Local School-System Use of State-Level Educational Goals in Selected States

Philip B. Lambert

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Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Philip B. Lambert
1977
LOCAL SCHOOL-SYSTEM USE OF STATE-LEVEL
EDUCATIONAL GOALS IN SELECTED STATES

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Philip B. Lambert

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ABSTRACT

LOCAL SCHOOL-SYSTEM USE OF STATE-LEVEL EDUCATIONAL GOALS IN SELECTED STATES

by

Philip B. Lambert

Chairperson: Rudolf E. Klimes
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University
Department of Education

Title: LOCAL SCHOOL-SYSTEM USE OF STATE-LEVEL EDUCATIONAL GOALS IN SELECTED STATES

Name of researcher: Philip B. Lambert
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Problem

A major component of state-level educational accountability systems is the specification of goals upon which other components of the systems are established. The use being made of these goals at the local-school-district level in states where they exist has not been formally investigated.

This study examines the extent of use being made of state-level educational goals in the development of local-district goals and programs in the states of Colorado, Maryland, Michigan, and Rhode Island.

Method

The writer developed a six-item survey instrument to examine specific uses of state-level goals by local districts.
This was sent to 766 local school-district superintendents in Colorado, Maryland, Michigan, and Rhode Island. There were 608 or 80 percent usable returns available for analysis. The subjects were asked to indicate a rank selection ranging from "always" to "never" regarding the use of state goals in each category.

Six hypotheses were developed for the study. The first and second hypotheses related to the use of state-level goals in local district goal and program development. Hypothesis three related to the question of state and local district goal compatibility. The fourth and fifth hypotheses were concerned with the structure and adequacy of the state's assessment program. Hypothesis six related to state-level goals providing direction and purpose for local educational programs. The Kolmogorov-Smirnov nonparametric test was used to test the data.

Results

Null hypotheses specifying there would be no significant difference in the number of times each of five ranks identified as, "always," "usually," "sometimes," "infrequently," and "never," would be selected by respondents were formulated. All six null hypotheses were rejected at the .05 level of significance, with the point of maximum divergence between what was expected and what was observed occurring at the rank specified as "usually".

In subgroups of each of the states and small-sized school districts (less than 3,000 pupils), medium-sized school districts (3,001 to 10,000 pupils), and large-sized school districts (over 10,000 pupils) the points of maximum divergence between the expected and observed were statistically significant for at least four and
usually six of the hypotheses tested. The consistent exception was Rhode Island where the six null hypotheses were retained.

Conclusions

1. State-level educational goals are influential in the determination of local-district goals and the development of local-district programs in the states of Colorado, Maryland, and Michigan.

2. Superintendents of local school districts in the states of Colorado, Maryland, and Michigan feel their state departments of education view local-district and state-level goal compatibility as desirable.

3. Superintendents of local school districts in the states of Colorado, Maryland, and Michigan feel their state-level assessment programs are structured to evaluate educational outcomes in light of state-level goals and that they do so adequately.

4. Superintendents of school districts in Rhode Island do not support the value of educational goals in local districts to the same extent as those in Colorado, Maryland, and Michigan.

5. School district student population has no influence on the extent to which state-level goals are considered useful at the local-district level in the states in which the study was conducted.
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CHAPTER I
INTRODUCTION

The contemporary American educational community continues to be involved with the phenomenon of accountability in one form or another on an almost daily basis. While the concept appears to have different meanings to different people and has numerous applications at various levels of the educational process, it is generally agreed that one ingredient vital to the process is the specification of goals.

Examining the question of the purpose for the existence of an educational system, Popham (1972) determined that such a problem is essentially one of goal determination:

In the field of education we are becoming increasingly more sophisticated in designing instructional sequences. It thus becomes increasingly imperative to identify the most defensible goals of our educational systems so that improved instructional means can be directed toward the proper ends.

Writing on the same topic, McMurrin (1971) observes in his "Goals of Education" overview:

What has been, for the most part, a casual and neglected issue deserves the full force of rational analysis supported by reliable knowledge of human behavior. The end values to be sought through education must be identified, elaborated, and given operational meaning by reference to social conditions and personal experience, to the efforts and designs of society, and to the aims, needs, and aspiration of those who are to be educated.

Long before goal development became prominent in accountability-related literature, efforts existed which were intended to
facilitate the development of educational goals.

After reviewing the record of efforts to develop guiding principles for formulating goals, which reveal a modification of of emphasis among modern writers on accountability-related goal specification, Flanagan and Russ-Eft (1975) observe that such state-ments share the same broad views as their predecessors.

While these early statements of purpose and goals were developed with minimal reference to empirical data there were a few exceptions. These exceptions were the work of Bobbitt (1918) and Charters (1923) who made an effort to incorporate a scientific dimension into the process of determining educational goals and objectives (Flanagan and Russ-Eft, 1975).

As with so many educational trends of the 1960s in America, interest in accountability likely had its beginning with the launch-ing of Sputnik in 1957. Other developments of more recent years increased public interest in accountability. A general reassessment of the goals of American society; a program called the National Assessment of Educational Progress; renewed focus on the needs of educationally and culturally deprived Americans through the ESEA Title I program; and the 1966 Coleman Report on Equality of Educa-tional Opportunity are among the more prominent influences contrib-uting to the accountability movement (Dyer and Rosenthal, 1971).

The National Assessment of Educational Progress constitutes a broadly based effort to specify outcomes of the educational process for public consumption. Tyler (1966) elaborates on this topic as the purposes of the program are described.

To assess the educational progress of larger populations in order to provide the public with dependable information to help
in the understanding of educational problems and needs and to
guide in efforts to develop sound public policy regarding
education. (p. 17)

The very purpose of the program implies accountability.

The Coleman report was also a much publicized public effort
to evaluate the effectiveness of education in America. Although
the emphasis was on the "lack of availability" of equal educational
opportunities for individuals of various racial and ethnic back­
grounds, Flanagan and Russ-Eft (1975) point out that the intent was
to call attention to the process of evaluating educational outcomes.

Public demand for educational accountability had an early
impact on state school systems. Long before the introduction of the
modern version of accountability, states were conducting statewide
testing programs. The difference in modern assessment programs
related to accountability and earlier testing programs concerned the
use of results. Data were used in the earlier programs for the
benefit of local school systems or for college application and
placement purposes. The more comprehensive assessment programs of
the modern era of accountability are designed to measure educational
effectiveness across entire states. Consequently, during the early
1970s, many states began giving serious consideration to changing
their statewide assessment programs.

A major trend in the development of existing state assess­
ment programs during that time period was an increasing concern with
the involvement of citizens in goal setting (Beers and Campbell,
1973, p. 5).

Many sophisticated and well-conceived approaches to goal
setting, as part of statewide assessment, have taken place
throughout the country since 1969 (pp. 9-93). A major problem exists, however, at the point where goals are translated into program objectives. Questioning further, Beers and Campbell (p. 6) ask:

Do assessment programs increase our chances of attaining stated goals? Are program changes occurring because of assessment results?

Cautioning against premature evaluation of the impact of the process, Beers and Campbell qualify the questions:

State assessment programs have not had enough operational time to demonstrate the nature and extent of their influence on the goal orientation of programs.

By 1971 every state had conducted or was involved in developing statewide needs-assessment programs leading to the development of statewide educational goals (Hawthorne, 1974, p. 3). It was generally recognized early in this process that goals were essential to defining assessment programs by which educational effectiveness could be measured (Dyer and Rosenthal, 1971, p. xi).

Writing about appropriate components of an accountability system, Krystal and Heurie (1972) elaborated on the process of goal development by listing six steps in the process:

1. Development of clear, long-range goals, "working statements of the knowledge skills that the system seeks to provide."

2. Establishment of local district goals, preferably each district evolving its own process for goal development.

3. Citizens involvement -- students, parents, educators, and others affected by the decisions brought together in a cooperative effort.

4. Placement of goals in a priority order.

5. Provision for a continuous goal-review process.

6. Development of behavioral or performance objectives to achieve the goals. These are "short-range, operational
statements of learning outcomes, the standards by which student progress is evaluated." (p. 3)

State officials utilized a broad variety of techniques for establishing goals (Beers and Campbell, 1973, p. 5). Some merely re-evaluated and modified existing goal statements while others employed extensive and complex techniques involving both laymen and educators.

In Colorado, legislation suggested that citizens be involved in the goal-setting process. Local district advisory groups were organized to recommend accountability programs to local boards of education. Responsibility for implementation of accountability legislation then rested with the local boards of education (Hawthorne, 1974, p. 11). The result of this and other similar efforts was that by 1972 some forty-two states had published state-level educational goals (Ribble, 1973, p. ii).

In conjunction with this goal-development movement, state legislatures inevitably responded to the clamor for accountability by passing related legislation. By June 1974, some thirty states had passed legislation involving statewide goals and assessment programs (Hawthorne, 1974, p. 1). Within these thirty states there were some seventy-three laws. A third of the states enacted more than one law. The states of Maryland (Article 77, S.28A-1972), Michigan (Public Act 38-1970), and Colorado (Article 41-197) passed comprehensive accountability-system laws, while the Rhode Island legislature amended an existing law (Chapter 16-22-1963) to establish a basis for accountability activities (Hawthorne, 1974, pp. 10-11).

The Educational Testing Service published progress reports
in 1971 and again in 1973 summarizing progress in state-level goal development and related assessment activities. According to Beers and Campbell (1973, p. 6) only spotty evidence existed to indicate that assessment programs were stimulating change at the local school-district level. In the same report the vital question was asked, "Do assessment programs increase our chances of attaining the stated goals?" They concluded that such programs were too recent to determine the answer and that more operational time was necessary to make such a determination.

Some indications were cited, however, which hinted that progress toward this end was being made in both intent and practice in various states (p. 7):

State education agencies in every state in the union are taking the leadership in helping or coercing school administrators to answer the public's cries for better information about what children know and how well schools are doing their job.

A statement by Baker (1973, pp. 7-8), "Perhaps state education agencies are doing the best they can do. Perhaps local school board members, administrators and teachers should now do more," implies a provocative question related to local school-district use of state-level educational goals. Are the efforts of thousands of citizens and the many dollars utilized in establishing goals and constructing assessment programs in the various states actually making any difference at the local school-district level?

