if anything, would you say are the major problems in this community, things that need correction or action?

   [Blank lines for written responses]

4. What things, if any, are there about your community public school system that you like?

   [Blank lines for written responses]
5. Are there any things in particular about your community public school system that you dislike?


6. How would you rate the quality of the public schools in your community?

check one

- good
- fair
- poor

7. From which one of the sources below do you get most of your general information about your local public school system?

check one

- television
- radio
- newspapers
- friends or relatives
- school handouts
- other (please specify)

8. Did you happen to attend any public school meetings in the past two years (e.g., board meetings, P.T.A.)?

check one

- yes
- no

9. In general, do you think your community public school's operating money is more than adequate, adequate, or inadequate to provide quality education to the students?

check one

- more than adequate
- adequate
- inadequate
10. If more money was needed to help solve some of the problems of the schools in your community, would you support a 5% increase in the property tax to cover the costs of such actions?

   check one

   definitely
   probably
   probably not
   definitely not

11. Do you feel that your community public school teachers are overpaid, underpaid, or paid just about right for the amount of work that they do?

   check one

   overpaid
   underpaid
   about right

12. Please rate each of the following school courses in terms of how important you think it is for students to have at some point in their grade school or high school education. Would you say that the following courses are important, somewhat important, or not very important?

<table>
<thead>
<tr>
<th>Courses</th>
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<th>Not very Important</th>
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<tbody>
<tr>
<td>Mathematics</td>
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<td>English grammar</td>
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<td>Spelling</td>
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13. Please rate each of the following school activities in terms of how important you think it is for students to have at some point in their grade school or high school education. Would you say that the following activities are important, somewhat important, or not very important?

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<tr>
<td>Vocational training</td>
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<tr>
<td>Physical education</td>
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</tbody>
</table>
14. How good a job do you think your local public school board is doing in running your local schools?

   check one

   good □
   fair □
   poor □

15. Some people say that "minorities" are getting special treatment by the local public school system, while others disagree. How about you? Do you agree or disagree that minorities are getting special treatment by the local school system?

   check one

   agree □
   disagree □

16. Some citizens have said that one of the major problems confronting our schools today is the lack of discipline in the schools. Do you agree or disagree that the lack of discipline is a major problem in your local public schools?

   check one

   agree □
   disagree □

17. Some people feel that minority students are the cause of most of the problems in the schools today, while others disagree. Do you agree or disagree that minority students are the cause of most of the problems in the local public schools?

   check one

   agree □
   disagree □

18. Do you have children now attending or who have attended any of the schools in this community within the last two years?

   Yes □, how many □ number

   No □ If no, please skip to question #21
19. Please give your impressions about what kind of job you think the local public schools are doing in the following activities. Do you agree or disagree that

... THE COLUMBUS PUBLIC SCHOOLS

- Agree
- Disagree

Buy quality textbooks
Treat all students fairly
Keep parents informed of child's progress
Maintain acceptable classroom sizes
Provide tutoring to students
Encourage teacher-parent involvement
Teach vocational courses
Encourage homework
Provide adequate school counselors
Have a fair grading system

20. Some people have a chance to talk to their children's teachers or principals often and some people to not. During the last 12 months, how many times would you estimate you have talked to your children's teachers or principals?

- times

21. Some people say that schools today are overcrowded, others disagree. Do you agree or disagree that the schools in this community are overcrowded?

- check one
- agree
- disagree

22. Some residents of this community are registered voters in Franklin County, while other residents have not had a chance to register. How about you? Are you a registered voter in Franklin County at this time?

- check one
- yes
- no
23. I wonder if you could tell me the names of any of the officials holding the following positions.

   a. The Ward Committee Chairman of your ward
      Name ________________________________

   b. The name of any Columbus School Board member
      Name ________________________________

   c. The name of the U.S. Senators from Ohio
      Name ____________________________ Name ____________________________

   d. The Columbus School Superintendent
      Name ________________________________

   e. The Mayor of Columbus
      Name ________________________________

Just a few more questions to help us analyze our data.