Statement of the Problem

State departments of education and local school districts share the legal responsibility for providing leadership in the educational programs for each state (Chamberlain and Kindred, 1966, p. 45).
In a case directly related to the question of state control over local school districts, the Supreme Court of Indiana held that:

Essentially and intrinsically the schools . . . are matters of State, and not local jurisdiction . . . the State is the unit and the Legislature the source of power. It is for the law-making power to determine whether the authority shall be exercised by a state board of education, or distributed to county, township or city organizations throughout the state (Chamberlain and Kindred, 1966, p. 49).

It seems appropriate that state and local school districts share the same goals and purposes if educational programs are to function with consistent direction and purpose.

Related literature revealed that efforts to gain compatibility between local and state educational goals did exist. State-level goal-development activities with widespread citizen involvement reflected this intent. The states of Colorado and Maryland required the development of educational goals for the state as well as assessment-related performance objectives. State agencies offer assistance in developing mandated local district goals, and in Maryland it was specified that they should be compatible with state-level goals (Hawthorne, 1974, p. 8).

A further indication of compatibility efforts was identifiable in state assessment programs, often related to specified state-level goals. In many states strong impetus to assure that state-level educational goals are held as meaningful was provided for by accountability legislation.

Among the recommendations made by Buchmiller (1974) were:

1. Establish procedures for evaluating the state's and school district's performance in relation to stated goals and objectives.

2. Establish recommendations for components of school district accountability programs and provide technical assistance to
school districts in planning and implementing their plan.

3. Adopt a plan for a local accountability program designed to measure the adequacy and efficiency of educational programs offered by the local school district in accordance with recommendations and criteria promulgated by the state educational agency or board and the policies of the local school board. (pp. 30-31)

The literature regarding policies and procedures adopted by the various state departments of education either specified or implied that recent accountability activities involving goal development and assessment practices were intended to be relevant at the local school-district level.

The problem is to determine whether or not local school-district superintendents see state-level educational goals as being relevant and important as local educational goals are developed and educational programs determined.

**Purpose of the Study**

The purpose of the study is to examine the use being made of state-level educational goals by selected local school districts. To examine this effect, six areas are investigated:

1. The effect state-level goals have on local boards of education as local district educational goals are developed.

2. The effect state-level goals have on local boards of education as local district educational programs are planned.

3. If selected superintendents perceive statewide and local district goal compatibility as being desirable by their state departments of education.

4. If selected local superintendents perceive that their state's assessment program is structured to evaluate educational
outcomes in light of state-level educational goals.

5. If selected local superintendents perceive that their state's assessment program is adequate for measuring attainment of state-level goals by local school districts.

6. If selected local superintendents perceive their state-level goals as giving purpose and direction to their state's educational program.

Importance of the Study

Baker (1973, p. 8) stated that the modern American accountability movement should be permitted an infancy and a period of maturation prior to full-scale evaluation of its effectiveness.

Computer searches of doctoral dissertation abstracts and of ERIC files conducted in 1975 and again in 1976 revealed that research in the area of accountability related to local school-systems' use of state-level educational goals was virtually non-existent. The period of infancy suggested by Baker is here.

Obvious in initial discussion of goals and assessment programs built upon specified goals were questions as to whether or not assessment programs increased the chances of attaining state-level goals and whether specified state-level goals and statewide educational assessment programs would precipitate changes at the local school-district level. These questions have yet to be answered. This study makes an effort to deal with the problem through communication with the chief administrative officers in local school districts located in states having experienced the accountability infancy identified by Baker.

Preparatory activities related to this research included
inquiries to chairmen of all U. S. House of Representative and Senate committees related to education, to all chief state school officers, to all state Title IV ESEA coordinators, and to the Cooperative Accountability Project Office in Denver, Colorado. Responses to inquiries from these sources substantiated the importance of the study.

Alpheus L. White (see letter, appendix A), Director of the Division of State Assistance to the U. S. Office of Education, stated:

All states now have state-level educational goals; they vary in formulation and motivation. In its administration of its education assistance program, the U. S. Office of Education has required proof that appropriated funds have been used in ways prescribed by the statutes, but it lacked the resources and the mandate to make a detailed compilation that would reflect the formulation and motivations Mr. Lambert seeks.

William J. Gruver (see letter, appendix B), Senior Program Officer of the Eastern Program Operations Branch of the U. S. Office of Education, stated:

Your completed dissertation will make a significant contribution in assessing the relationship between legislative mandate and the educational goals of state departments of education.

Within accountability laws of all states in which these laws exist, there is an obvious emphasis on the fact that the state education agency bears the burden for implementing assessment-related legislation (Webster, 1973, p. 80). Even in states like Colorado and Maryland where latitude is provided for the development of local accountability programs, the state retains much control.

Webster stated further:

Technical assistance of state to local agencies, associated with various accountability-planning-evaluation activities is an expanding function in many states. (p. 81)
Allowing that discussion and problems related to goals, priorities, and objectives, such as: What are the schools good for? What do we mean by quality in education? What kind of education? are left unanswered. Webster states:

These goal-related questions and issues can and must be addressed in relation to the current wave of statewide testing/assessment legislation and practices. (p. 135)

Results of the study will reveal whether or not selected local-district programs are affected by these massive undertakings involving large amounts of money and many citizens. Data from the study could be used to stimulate further research into the value of state-level accountability activities and serve as a basis for meaningful modification of existing accountability measures.

**Delimitations of the Study**

This study attempted to determine what use was being made of state-level educational goals by local district superintendents in four states. The study was delimited by the following factors:

1. The number of states represented by the sample for the research is small, being four in number.

2. Sample selection is according to specified criteria regarding conditions existing in 1973 as measured by published literature of the Cooperative Accountability Project and the Educational Testing Service.

3. Responses to the survey were the perceptions of the local school-district superintendents selected.

4. Only public school systems including grades K-12 were considered in the sample.
Basic Assumption

Although goal-formulation activities, measurement of goal attainment, and state-level leadership behavior varied among the four states constituting the sample, it was assumed that the similarity of purpose and overall direction provide an adequate basis for the structure of this research.

Theoretical Framework

Public organizations, such as school systems, exist within the social system for specific purposes. Getzels and Guba (1958) stated that within the social system "There are, first, the institutions with certain roles and expectations that will fulfill the goals of the system" (p. 152). Formal organization has been described by Parson (1958) as a "mechanism by which goals somehow important to the society, or to various subsystems of it, are implemented and to some degree defined" (p. 157).

Attempts to describe the process and structure of efforts to attain the purposes of education have recently been subjected to discussions in terms and language similar to those used for business and other public organizations (Campbell, 1958, p. 166). If the schools are to perform their unique function acceptably, "there must be some priority of purposes" (p. 171). With education a "public service with legal control lodged essentially at the state level and with operation delegated almost completely to local communities . . . (p. 183), the task of determining and describing the purposes or goals of education required constituent interaction.

An essential theme underlying the work of several educational
theorists is that, as Bogue (1973) stated:

... relationships encouraging dependence, submissiveness, conformity, and imposed evaluation must give way to relationships which hold opportunity for development of trust, for independence of action, for risk-taking and for self-evaluation. (p. 63).

Looking upon education as a subsystem of the total social process, Hemphill (1958) stated:

We may find group members exerting considerable pressures on leaders in order to avoid actions that would lessen the group's potential for satisfying social needs. (p. 118)

As individuals function within the framework of any organization, the concepts of mutual need and respect coincide with satisfying the needs of individuals and groups as purposes are attained. A central concept identified within this framework was offered by Parsons (1958), "The central phenomenon of organization is the mobilization of power for the attainment of the goals of the organization" (p. 225).

Getzels and Guba (1957) described the administration of schools as part of the social process. They stated that the hierarchy of relationships existing within the structure "... is the locus for allocating and integrating roles and facilities in order to achieve the goals of the social system" (p. 151). The general conceptual model developed by Getzels and Guba of the school as a social system has enjoyed significant credibility among educators.

Getzels and Guba further stated:

We conceive of the social system as involving two classes of phenomena which are at once conceptually independent and phenomenally interactive. There are first the institutions with certain roles and expectations that will fulfill the goals of the system. And there are second the individuals with certain personalities and need-dispositions inhabiting the system, whose observed interactions comprise what we generally call "social behavior." We shall assert that this social
behavior may be understood as a function of these major elements: institution, role and expectation, which together constitute what we shall call the nomothetic or normative dimension of activity in a social system; and individual, personality, and need-disposition, which together constitute the ideographic or personal dimension of activity in a social system. (p. 152)

Within the system described by Getzels and Guba (pp. 150-65), key concepts were juxtaposed with the structure and intent of this research.

The nomothetic dimension of the system developed by Getzels and Guba states that "... the social system is defined by its institutions, each institution by its constituent roles and each role by the expectations attaching to it" (p. 156). The ideographic dimension consists of individuality, personality, and need-disposition, each term again serving as the analytic unit for the term preceding it (p. 157).

A theoretical juxtaposition could be conceptualized to equate the system described by Getzels and Guba with the development and use of a state-level educational goal as a function of the social system and its participants. With the social system defined to include each state's educational program consisting of both the state department of education and the local school systems, it would seem, on the basis of the theory, that the roles of local systems would involve constituency responsibilities in terms of fulfilling its responsibilities to the social system.

The ideographic comparison occurs in the process of individuals participating in the process of identifying with educational goals. With the social system equated with the state's educational program, the needs of the individual are the basis of the total educational program.
Supporting the comparison offered, Getzels and Guba state:

When we say that two role incumbents -- e.g., a subordinate and a superordinate--understand each other, we mean that their perceptions and private organization of the prescribed complementary expectations are congruent; when we say that they misunderstand each other, we mean that their perceptions and private organization of the prescribed complementary expectations are incongruent. (p. 156)

Illustration 1 provides a model of the theoretical framework of the research. Education as a subsystem of the total social system is the arena in which the social process of participatory determination, development, and attainment of educational goals within a given state occurs. A complex hierarchy of relationships and expectations exists between state-level responsibilities and those of citizens at the local district level.

The process is a never-ending one of continuous identification, specification, and evaluation of the needs of individuals within the system for the good of the total system. Pictured in Illustration 1 is the continuous process of the needs of both the system and individuals being served individually and collectively exerting pressure through participation in goal-determination activities to satisfy both individual and social needs.

Illustration 1 pictures the social subsystem of education as involving two dimensions in the use of educational goals within a state. State-level activities represent the super-ordinate level and local district activities represent the subordinate level in the relationship between the two dimensions. The clients being served by the process are identical in both dimensions, being the citizens, educators, and students of the state.

These clients are both the initiators and the recipients
Illustration 1.—Theoretical framework underlying the use of state-level educational goals in local school districts with education as a social subsystem.
In the development and use of educational goals in the state. They are initiators involved in the early stages of the process as they participate in the determination of state-level goals which constitute dimension 1 in the illustration. This is diagrammatically presented in the illustration as the arrow moves upward from the client group in the lower left corner to Goals A, B, and C representing state-level goals.

This circular, continuous process represented by the arrow in the illustration, moves from dimension one through a series of relationships and structures determining the constraints and framework of the superordinate, subordinate relationship between state-level goals and the use of them at the local-district level. This series of relationships and structures are identified as a, b, c, and d.

The first of four relationships (a) is educational theory. Theories underlying the total educational process within a state are determining factors in the superordinate, subordinate relationship between state-level and local-district educators. Relating to goal consideration in both dimensions and on an interacting basis, the generalizations and pre determined assumptions underlying educational theory in the state represent an operational construct which influences the relationship between state and local levels of education. Consequently, the use of state-level goals at the local-district level is influenced.

There exist legal responsibilities (b) for both superordinates at the state-level and subordinates at the local-district level in the use of state-level goals in local districts. Legal frameworks
specified by statute and the delegation of responsibility and authority to the subordinate local districts influence the use made of state-level goals at the local-district level.

Represented by (c) in the illustration are the concepts of leadership within the state which influence the use made of state-level goals in local districts. In some states the superordinate may demonstrate an aggressive profile, directing subordinate local districts to deal with state-level goals in a specific manner. In other cases, the superordinate may perceive its role to be one of a low-level regulatory agency resulting in a more permissive attitude about the use made of state-level goals in local-districts.

Reflected in the social structure of the subsystem of education (d) is the social structure of the larger social system. A social structure reflecting belief in measuring input and output may support an educational system in which great importance is attached to the subsystem of education being accountable for monetary expenditures. On the other hand, a society reflecting aesthetic values to a greater extent, may not be concerned with such pragmatic data. Whatever the social structure, one would identify similar characteristics in the relationship between state-level and local-district goals.

Each of the relationships or structures identified as a, b, c, and d shows arrows going to and from. This would indicate that none of them exists in isolation, all interact with each other to influence the use of state-level goals at the local-district level.

The words evaluation and attainment in the upper section of the figure and identification, specification of needs in the
lower portion of the illustration enclose the relationships pictured in the center to show that these activities both determine matters among the various relationships, and grow out of the interaction of the various structures which are part of the interaction between state and local dimensions. These words also appear as part of the broken but continuous arrow to show that they are clearly specified steps in the overall process and that they are activities occurring regularly which both determine relationships between the two dimensions and are the result of interaction among all parts of the social subsystem called education.

Administrative theory, organizational concepts, legal responsibilities, and the structure of the social system are the ingredients of the process through which the specific purposes of the public organization called a school system are met.

This study examined the concept of a public organization's efforts to meet the collective and individual needs of one segment in the lives of members of the social system. Extensive theoretical discussion has been offered in the literature related to the implications of attaining such a purpose. A high degree of agreement with the methods and satisfaction with the results of such efforts seemed necessary if the good of the system were to be accomplished. Major theoretical positions related to the process were examined and incorporated into the construction of a theoretical framework for the study. The state-level superordinate and local-level subordinate relationship related to educational goals illustrates the public organization's efforts to meet the needs of its members.
**Statement of Hypotheses**

Six research hypotheses are stated, consistent with the purpose of the study and the statement of the problem. The same hypotheses are later stated in the null form for the purpose of testing and analysis.

1. State-level educational goals influence the determination of local-school-district educational goals in the states selected.

2. State-level educational goals influence the development of local-school-district educational programs in the states selected.

3. Selected local school district superintendents perceive that their state departments of education view local-district and state-level goal compatibility as being desirable.

4. Selected local school district superintendents perceive their state's assessment program as being structured to evaluate educational outcomes in light of their state's educational goals.

5. Selected local school district superintendents perceive their state's assessment program as being adequate for measuring attainment of state-level goals by local school districts.

6. Selected local school district superintendents perceive their state's educational goals as providing purpose and direction for their state's educational program.

**Definition of Terms**

The following terms are defined for the purpose of this study:

*Accountability:* The efforts of educators to satisfy public and legislative demands to justify educational costs by measuring and
specifying results of the process in terms of student performance.

**Educational Assessment:** A program of systematic statewide testing of student performance intended to measure progress toward attainment of the educational goals of the state.

**Educational Testing Service (Center for Statewide Educational Assessment):** A division of Educational Testing Service located in Princeton, New Jersey, which publishes information on statewide assessment procedures and practices.

**Local School District:** Legally established K-12 school systems located in the communities of the various states participating in the research.

**Local-School-District Goals:** Desired educational outcomes of local school districts as prepared by and specified for local-school-district educational programs.

**Local-School-District Programs:** Description of learning experiences and activities conducted in the school of the respective local school district.

**Needs Assessment:** That phase of the accountability process dealing with the difference between what "is" and what "should be" in the learning outcomes of the educational operation. Identification of this discrepancy should provide for (a) identifying desired learner outcomes and (b) ascertaining the learner's current status with respect to those outcomes.

**State-Level Educational Goals:** Published statements by state departments of education establishing broad outcomes expected of the educational system of their respective states.
Organization of the Study

The study was organized into five chapters:

Chapter I contains the introduction, a statement of the problem, the purpose of the study, importance of the study, delimitations, a basic assumption, six hypotheses, a definition of terms, and an outline of the organization of the study.

Chapter II contains a review of related literature. Reviewed for the study were doctoral dissertations having some bearing on the subject. Also reviewed was literature related to educational goals in America, state-level accountability, legislation, and assessment as part of educational accountability and literature specifically related to the states involved in the study.

Chapter III contains a description of the methods and procedures used in the study. Areas covered in the chapter includes the design of the research, the six hypotheses stated in the null, subject selection procedures, instrumentation, data collection procedures, and treatment of the data.

Chapter IV contains an analysis of the data. Included is an analysis of data on each of six hypotheses related to the overall sample and to each of seven subgroups. Concluding the chapter is a summary.

Chapter V contains a summary of the study, conclusions resulting from the data analysis, implications of the findings, and recommendations for further research.
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CHAPTER II

REVIEW OF RELATED LITERATURE

The review of related literature began with doctoral dissertations having some bearing on the research. This was followed with an investigation of publications related to three major areas of the study: the goals of education, state-level accountability activities with emphasis on goal development, legislation, and assessment, and finally a review of the literature directly related to the goals of the four states involved in the research.

The task of reviewing literature that relates to a very contemporary topic, with beginnings reaching no further back than approximately 1970, was facilitated immensely by assistance provided by the Education Commission of the States and the many documents provided through their State Educational Accountability Repository (SEAR) files. It was discovered that these files constituted the majority of sources identified by the Educational Resources Information Center (ERIC) searches in September 1975 and again in October 1976 as those being relevant to the study.

A search by the Comprehensive Dissertation Query Service in October 1976 revealed that there were no doctoral dissertations dealing specifically with the topic of the study. There are twelve dissertations having a general or indirect relationship to the research.
Dissertation Review

The doctoral dissertations seeming to have the most direct bearing on the study includes the work of Theil (1976) and Richardson (1975). William Thiel's study indicates that repetition and unnecessary problems continue to occur in states' efforts to implement accountability programs because little communication existed among those states making the plans and efforts. Each state seemed to be charting its own course, based upon constituent or legislative pressure, and was therefore encountering the same type of confusion that its predecessors had overcome.

A review of codes in fifty states revealed that the general thrust of all accountability legislation was that of holding local districts responsible for the various aspects of accountability.

The study by Richardson (1975) on the impact of Michigan's Six Step Accountability Program on local school districts has bearing on the study in that Michigan is one of the four states involved in the research and because the study deals with the use of statewide goals (a part of the accountability structure) at the local district level.

Based upon a survey of 102 selected school districts (with a usable return rate of 70 percent) some conclusions were arrived at which relate to the study. Over 90 percent of the respondents indicated that implementation of the Six Step Accountability Model was the responsibility of local school districts. As of 1975, Richardson determined that the program was in the "process phase" with many districts still moving slowly in what was the fifth year of the program. Implementation obstacles at the local level included
staff resistance and a diversity of opinion related to the value of the program. Three-fourths of the local districts surveyed indicated that no funds had been allocated for implementation of the program.

A central premise in the research is that educational goals constitute a vital ingredient in the development and implementation of state accountability programs. Five dissertations provide additional information related to this point.

Marvin Cook's study (1973) indicates that specification of goals is at the heart of many accountability issues designed to measure cost effectiveness in the educational process. He concludes that, while pronouncements of educational goals had existed for over three hundred years in America, it has been only during the past decade that states have made a serious attempt at formalizing such statements into goals.

Relevant in a similar manner is the work of Jesse Bailey (1975) in which a model was generated for educational managers to use in demonstrating accountability. Included as a first ingredient in the accountability process is the specification of a set of goals.

William McMullen's study (1975) investigates the perceptions of selected Illinois citizens related to the question of whether Illinois' educational goals, Action Goals for the Seventies: An Agenda for Illinois Education, provides an adequate foundation upon which to base educational programs in the state. He concludes that they were. Although respondents were superintendents, a similar question was asked in this research.

Carole Spencer (1975) conducted research on procedures
utilized in the state of Illinois to determine a program of long-range action goals for the state. She concludes that it is possible to research and validate a state's plans and that the Illinois plan is a viable and workable one for other states to use in the process of measuring implementation of state-level goals at the local district level.

Frances Dokes (1973) compares various components of educational accountability systems in the states of Florida and Michigan. Measuring the effectiveness of goal-development procedures and statewide assessment programs and their application, Dokes concludes that leadership responsibilities for developing statewide accountability models belong to states. Her conclusion is consistent with one underlying this study.