24. Please circle the highest grade you completed, or are now attending.

<table>
<thead>
<tr>
<th>Grade school</th>
<th>High school</th>
<th>College (years)</th>
</tr>
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<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. Do you rent or own your residence?

   check one
   rent          own

26. Are you currently working full time (30 or more hours per week)?

   check one
   yes          no

27. What is your occupation? I mean, specifically, what do you do for a living?
28. What is your age?

   check one
   24 years or under
   25–34
   35–44
   45–54
   55–64
   65 years and older

29. Please indicate your sex.

   check one
   male
   female

30. Do you consider yourself a member of a minority group?

   check one
   yes
   no

   If yes, which one?

That's it. Many thanks for your help and cooperation. Would you please now check back through the questionnaire to make sure you have answered all questions and then return the completed questionnaire to us in the self-addressed, postage-paid, return envelope provided.
Community School Survey (Telephone)

Interviewer Name __________________________ Two Digit Code __________

Telephone Number of Respondent __________________________

Respondent Code (Three Digits) ______

Number of Calls to Respondent ___ 1st ___ 2nd ___ 3rd

Hello, my name is __________________________. We at The Ohio State University are conducting a scientific survey of a few selected residents in this community. You have been selected as one of a random sample of important residents to get your opinions and impressions about the local school system and what some of the problems are in this community. It will only take about ten minutes.

Your responses will be kept completely confidential; we are only interested in getting your opinions in order to help make some of the changes that you feel are needed in the local school system and this community. May I begin the interview now?

Time interview began ________

101
First, we would like to ask you some general questions about your community.

1. How long have you lived in this community, or within 10 miles of here? ___ years

2. What, if anything, are the things about this community that you particularly like?

3. What, if anything, would you say are the major problems in this community, things that need correction or action?

4. What things, if any, are there about your community public school system that you like?

5. Are there any things in particular about your community public school system that you dislike?
6. How would you rate the quality of the public schools in your community, would you say they are good, fair, or poor?

   check one
   good     
   fair     
   poor     

7. From which one of the following sources do you get most of your general information about your local public school system?

   check one
   television     
   radio         
   newspapers    
   friends or relatives
   school handouts
   other (please specify)

8. Did you happen to attend any public school meetings in the past two years (e.g., board meetings, P.T.A.)?

   check one
   yes     
   no      

9. In general, do you think your community public school's operating money is more than adequate, adequate, or inadequate to provide quality education to the students?

   check one
   more than adequate
   adequate
   inadequate
10. If more money was needed to help solve some of the problems of the schools in your community, would you support a 5% increase in the property tax to cover the costs of such actions? Would you say you would definitely, probably, probably not, or definitely not support a 5% increase.

<table>
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<tr>
<td>definitely</td>
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<tr>
<td>probably</td>
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11. Do you feel that your community public school teachers are overpaid, underpaid, or paid just about right for the amount of work that they do?

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12. Please rate each of the following school courses in terms of how important you think it is for students to have at some point in their grade school or high school education. Would you say that the following courses are important, somewhat important, or not very important?

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   check one
   good  
   fair  
   poor

15. Some people say that "minorities" are getting special treatment by the local public school system, while others disagree. Do you agree or disagree that minorities are getting special treatment by the local school system?

   check one
   agree  
   disagree  
   no opinion

16. Some citizens have said that one of the major problems confronting our schools today is the lack of discipline in the schools. Do you agree or disagree that the lack of discipline is a major problem in your local public schools?

   check one
   agree  
   disagree  
   no opinion

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   check one
   agree  
   disagree  
   no opinion

18. Do you have children now attending or who have attended any of the schools in this community within the last two years?

   Yes , how many 
   number

   No  If no, please skip to question #21
19. Please give your impressions about what kind of jobs you think the local public schools are doing in the following activities. Do you agree or disagree that

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   times

21. Some people say that schools today are overcrowded, others disagree. Do you agree or disagree that the schools in this community are overcrowded?

   | check one |
   |          |
   | agree    | disagree |

22. Some residents of this community are registered voters in Franklin County, while other residents have not had a chance to register. How about you? Are you a registered voter in Franklin County at this time?

   | check one |
   |          |
   | yes      | no       |
23. I wonder if you could tell me the names of any of the officials holding the following positions.
   a. The Ward Committee Chairman of your ward
      Name __________________________________________
   b. The name of any Columbus School Board member
      Name __________________________________________
   c. The name of the U.S. Senators from Ohio
      Name __________________________________________ Name __________________________________________
   d. The Columbus School Superintendent
      Name __________________________________________
   e. The Mayor of Columbus
      Name __________________________________________

Just a few more questions to help us analyze our data.