Congruency or compatibility of educational goals between state departments of education and local school districts is at the heart of this study. A review of dissertations reveals none with a direct bearing on the topic. The measuring of patron and educator perception related to goal significance and development is dealt with in several dissertations. This format appears to be the most prevalent and popular dissertation technique in the area of goals in the time period 1974 to 1976.

William Cole (1974) assesses the priority order of educational goals as perceived by selected client groups in the Glendale, Arizona, Union High School District. Five statistical tests applied to the data result in a conclusion that educational goals vary with individuals and that the preference also varied among the groups sampled. This conclusion has relevance to the study in that
the need for leadership within the educational establishment exists.

In a study by Curtis Baham (1974) the accountability goal statements of the state of Colorado are analyzed using Downey's classification of "The Task of Public Education." He found only "low" to "moderate" relationships existing between these goal statements and Downey's "tasks." Relevant to the study are several conclusions which can be summarized by stating that diversity in goal priorities exists among the various regions of the state despite the existence of specific statewide accountability goal statements.

Jerome Tonso (1974) indicates, as a result of his study on the perceptions of Colorado teachers and their involvement in that state's accountability activities, that a greater degree of credibility needs to be established for the system before it receives the full support of Colorado teachers. Most relevant to the study is his conclusion that the State Department of Education needs to exert greater leadership if Colorado's accountability movement is to succeed.

There are a number of other doctoral theses that deal with similar topics but which have only a tangential relationship to this study. Among others, the following studies are found to be of limited usefulness: Lott (1976), Marshall (1974), Milliken (1974), Perry (1975), Saad (1974), and Wood (1975).

The Goals of Education

The activity of determining the purposes or goals of education is not a new process. McMurrin (1971, p. 152) pointed out that this process probably had its origins in very primitive societies and appeared frequently in ancient Chinese and Hindu cultures.
Common to such goal statements is the fact that they tend to reflect the values and needs of their culture (Downey, 1971, p. 15).

This observation is easily identifiable in the educational processes of Greco-Roman societies and their aristocratic way of life (Downey, 1971, p. 152) and again in the goal of eternal salvation (Ulich, 1965, pp. 36-40) during the early period of Christianity. As countries severed their ties with the Roman Catholic Church (Downey, 1971, p. 152) broader goals were accepted for the educational process. Then, in the seventeenth century, the process of education and learning achieved status as a worthwhile goal of education (Ulich, 1965, pp. 71-75).

Political revolutions, the Industrial Revolution, and the rise of nationalism, all resulting in a new way of life and a new dignity for the common man, brought about goals that reflected the needs of an entirely different way of life (Downey, 1971, p. 152). Stated purposes or goals for the educational process have reflected and continue to reflect the wishes and needs of the people involved.

American education has seen this reflection continue. Modifications in early American schools were a direct result of existing social conditions. Writing on this topic, McMurrin (1971, p. 30) again states that education's aims tend to reflect the mood and the conditions of the time in which they are made.

Prominent among the moods of the contemporary American educational scene is the clamor for accountability, a demonstration of results for expenditures made. Inevitably, this clamor must appear in the educational process of the era. Howe (1971, p. 197) states that today's most important continuing educational issue is
the dilemma of what to do about the gap between what Americans expect from the educational system and the actual performance of these systems, which adequately reflects the significance of the phenomenon on today's American educational system.

**State Level Accountability**

A review of literature related to state-level accountability must begin with mention of the Education Commission of the States. It is neither the intent nor purpose of this research to deal extensively with the background, development, or the activities of the Commission. Modern American literature on accountability gives just and well-deserved credit to all dimensions of the Commission's work. This project, involving seven states, has been at the helm of gathering, synthesizing, and disseminating accountability-related literature wherever and whenever it has occurred since 1972.

Layton (1975, p. 45) reports that the Commission has more than fulfilled the wishes of its major architects, James B. Conant and North Carolina Governor Terry Sanford. Maine's Senator Katz asserts that within ten years the Commission will assume a role in state-level education problems which will replace that which the federal government now assumes (Layton, 1975, p. 47).

A most notable effort among the statements which attempt to summarize the accountability movement at the state level is that of John I. Goodlad. Pointing out that the first step (in the accountability movement) is to formulate some common statewide goals, Goodlad (1974, p.108) identified the responsibility of the various state departments of education. He concluded that at the present time it is impossible to identify responsibilities among educational
constituencies within the states. He questions what the responsibilities are for state and local school districts and communities (Goodlad, 1975, p. 112), thereby enhancing the question inherent in this research.

Investigating the first step in the process of accountability, that of goal setting, the most apparent point is that the setting of such goals by the states has been handled in a variety of ways (Dyer and Rosenthal, 1971, p. xi). Although diversity seems to be the most acceptable word to describe the work of goal development in various states, the literature does contain one comprehensive effort to organize the complexity of participation in this process with suggestions for involvement.

Some fourteen individuals and groups seem to fulfill dominant roles in the process (Schroeder and Wilsey, 1974, pp. 17-18). Ranging from the state legislature to students, parents, and consultants, suggestions are made as to the level and type of involvement for each group (p. 19). To adequately and totally describe the extent and type of involvement among the states would require a specific breakdown of the roles of participants in each state. This information is available (Beers and Campbell, 1973, pp. 9-92) as various state accountability programs are described.

The process of educational goal development at the state level has been in a state of fluidity since about 1972. A study in 1973 revealed that forty-two states had formal educational goals and that all the rest of the states were either in process or considering the development of their own goals (Ribble, 1973, pp. 1-93).

To move the process of goal development and utilization from
the state level to the local level required a review of the publications of each of the states in order to determine the intended relationship between statewide goals and local goals and programs.

Since this was of significance to the study, several state publications were reviewed, resulting in conclusive evidence that state agencies intend for local school districts to utilize state-level goals as their district-level plans are made.

The New York State Board of Regents specifies (Nyquist, 1974, p. 3) that each school district would be encouraged to use the state's goals statement as a basis for action in setting its own goals. Stating its position clearly the Washington State Department of Education (1972) stated that its goals are practical, realistic ideals that each school should strive to attain.

The charge is direct in the state of Nevada (Larson, 1971, p. 16) where state officials write that it is anticipated that local school districts will develop programs and process objectives directly relating to the state-level goals.

Montana (Colburg, 1975, p. 6), where the fact that the state's assessment program is directly related to the educational goals of the state, and Kentucky (Ginger, 1974, p. 1), where it is specified that the goals are intended to give direction and meaning to the state's educational system, give further evidence of the intention of state-level officials that the goals be considered as local programs and goals are developed.

The literature contains no evidence that the relationship between state-level goals and local-school-district use of these goals has been investigated formally.
Legislative action at the state level related to accountability in education began in the late 1960s and has become a reality in the 1970s. Up to June 1974, thirty states had enacted legislation focusing on educational accountability (Hawthorne, 1974, p. 1).

Included in this legislation are seventy-three laws covering approaches to accountability enacted into law between 1963 and 1974. A third of the states enacted more than one law (11 of 30) and forty-two of these laws were passed by a total of five states: Arizona, California, Colorado, Connecticut, and Florida (Hawthorne, 1974, p. 3).

Corresponding with public concern for a just result for the cost of education, a peak of some twenty-two accountability statutes were enacted in 1971. The number of laws has leveled off since 1971, perhaps due to the decrease in available federal dollars and the fact that state legislators and educators realize that comprehensive accountability and assessment programs are costly. Of the thirty states adopting accountability legislation only four states: Colorado, Maryland, Michigan, and Rhode Island require statewide goals by legislative act (Hawthorne, p. 9). Some eighteen states have legislation in the area of state assessment/evaluation and state testing programs (p. 3).

State legislative action has done little to clarify the process of accountability between state departments of education and local school districts related to the development and utilization of educational goals. While it is not the subject of this study, educational accountability legislation has resulted in varying degrees of
success in dealing with other components of accountability such as Management Methods, Personnel Evaluation, and Performance Contracting (pp. 4-11).

A third dimension of state-level accountability processes relevant to the proposed study is that of assessment. While numerous definitions appear in the literature, most assessment specialists seem to abide by this definition: educational assessment is a program to improve educational decision making by securing information about the outcomes of education (Womer, 1973, p. 1).

The literature reveals that, as of 1974, some thirteen states had enacted legislation related to state testing, assessment, and evaluation. Typical of the diverse and somewhat unstructured condition of the accountability movement as a whole, not many of the states having legislation of this nature encompass a broad spectrum of those features commonly accepted to be a part of the accountability program (Hawthorne, 1974, p. 8).

Of those which do, Colorado, Florida, Maryland, and Michigan are considered to have the most comprehensive accountability laws in the area of state testing and assessment (p. 11).

Recent developments regarding testing/assessment legislation includes Georgia's 1974 Senate Bill Number 672 which repealed several existing laws and has as its major feature a uniform accounting system (p. 10). Legislation of this nature failed in Kansas, due to "lack of financial resources"; in Alabama, when the state legislature was reorganized and a committee not reappointed; in Mississippi; and in Louisiana, because the Louisiana Department of Education is testing its own accountability model (p. 13).
Legislation also exists in Massachusetts, New Mexico, and Wisconsin (p. 14).

A lack of agreement exists in the literature as to the definition of assessment within programs currently operational. The National Program of Educational Assessment has defined it as a look at change in educational outcomes over a period of time on a national basis (Womer, 1973, p. 6). Pennsylvania's definition seems to link the components of the total accountability process by defining assessment as the establishment of an assessment "service" to school districts within the state. The assessment tests, however, were selected or developed in order to measure the attainment of the ten major goals of education that had been identified statewide (p. 7).

Michigan's state assessment is one which was mandated by the state legislature and whose primary purpose has undergone modification. Educational leaders in Michigan have spent a great deal of effort to arrive at a permanent definition of assessment (p. 7).

Assessment is one component of accountability. It is a vital component, but not the sole one, and provides information as to whether the youth involved are acquiring the knowledge and skills deemed to be appropriate (Womer, 1973, p. 90).

Great diversity existed in relation to definition and use of information for the development of assessment programs and the meaning and value of results as far as related literature is concerned.

Colorado runs a distinctive program to attain accountability beginning at the local-school-district level. In this system, the
State Board of Education serves as a "guiding light" with local school boards given the autonomy to develop their own local accountability programs. The position of the State Board of Education is that final statewide goals should reflect and support the desires expressed by the local school district goals. Colorado's goals were originally stated in 1962, revised in 1971, and were to be finalized in 1976 (Hawthorne, 1975, p. 14).