24. What is the last grade of school you completed?

   Grade school  High school  College (years)
   1  2  3  4  5  6  7  8  9  10  11  12  1  2  3  4  5  6

25. Do you rent or own your residence?

   check one
   rent
   own

26. Are you currently working full time (30 or more hours per week)?

   check one
   yes
   no

27. What is your occupation? I mean, specifically, what do you do for a living?
28. In which one of the following age categories do you happen to belong?

- 24 years or under
- 25-34
- 35-44
- 45-54
- 55-64
- 65 years and older

30. Do you consider yourself a member of a minority group?

- check one
- yes
- no

(If yes, which one?)

That's it. Many thanks for your help and cooperation.

Sex of respondent

- male
- female

Date and month of interview

____________________________________________________

Time interview ended __________

Comments (reasons given for not participating in interview).

____________________________________________________

____________________________________________________

____________________________________________________

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Hello!
We at The Ohio State University are trying to find out what people who live in Columbus think about their local schools. You have been chosen as one of a small, but representative, group of Columbus residents to take part in our survey. In a few days you will be contacted or receive a short questionnaire which will require only a few minutes of your time to fill out. We think you will enjoy having a chance to tell us how your schools can be improved.
Please watch for our questionnaire a few days from now.
Thank you.

Sincerely,

Sam S. Johnson
Survey Director
Hello!
We at The Ohio State University are trying to find out what people who live in Columbus think about their local schools. You have been chosen as one of a small, but representative, group of Columbus residents to take part in our survey. In a few days you will be contacted or receive a short questionnaire which will require only a few minutes of your time to fill out. We think you will enjoy having a chance to tell us how your schools can be improved.
Please watch for our questionnaire a few days from now. Thank you.

Sincerely,

Alexander Van Voorkis
Survey Director
Hello!

A few days ago we wrote asking you to help us by participating in our survey of Columbus residents. Because you have been chosen to represent a large number of people in Columbus, your opinions and feelings about the local schools are extremely important if we are to make changes that better meet your needs.

The enclosed questionnaire will require only a few minutes of your time to complete. A brief look at the questionnaire will tell you those areas where we feel your opinions are desperately needed: community problem areas, problems with the schools, and your impressions of the job our schools are doing in educating our children.

If you wish, you may put the completed questionnaire in the enclosed plastic envelope and place it on your front doorknob to be picked up. We promise your answers will be held in strictest confidence.

We know that this is a very busy time of year for you, but we hope you will take just a few minutes now to answer our questionnaire.

Thank you very much for your time and cooperation.

Sincerely,

Alexander VanVoorkis
Survey Director

P.S. The enclosed quarter is not meant to be in payment for your valuable time, but is a token of our appreciation for your kind cooperation.
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A stamped, addressed envelope for returning the questionnaire has been included. We promise your answers will be held in strictest confidence.

We know that this is a very busy time of year for you, but we hope you will take just a few minutes now to answer our questionnaire. If it is at all possible, could we have your completed questionnaire back by January 19, 1979?

Thank you very much for your time and cooperation.

Sincerely,

Sam S. Johnson
Survey Director

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Alexander VanVoorkis
Survey Director

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APPENDIX D
Dear Community Resident:

We know you are busy, but we need your help. While many residents have returned the questionnaire concerning the local schools and problems in this community, a number of them have not. If you have not, please do so. If you have mislaid it, we have enclosed another one for your convenience.

Because you are one of just a few Columbus residents chosen to give their impressions about the type of job the schools are doing in educating our children and community conditions, we desperately need to hear from you.

The results of this study will be used to help make some of the changes that you feel are important and needed. Please be assured that your answers will be held in strictest confidence.

If you have not returned your questionnaire would you please take a few minutes now and complete as much of it as you can. A stamped, self-addressed return envelope is provided to make it more convenient for you to return the questionnaire.

We need, and will be grateful for, your response!

Thank you for your kind cooperation.

Sincerely,

Alexander VanVoorkis
Survey Director
Dear Community Resident:

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Sincerely,

Sam Johnson
Survey Director
LIST OF REFERENCES


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