In effect, Colorado inverts the assumed process of goal development. The final 1976 goals reflect the goals developed at the local district level. When approximately 68 percent of the local districts had filed their required district goals in 1974, a doctoral student analyzed the goals for the purpose of providing the State Advisory Committee with information to assist in establishing the final statewide goals (p. 14).

Maryland's initial set of statewide goals was published in 1972. Local educators, citizens, public officials, and legislators were invited to participate in validating goals which had been developed by the staff of the State Department of Education (p. 39).

Educational goal development is one of the four components of the Maryland Educational Accountability Act which relates it directly to local-school-district educational programs as assessments are made (Austin and Holowenzak, 1974, p. 15).

In Michigan the task force and citizen survey techniques were utilized to develop educational goals for the state. "The Common Goals of Michigan Education" were adopted in the fall of 1971. A task force appointed to develop and draft a statement of educational goals against which the assessment program could be
measured presented its report to the State Board of Education in June 1970. After a review of some 25,000 citizens, the goals were adopted by the Michigan Board of Education in September 1971 (Hawthorne, 1975, p. 22). The goals were intended to be common to all public school systems in the state who are also encouraged to expand upon them to develop local goals.

The Education Act of 1969 mandated that the Rhode Island Board of Regents establish goals and objectives for the state's educational system. Some two thousand citizens were involved in the process of goal development (Ribble, 1973, p. 73). Broad goals were developed with the intent that specific objectives could be developed to achieve their aim (Hawthorne, 1974, p. 49). The literature included no mention of the intentions of the Board of Regents related to the relationship between state-level goals and local school districts.

**Summary**

The review of related literature revealed frequent studies of public perceptions regarding statewide goal development, the perceived function and effectiveness of assessment programs, and the prioritizing of existing goals. Studies by Tonso (1974), McMullen (1975), and Cole (1974) are examples of this popular topic of investigation.

Detectable in the literature were numerous references to the importance and long-time presence of goals underlying the structure and function of educational systems. This history was traced by the work of McMurrin (1971), Downey (1971), and Ulich 1965).
Literature of recent years, tracing the development of the accountability movement, most of which was sponsored by the Education Commission of the States and their Cooperative Accountability Project, provided an abundance of material documenting the fluid and unsettled state of accountability-related activities.

Publications including a specification of goals and written intentions that these goals be used at local district levels were easily identifiable. Publications by the New York State Board of Regents (1974), by the Washington State Board of Education (1972), by Larson (1971), regarding Nevada's goals, and by Ginger (1974), specifying Kentucky's goals, left little doubt that state departments of education intend for local school districts to utilize state-level goals at the local level.
CHAPTER III

METHODS AND PROCEDURES

Research Design

The study measured, by means of a mailed survey, the expressed extent to which public school superintendents in the states of Colorado, Maryland, Michigan, and Rhode Island utilize their state's educational goals related to development of local district goals and programs, state and local goal compatibility, the purpose and function of the state's assessment program and the total impact of the state-level goals on local educational effectiveness.

Null Hypotheses

Six hypotheses relating to specific components of accountability were tested with a specific question designed for each hypothesis. For the purpose of testing and analysis, the six research hypotheses are stated in the null form:

1. There will be no significant difference in the expected number of choices for each of the five ranks related to the influence of state-level goals on the determination of local district goals among the superintendents surveyed.

2. There will be no significant differences in the expected number of choices for each of the five ranks related to the influence of state-level goals on the development of local district
programs among the superintendents surveyed.

3. There will be no significant difference in the expected number of choices for each of the five ranks related to local superintendent's perceptions about local-district and state-level goal compatibility intentions.

4. There will be no significant difference in the expected number of choices for each of the five ranks related to local district superintendent's perceptions on the intention of their state's assessment program's relationship to state educational goals.

5. There will be no significant difference in the expected number of choices for each of the five ranks related to the adequacy of their state's assessment program in measuring attainment of state-level goals among the superintendents surveyed.

6. There will be no significant difference in the expected number of choices for each of the five ranks related to local district superintendent's perceptions about state-level goals providing purpose and direction for their state's educational programs.

Selection of Subjects

The period from 1967 to 1971 saw the first real movement among state departments of education to attempt to answer the public question: "How much and what kinds of measurable pupil learning and development is the state educational tax dollar buying?" (Dyer and Rosenthal, 1971, p. ix). Activities related to this topic occurring between 1969 and 1971 revealed that state assessment plans and programs, as well as goal-development activities, were in a highly fluid state with new developments occurring daily (Dyer and Rosenthal, 1971, p. ix).
Evident throughout the work of Beers and Campbell (1973), Dyer and Rosenthal (1971), and Hawthorne (1973) was the fact that unsettled conditions prevailed among the states with regard to both the content and the timetable of accountability activities. Theil (1976) concluded that there was still a lack of general communication among states regarding the progress of accountability efforts and that identical mistakes in developing programs was the result. A review of the most recent compilation of accountability-related conditions (Hawthorne, 1974, pp. 15-98) supports the unsettled state of affairs.

Efforts to gather information through which the total picture could be clarified included corresponding with all chief state school officers in the United States in June 1975 requesting copies of each state's educational goals, an ERIC search of the literature in September 1975, a search of the literature by the Comprehensive Dissertation Query Service in October 1975 and resulting correspondence with the Cooperative Accountability Project of the Education Commission of the States.

An ERIC search revealed the Education Commission of the States to be the authoritative source for literature related to all components of state-level accountability activities. These publications adequately reflected the fluid condition of the activities.

Hawthorne (1973) stated:

Legislation on accountability is in a fluid situation; in many states a bill is likely to be introduced during several succeeding legislative sessions. Not all are enacted into law, as happened in Georgia, Illinois, New Jersey and Oklahoma in the 1971-1972 session, but Georgia, Illinois, and Oklahoma plan to reintroduce the bills, probably with some changes, during the 1973 session. New Jersey submitted a second bill that is still pending with some accountability features in May 1972. Other
states anticipating new legislation being introduced in 1973 are Connecticut, Indiana, Kansas, Maryland, Massachusetts, Minnesota, Nevada, New York, North Carolina, Oregon, Rhode Island, Texas and Wyoming. (p. 2).

To keep abreast of legislation being passed or rejected required almost daily attention to the topic. Attempting to report on the content of the situation, Hawthorne (1973) stated:

The purpose of this report is to focus on the kinds of legislation that are being enacted by the states and to point out characteristics, omissions, and trends in the legislation. This task has turned out to be difficult for several reasons. Accountability legislation ranges in content from comprehensive statutes embodying several key components of accountability, such as Colorado's 1971 Articles 41 and 42, to broad, generalized authorizations for an accountability or state testing and evaluation program; i.e., Pennsylvania's Act of 1963 or Massachusetts' Willis-Harrington Act of 1965. (p. 2)

For the purpose of this research, an attempt was made to select four states which had experienced the infancy suggested by Baker (1973, p.8) related to accountability activities. As illustrated in the literature, the status of accountability activities in various states was still in a very fluid condition. A survey specifically related to accountability activities at the local district level might be questionable in states not having experienced the process at some length.

To initiate the process of selecting states in which to conduct research on accountability-related activities required the identification of commonalities among states. It was determined that the first commonality would be the status of conditions at a given point in time. Intensive review of published materials revealed that the situation was adequately and thoroughly described through the year 1973. It was determined to use the year 1973 to compare conditions in the various states for the purpose of selecting subjects.
It next appeared important to determine a common basis for comparison among states. This included identifying major components of the overall accountability process by which states could be compared. For this purpose, five criteria were developed which reflected the major components of accountability. These criteria were:

1. The existence of legislation related to accountability in the state by the year 1973.
2. The existence of a statewide assessment program designed to measure educational outcomes by the year 1973.
3. The existence of statewide educational goals by 1973 which reflected citizen involvement in their determination.
4. The existence of statewide adoption of educational goals by the legislature as of 1973.

Using the work of Hawthorne (1974), conditions in all states were analyzed with reference to their meeting the criteria specified. Twenty-three states met none of the criteria specified. Four states met only one of the criteria. In all four cases this was criterion one, the existence of accountability-related legislation. Three states met three of the criteria, while four of the states met all but one of the criteria. Twenty-seven states had enacted accountability legislation, fifteen had developed a statewide assessment program, citizens were involved in the goal-setting process in sixteen states, state-level educational goals had been adopted by the legislatures of fourteen states, and only four states
legislatures required state-level goals by 1973. Table 1 contains an illustration of the existence of accountability components among fifty states and the District of Columbia.

TABLE 1.—A comparison of the existence of selected accountability components in fifty states and the District of Columbia as of 1973

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On the basis of this predetermined selection process, the states of Colorado, Maryland, Michigan, and Rhode Island were selected as the states in which to conduct the research. Resulting from this selection process were four states with much in common regarding the timetable and content of accountability activities, but a divergence in the number of school systems within each state.

Specifically, located in Michigan were 544 public school systems including grades K-12, while there were 179 such systems in Colorado, 30 in Rhode Island, and 24 in Maryland. This provided a total of 766 subjects on which the research could be conducted. This unevenness in numbers resulted in the decision to treat the total population as one sample in the research.

Instrumentation

The instrument used in this study was developed by the writer and his adviser. It is a six-item survey printed on a postal card (appendix D). Subjects were asked to respond to questions which would indicate their school-district practices as related to each of six items. These responses were given in the form of check marks located in one of five ranks:

- **High** 1 - Always
  2 - Usually
  3 - Sometimes
  4 - Infrequently
- **Low** 5 - Never

Questions used in the survey were formulated to gather data directly related to the extent of use local districts made of state-
Q uestion one e x p l o red  the firs t area of inves tig a tio n  specified in the purpose of the study. Respondents were asked to indicate conditions in their school systems related to the use made of state-level educational goals in the development of local-district goals.

Q uestion two asked respondents to make the same indication regarding local-school-district use of state-level educational goals in determining local district educational programs. This was the second area specified for investigation in the purpose of the study.

Q uestion three e x p l o red  the th ir d  a rea  in d ic a te d  in  the purpose statement. Respondents were asked to indicate their feelings as chief local-district school officers regarding the desire of their state departments of education that local-district and state-level educational goals be compatible.

Q uestion four asked respondents to indicate their feelings regarding whether their state's assessment program was structured to evaluate educational outcomes in light of state-level goals.

Q uestion five p u rsue d  the f if t h  a rea  of inv es tig a tio n  c ite d  in  the purpose statement. Respondents were asked to indicate their feelings as to whether their state's assessment program was an adequate vehicle for measuring attainment of state-level goals by local districts.

Q uestion six e x p l o red  the f in a l area listed in the purpose statement. Respondents were asked to specify one of the ranks on the survey instrument related to whether state-level educational goals gave purpose and direction to the educational programs in
their state.

Since the study concerned itself with school district size as related to accountability activities, the request was made to designate the student population. The population groups were classified as "small" (under 3,000), "medium" (3,001 to 10,000), and "large" (over 10,000).

Collection of Data

Since subjects in the sample were located in geographically unrelated areas, the mailed questionnaire appeared to represent the most effective and efficient manner of communication. Obstacles to the attainment of a high percentage of returns were considered. To alleviate the usual dilemma of outdated lists of names and addresses, letters requesting the names and addresses of local school districts and superintendents were mailed to the chief state school officers of the four states involved in the study. These were returned readily by all four state superintendents. The design of the questionnaire was assumed to have alleviated the problem of requiring extensive reading and writing by the respondents. Pre-testing was determined to pose a valid method of eliminating potential problems. The pretesting process involved a small group of twenty public school superintendents in a state which was not included in the research. Public school superintendents were selected for the pretesting procedure due to the similarity of their role to that of the respondents.

Participants in the pretesting process were asked to comment regarding the questionnaire in terms of factors such as readability, clarity of the questions asked, specificity of information requested,
and the general design of the research format. Information of value resulting from pretesting activity was:

1. Concern that the cover letter might be mistaken for advertising, thus limiting the return percentage.

2. Concern about the size of the print—two persons felt that the print was too small.

3. Concern that despite the fact that anonymity was assured for the duration of the research, inclusion of the "I.D." space on the questionnaire might raise doubts—as pointed out by one pretest participant.

One means of increasing the rate of return was the use of the postal card technique. Briefly, it consists of providing a postal card upon which respondents are asked to place seven check marks to represent their school district's activities or position related to each of the six items. The postal card was prestamped and could be returned with no further effort on the part of the respondent. The covering letter (appendix C) included an explanation for the request and encouraged a prompt response.

As seen in illustration 2, fourteen calendar days after the initial mailing, 58 percent return had been received. At this point a second mailing was made with covering letter and stamped postal card to all members of the sample from whom a return had not been received. Fourteen calendar days beyond this date, a total of 73 percent of the total number of returns had been received. A third mailing, with a covering letter similar to the second was sent out to all nonrespondents eighteen calendar days later. The final usable returns totalled 608 or 80 percent of the sample.
Illustration 2—Illustration of elapsed time/return relationship of questionnaire

While the Research Division of the National Education Association indicates a fifty-seven day duration for achieving optimum return rates (Isaac, 1975, p. 93) the ten-day period following the forty-six day period at which 80 percent was achieved saw no additional responses. It was determined at that point to proceed to analysis with the 80 percent usable returns.

Treatment of Data

The null hypotheses were based upon a theoretical equal distribution of selections made by respondents among the five ranks for each of the six questions tested. To test the null hypotheses, the appropriate statistical test needed to concern itself with the degree of agreement between their theoretical distribution and the
actual distribution resulting from respondents' choices.

Since there was one sample involved in the research and since data generated were ordinal and concerned with comparing an observed distribution with a theoretical one, the Kolmogorov-Smirnov nonparametric test was applied. This goodness-of-fit test is designed to determine whether the distribution of choices in the sample could reasonably be assumed to have come from a larger population having the theoretical distribution.

The test involves specifying the cumulative frequency distribution which would occur under the theoretical distribution and comparing it with the observed cumulative distribution. The Kolmogorov-Smirnov test determines the point at which the greatest divergence between the theoretical and observed distribution occurs. A specified sampling distribution indicates whether the divergence is likely on the basis of chance.

In the formula for computing, \( f \) equals the number of subjects choosing a specific rank, \( F_0(X) \) equals the theoretical cumulative distribution of choices under Ho, and \( S_n(X) \) equals the cumulative distribution of observed scores. Under the null hypotheses, it is expected that for each value of \( X \), \( S_n(X) \) will be fairly close to \( F_0(X) \). The Kolmogorov-Smirnov test focuses on the point where these two show the greatest divergence. The largest value of \( F_0(X) - S_n(X) \) is the maximum deviation, \( D \).

The sampling distribution of \( D \) under Ho is known up to an \( N=35 \). For an \( N \) exceeding 35, \( D \) is computed. The formula for computing \( D \) for a significance level of \( p=.05 \) is \( 1.36 \sqrt{N} \).
Questionnaire items were tested under the null hypotheses in specified categories. The Kolmogorov-Smirnov test was computed on each of the six hypotheses in three categories: the total sample of 608 respondents, each of the four states in the sample, and for each of the three groups of school districts classified by size.

Steps in the application of the Kolmogorov-Smirnov analysis were:

1. Specification of the theoretical cumulative distribution expected under the null hypothesis.

2. Arranging observed scores in a cumulative distribution, pairing each interval of \( Sn(X) \) with the comparable interval of \( Fo(X) \).

3. Subtracting \( Sn(X) \) from \( Fo(X) \) for each step in the cumulative distribution.

4. Computing \( D - D = \text{maximum } Fo(X) - Sn(X) \).

5. Finding the probability associated with occurrence under the null hypotheses. If that \( p \) is \( \geq a \), the null hypothesis is rejected (illustration 3, appendix E).

The data were computer scored with each of the six null hypotheses tested at the .05 level of significance.

In describing the methods and procedures utilized to conduct the research in this chapter, the design of the research was specified to include the statement of hypotheses in the null form, the selection of subjects, design and use of the instrument, data collection procedures, and data treatment techniques.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Data resulting from responses by the 608 subjects participating in the study are presented and analyzed sequentially for hypotheses one through six in this chapter. Percentage distributions of respondents' selections of ranks appearing on the survey instrument are listed for each of the six hypotheses. Data were specified in this manner for the overall sample and for each of the seven subgroups which included the states of Colorado, Maryland, Michigan, and Rhode Island and for school districts classified as small (under 3,000 students), medium (3,001 to 10,000 students), and large (over 10,000 students). Sizes were arbitrarily assigned by the researcher.

Results of the survey were analyzed by use of the Kolmogorov-Smirnov nonparametric test. This test compared the actual distribution of observed respondent selection of ranks offered, with a theoretical random distribution of no differences expected in the number of times each rank will be selected for the null hypothesis. It locates that point in the comparison of the two distributions where the divergence between the two is the greatest. That point of maximum divergence is assigned D. The numerical D, stated in decimal form, is compared to a critical value of D that must be equalled or exceeded by the D representing the maximum divergence, for that divergence, or numerical D, to be significant at the
specified level for this study. Each of the six hypotheses were tested for the overall sample and for each of the subgroups specified. Results of the analysis were presented sequentially for hypotheses one through six.

Of the 766 questionnaires sent out, a total of 608 or 80 percent was available for analysis. From the state of Colorado, 147 of 179, or 82 percent of the questionnaires were returned. From the state of Maryland 22 of 24, or 91 percent of the questionnaires were returned. From the state of Michigan 411 of 544, or 76 percent of the questionnaires were returned. From the state of Rhode Island, 28 of 30, or 93 percent of the questionnaires were returned. Of the 608 school districts classified by size, 373 questionnaires were returned from small-sized districts, 183 from medium-sized districts, and 52 from large-sized districts. Specification of the percentage of returns for subgroups of school district size is omitted as school district size was an item indicated on the questionnaire by respondents.

State Goals and Local Goal Development

Hypothesis one examined the extent to which superintendents felt their state's educational goals were used in the development of educational goals for their local school districts. The statement to which subjects were asked to respond by indicating a preference among the choices of "always," "usually," "sometimes," "infrequently," and "never" was:

As local district goals are developed in our school district, an intentional effort is made to assure they are compatible with the educational goals of our state.
Table 2 presents data related to the responses of subjects to this item.

TABLE 2.—Percentage of respondents selecting each of five ranks related to use of state-level goals in developing local-district goals

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<tr>
<th>Respondent Groups</th>
<th>Percentage Selecting Ranks</th>
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<tr>
<td></td>
<td>Always 1</td>
<td>Usually 2</td>
<td>Sometimes 3</td>
<td>Infrequently 4</td>
<td>Never 5</td>
<td>No Response</td>
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<tr>
<td>Colorado</td>
<td>17.69</td>
<td>44.22</td>
<td>14.29</td>
<td>12.93</td>
<td>10.20</td>
<td>.68</td>
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<td>Maryland</td>
<td>40.91</td>
<td>18.18</td>
<td>18.18</td>
<td>22.73</td>
<td>0.00</td>
<td>0.00</td>
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<td>Michigan</td>
<td>19.46</td>
<td>52.31</td>
<td>16.79</td>
<td>10.46</td>
<td>.97</td>
<td>0.00</td>
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<td>Rhode Island</td>
<td>28.57</td>
<td>32.14</td>
<td>3.57</td>
<td>28.57</td>
<td>7.14</td>
<td>0.00</td>
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<tr>
<td>Small</td>
<td>20.38</td>
<td>52.28</td>
<td>15.28</td>
<td>8.85</td>
<td>3.22</td>
<td>0.00</td>
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<tr>
<td>Medium</td>
<td>17.49</td>
<td>42.08</td>
<td>16.39</td>
<td>20.77</td>
<td>3.28</td>
<td>0.00</td>
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<tr>
<td>Large</td>
<td>28.85</td>
<td>40.38</td>
<td>15.38</td>
<td>7.69</td>
<td>5.77</td>
<td>1.92</td>
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<td>Total Sample</td>
<td>20.23</td>
<td>48.19</td>
<td>15.62</td>
<td>12.34</td>
<td>3.45</td>
<td>.16</td>
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For the overall sample of 607 subjects responding to this item, 293 or 48.19 percent indicated that they usually attempt to seek compatibility with state-level goals as they develop educational goals in their local school districts. Of the 608 superintendents responding, 21 or 3.45 percent indicated they never strive for compatibility with state-level goals in the development of local-district goals. These two figures represent the preferences indicated most often and least often by respondents. A total of 68.42 percent representing 416 of the 607 respondents indicated that
they either always or usually strive for compatibility with state-level goals as local-district goals are developed. Conversely, 96 subjects, or 15.79 percent of the sample, selected the lower two ranks of "infrequently" and "never" related to their striving for local-district and state-level goal compatibility in developing local educational goals. The data indicate that superintendents participating in the study usually strive for compatibility with their state-level goals as local-district goals are developed.

For the subgroup of states, the largest number of respondents indicated that they usually strive for local-district and state-level goal compatibility in the states of Colorado, Michigan, and Rhode Island. In the subgroup of states the largest number of respondents who indicated "usually" to this item was in Michigan where 52.18 percent selected that preference.

The subgroup differing to the greatest extent from the pattern set by the overall sample was Maryland where the largest number of respondents, 40.91 percent, or 9 of 22, indicated that they always strive for compatibility with state-level goals as local-district goals are developed. In Maryland the number of respondents, four, or 18.18 percent of the total, selecting the ranks specified as "usually" or "sometimes" was identical. Not one respondent in Maryland indicated that state-level goals were never considered as local-district goals were developed.

For the subgroup of school districts divided by size, the pattern resembled the overall choices. For all three subgroups, respondents favored the word "usually" to indicate their use of state-level goals in the development of goals in the local districts.
The largest number of times the rank of "usually" was selected was in the subgroup of small-sized school districts where 52.28 percent selected it. The overall pattern of choices in the subgroup of states divided by size resembled the overall pattern in which respondents indicated that they usually consider state-level and local-district goal compatibility to be important as local-district goals are developed.

The null hypothesis tested specified that there would be no significant difference in the number of times respondents would indicate they "always," "usually," "sometimes," "infrequently," and "never" consider state-level goals as local-district educational goals are developed in their school districts. In order to determine if there was a significant difference in the number of times each of the choices were selected, or if any of the choices were favored to a significant extent over the others, the Kolmogorov-Smirnov nonparametric test was applied. This test compared the number of times each rank was selected with the number of times that rank would have been chosen if respondents' choices were in a random pattern. It located that point in the comparison where the largest divergence between what was expected according to randomness and what actually occurred appeared. This point was assigned D. The point of the largest divergence between the random pattern expected and the pattern of observed choices was compared to a critical value of D which must be equalled or exceeded at the specified level of significance, .05 for this study, for the divergence to be statistically significant and not be due to chance.

Had the expected random pattern of responses occurred on
this item, 121.4 respondents would have selected each of the five ranks. The data reveals that 293 respondents, or 171.6 more than would have occurred in the random pattern expected, said they usually consider state-level goals as local-district goals are developed. This represented the largest difference between the random pattern expected and the actual pattern of choices by respondents.

As shown in table 3, application of the Kolmogorov-Smirnov test showed a numerical maximum divergence, or D of .2853. For the divergence to be significant and not due to chance, a D of .055 or larger was required.

TABLE 3.—Differences between the computed maximum divergence and critical value of D required for significance at the .05 level related to state educational goals and local-district goal development

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Number of Respondents</th>
<th>Computed D</th>
<th>Critical Value of D Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>By States</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>146</td>
<td>.2233*</td>
<td>.112</td>
</tr>
<tr>
<td>Maryland</td>
<td>22</td>
<td>.2091</td>
<td>.282</td>
</tr>
<tr>
<td>Michigan</td>
<td>411</td>
<td>.3178*</td>
<td>.067</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>28</td>
<td>.2071</td>
<td>.249</td>
</tr>
<tr>
<td>By Size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>373</td>
<td>.3265*</td>
<td>.070</td>
</tr>
<tr>
<td>Medium</td>
<td>183</td>
<td>.1956*</td>
<td>.100</td>
</tr>
<tr>
<td>Large</td>
<td>51</td>
<td>.3059*</td>
<td>.190</td>
</tr>
<tr>
<td>Total Sample</td>
<td>607</td>
<td>.2853*</td>
<td>.055</td>
</tr>
</tbody>
</table>

* Significant at the .05 level
The computed D of .2853 exceeded this critical value by .2033, indicating that such a large number of respondents indicating that they usually consider state-level goals as local goals are developed represented a significant pattern and was not due to chance.

For the subgroup of states, the maximum divergences between the expected random pattern and the observed choices were significant in two states. The largest maximum divergence was in Michigan where the numerical D of .3178 was shown. Deviations in the pattern of preferences stated by respondents among the five choices from the expected random pattern were not large enough to be significant in the subgroups of Maryland and Rhode Island. Had the expected random pattern resulted, 4.4 subjects would have selected each of the five choices in that state. With the exception of the ranks called "always" selected by 9 respondents and the one called "never" which was selected by none of the respondents, the distribution of choices resembled the expected random pattern, indicating that the numerically stated divergence of .2091 in the "always" category was not significant at the .05 level.

In Rhode Island, the D of .2071 to indicate the point of maximum divergence between the expected random pattern and the observed pattern of responses occurred at the rank called "usually". This did not represent a sizeable enough divergence to state that the pattern was more than a random one and was not due to chance.

For the subgroup of school districts divided by size, the maximum divergence of .3265 for small-sized school districts exceeded its specified critical value of D, or .070 by .2565, to represent the largest difference between the computed D and critical value of D. A total of 195 respondents indicated "usually" for this
item in the small-sized school districts. Had the random pattern of no differences expected for the null hypotheses occurred for this item, 74.6 respondents would have selected each of the five choices. This would indicate that superintendents in small-sized school districts in the sample consider state-level goals to be important to the development of local-district goals to a greater extent than superintendents in the subgroups of medium-sized and large-sized school districts. The maximum divergence of .3059 in large-sized school districts shows a similar pattern, where 21 respondents indicated they usually consider state-level goals as local-district goals are developed, when, had the expected random pattern of no differences occurred as stated in the null hypotheses, 10.2 respondents would have selected that rank.

Medium-sized school districts showed a different pattern. While the maximum divergence of .1956 was significant at the .05 level and occurred in the "usually" category, just as with small, and large-sized districts, the divergence was considerably less than in the other two subgroups by size. No reason for this difference was detectable in the data.

Summarizing the analysis of data related to hypothesis one, the largest number of respondents indicated they usually consider state-level goals as local-district goals are developed. The differences between the random pattern of choices expected for the null hypothesis and the observed choices were significant enough to not be due to chance in the overall sample and in all but two of the subgroups, Maryland and Rhode Island. The point of maximum divergence between the distribution expected on the basis of the null
hypotheses and the observed distribution of respondent choices in the overall sample occurred at the rank called "usually." This was also the case in all subgroups with the exception of Maryland.

State Goals and Local-District Program Determination

Hypothesis two examined the extent to which superintendents felt their state's educational goals were being used in the determination of educational programs in their local school districts. The statement to which subjects were asked to respond by indicating a preference among the choices of "always," "usually," "sometimes," "infrequently," and "never" was:

As local district educational programs are developed in our school district, an intentional effort is made to design them with attainment of our state's educational goals in mind.

Table 4 presents data related to the response of subjects to this item.

For the overall sample of 606 subjects responding to this item, 287 or 47.20 percent indicated that they usually attempt to design educational programs at the local-district level with attainment of state-level goals in mind. Of the 606 superintendents responding, 25 or 4.11 percent indicated they never design local educational programs with attainment of state-level goals in mind. These two figures represent the preferences indicated most often and least often by respondents. A total of 53.48 percent, representing 386 of the 606 respondents, indicated that they either "always" or "usually" design local educational programs with attainment of state-level goals in mind. Conversely, 103 subjects, or 16.94 percent of the sample, selected the lower two ranks of "infrequently" and "never" related to their designing local-district educational
programs with attainment of state-level educational goals in mind.

The data indicate that superintendents participating in the study usually design local-district educational programs with attainment of state-level goals in mind.

TABLE 4.—Percentages of respondents selecting each of five ranks related to use of state-level goals in determining local-district educational programs

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Percentage Selecting Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Always 1</td>
</tr>
<tr>
<td>By States</td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>11.56</td>
</tr>
<tr>
<td>Maryland</td>
<td>31.82</td>
</tr>
<tr>
<td>Michigan</td>
<td>16.30</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>28.57</td>
</tr>
<tr>
<td>By Size</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>15.82</td>
</tr>
<tr>
<td>Medium</td>
<td>16.39</td>
</tr>
<tr>
<td>Large</td>
<td>19.23</td>
</tr>
<tr>
<td>Total Sample</td>
<td>16.28</td>
</tr>
</tbody>
</table>

For the subgroup of states, the largest number of respondents indicated that they usually design local-district educational programs with attainment of state-level goals in mind in the states of Colorado, Maryland, and Michigan. In Rhode Island, an equal number of 8 respondents, or 28.57 percent selected the ranks of "always" and "usually." In the subgroup of states, the largest number of respondents who selected the rank of "usually" was in
Michigan where 49.88 percent, or 205 of the 411 respondents, selected that preference.

The subgroup differing to the greatest extent from the pattern set by the overall sample was Rhode Island where 32.14 percent of the respondents, or 9 of 28 subjects, selected the rank of "infrequently" to indicate their designing of local-district educational programs with attainment of state-level goals in mind. Not one respondent in the state of Maryland indicated a preference for the rank specified as "never" for this item.

For the subgroup of school districts divided by size, the pattern resembled the overall choices. For the three subgroups, respondents indicated they usually design local educational programs with state-level goal attainment in mind. The largest number of times the rank of "usually" was selected was in the subgroup of small-sized school districts where 190 of 373, or 50.94 percent, selected it. The overall pattern of choices in the subgroup of states divided by size resembled the overall pattern in which respondents indicated that they usually design local educational programs with attainment of their state-level goals in mind.

The null hypothesis tested specified that there would be no significant difference in the number of times respondents would indicate they "always," "usually," "sometimes," "infrequently," and "never" consider state-level goal attainment as local-district educational programs are determined in their school districts. In order to determine if there was a significant difference in the number of times each of the choices were selected, or if any of the choices were favored to a significant extent over the others, the Kolmogorov-
Smirnov nonparametric test was applied. This test compared the number of times each rank was selected with the number of times that rank would have been selected if respondents' choices were in a random pattern. It located that point in the comparison where the largest divergence between what was expected according to randomness and what actually occurred, appeared. This point was assigned D. The point of the largest divergence between the random pattern expected and the pattern of observed choices was compared to a critical value of D which must be equalled or exceeded at the specified level of significance, .05 for this study, for the divergence to be statistically significant and not to be due to chance.

Had the expected random pattern of responses occurred on this item, 121.2 respondents would have selected each of the five ranks. The data reveals that 287 respondents, or 165.8 more than would have done so in the random pattern expected, said they usually design local-district educational programs with attainment of their state's educational goals in mind. This represented the largest divergence between the random pattern expected and the actual pattern of choices by respondents.

As shown in table 5, application of the Kolmogorov-Smirnov test showed a numerical maximum divergence, or D of .2730. For the divergence to be significant at the .05 level, and not due to chance, a D of .055 or larger was required.

The computed D of .2730 exceeded this critical value by .218, indicating that such a large number of respondents indicating that they usually consider attainment of state-level goals as local-district educational programs are determined represented a significant pattern and was not due to chance.
TABLE 5.—Differences between the computed maximum divergence and the critical value of D required for significance at the .05 level related to state educational goals and local-district programs.

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Number of Respondents</th>
<th>Computed D</th>
<th>Critical Value of D Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>By States</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>145</td>
<td>.1655*</td>
<td>.113</td>
</tr>
<tr>
<td>Maryland</td>
<td>22</td>
<td>.3273*</td>
<td>.282</td>
</tr>
<tr>
<td>Michigan</td>
<td>411</td>
<td>.2808*</td>
<td>.067</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>28</td>
<td>.1714</td>
<td>.249</td>
</tr>
<tr>
<td>By Size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>373</td>
<td>.2740*</td>
<td>.070</td>
</tr>
<tr>
<td>Medium</td>
<td>182</td>
<td>.1659*</td>
<td>.100</td>
</tr>
<tr>
<td>Large</td>
<td>51</td>
<td>.2824*</td>
<td>.190</td>
</tr>
<tr>
<td>Total Sample</td>
<td>606</td>
<td>.2730*</td>
<td>.055</td>
</tr>
</tbody>
</table>

* Significant at .05 level

For the subgroup of states the divergences between the expected random pattern and the observed choices were statistically significant in the states of Colorado, Maryland, and Michigan. The largest maximum divergence was in Maryland where the numerical D of .3276, was shown. Deviations in the pattern of preferences stated by respondents among the five choices, from the expected random pattern, were not large enough to be significant at the .05 level in Rhode Island. Had the expected random pattern appeared in Rhode Island, 5.6 subjects would have selected each of the five choices in that state. With the exception of ranks identified as "sometimes" and "never," the distribution of choices resembled the
expected random pattern indicating that the numerically stated maximum divergence of .1714 in the "usually" category was not significant at the .05 level.

For the subgroup of school districts divided by size, the maximum divergence of .2740 for small-sized districts exceeded its critical value of D, or .070, by .204 to represent the largest difference between the computed D and its critical value required for significance. A total of 190 respondents indicated "usually" for this item in the small-sized school districts. Had the random pattern of no differences expected for the null hypothesis occurred for this item, 74.6 respondents would have selected each of the five choices. The maximum divergence of .2824 was the largest D among the subgroups of districts divided according to size. This occurred in the subgroup of large-sized school districts where the expected random pattern would have resulted in 10.2 respondents selecting each of the five ranks, but where 24 subjects selected the rank identified as "usually" for that item.

Medium-sized school districts showed a similar pattern, with the numerical D of .1659 exceeding the critical value required for significance of .100 by .065 to be significant at the .05 level and to indicate that the divergence was not due to chance.

Summarizing the analysis of data related to hypothesis two, the largest number of respondents indicated they usually design local-district educational programs with attainment of state-level goals in mind. The differences between the random pattern of choices expected for the null hypothesis and the observed choices were significant enough not to be due to chance in the overall sample and
in all but one of the subgroups, Rhode Island. The point of maximum divergence between the random distribution expected on the basis of the null hypothesis and the observed distribution of respondent choices in the overall sample occurred at the rank called "usually," This was also true in all subgroups with the exception of Rhode Island.

State and Local Goal Compatibility

Hypothesis three examined the extent to which superintendents in the study felt their state departments of education expressed a desire for local-district and state-level goal compatibility. The statement to which subjects were asked to respond by indicating a preference among the choices of "always," "usually," "sometimes," "infrequently," and "never" was:

Our state department of education expresses the desire that our local-district goals and state-level goals be compatible.

Table 6 presents the data related to the responses of subjects to this item.

For the overall sample of 595 subjects responding to this item, 242, or 39.80 percent, indicated they felt that their state departments usually expressed a desire for state-level and local-district goal compatibility. Of the 595 superintendents responding, 32, or 5.26 percent, indicated they felt their state departments of education never expressed a desire for state-level and local-district goal compatibility. These two figures represent the most often and least often preferences of respondents. A total of 65.79 percent, representing 400 of the 608 respondents, indicated that they felt their state departments of education either always or
usually expressed a desire for local-district and state-level goal compatibility. Conversely, 93 subjects, or 15.79 percent, selected the lower ranks of "infrequently" and "never" related to this item. The data indicate that superintendents feel that state departments of education in the states which are part of the sample usually express a desire for local-district and state-level goal compatibility.

### TABLE 6

Percentage of respondents selecting each of five ranks related to the expressions of their state department of education's desire for local-district and state-level goal compatibility

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Percentage Selecting Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Always</td>
</tr>
<tr>
<td><strong>By States</strong></td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>13.61</td>
</tr>
<tr>
<td>Maryland</td>
<td>27.27</td>
</tr>
<tr>
<td>Michigan</td>
<td>29.92</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>32.14</td>
</tr>
<tr>
<td><strong>By Size</strong></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>27.08</td>
</tr>
<tr>
<td>Medium</td>
<td>24.59</td>
</tr>
<tr>
<td>Large</td>
<td>23.08</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td>25.99</td>
</tr>
</tbody>
</table>

For the subgroup of states, the largest number of respondents indicated their state departments of education usually express a desire for state-level and local-district goal compatibility in the states of Colorado, Maryland, and Michigan. Rhode Island was
the exception, where a high of 32.14 percent, or 9 of 28 respondents, selected the rank of "always" for this item. In the subgroup of states, the largest number of respondents selected the rank of "usually" in Michigan where 43.90 percent selected it. The subgroup differing to the greatest extent from the pattern set by the overall sample was Rhode Island, where the largest number of respondents, 9 of 28, or 32.14 percent, indicated they felt their state department of education always expressed a desire for state-level and local-district goal compatibility. Not one respondent from Maryland indicated a preference for the rank of "never" related to this item.

For the subgroup of school districts divided by size, the pattern reflected the overall sample. For all three subgroups, respondents favored the word "usually" in terms of expressions by their state department of education, that state-level and local-district goals be compatible. The percentage of respondents preferring the rank of "usually" was almost identical in the subgroups of small-sized and large-sized districts at 41.29 percent and 42.31 percent, respectively. The overall pattern of choices in the subgroup of states divided by size, resembled the overall pattern in which respondents indicated that they felt state departments of education usually expressed a desire for local-district and state-level goal compatibility.

The null hypothesis tested specified that there would be no significant difference in the number of times respondents would indicate they "always," "usually." "sometimes." "infrequently." or "never" felt their state department of education expressed a desire for state-level and local-district goal compatibility. In order to
determine if there was a significant difference in the number of times each of the choices were selected, or if any of the choices were favored to a significant extent over the others, the Kolmogorov-Smirnov nonparametric test was applied. This test compared the number of times each rank was selected with the number of times that rank would have been chosen if respondents' choices were in a random pattern. It located that point in the comparison where the largest divergence between what was expected according to randomness and what actually occurred appeared. This point was assigned D. The point of the largest divergence between the random pattern expected and the pattern of observed choices was compared to a critical value of D which must be equalled or exceeded at the specified level of significance, .05 for this study, for the divergence to be statistically significant and not to be due to chance.

Had the expected random pattern of responses occurred on this item, 119 respondents would have selected each of the five ranks. The data reveals that 242 respondents, or 123 more than would have occurred in the random pattern expected, said their state departments of education usually express a desire for local-district and state-level goal compatibility. This represented the largest divergence between the random pattern expected and the actual pattern observed.

As shown in table 7, application of the Kolmogorov-Smirnov test showed a numerical maximum divergence, or D, of .2723. For the divergence to be significant at the .05 level and not due to chance, a D of .055 or larger was required.
TABLE 7.—Differences between the computed maximum divergence and the critical value of D required for significance at the .05 level related to state-level and local-district goal compatibility.

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Number of Respondents</th>
<th>Computed D</th>
<th>Critical Value of D Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>142</td>
<td>.1042</td>
<td>.114</td>
</tr>
<tr>
<td>Maryland</td>
<td>22</td>
<td>.2364</td>
<td>.282</td>
</tr>
<tr>
<td>Michigan</td>
<td>403</td>
<td>.3519*</td>
<td>.067</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>28</td>
<td>.1714</td>
<td>.249</td>
</tr>
<tr>
<td><strong>By Size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>364</td>
<td>.3005*</td>
<td>.071</td>
</tr>
<tr>
<td>Medium</td>
<td>181</td>
<td>.2133*</td>
<td>.101</td>
</tr>
<tr>
<td>Large</td>
<td>50</td>
<td>.2800*</td>
<td>.192</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td>595</td>
<td>.2723*</td>
<td>.055</td>
</tr>
</tbody>
</table>

* Significant at .05 level

The computed D of .2723 exceeded this critical value by .0273, indicating that such a large number of respondents indicating that their state departments usually express a desire for local-district and state-level goal compatibility represented a significant pattern and was not due to chance.

For the subgroup of states, the divergence between the expected random pattern and the observed choices was large enough to be statistically significant in one state, Michigan. The largest maximum divergence between the expected and observed distributions occurred in Michigan where a numerical D of .3519 exceeded the critical value required for significance of .067 by .2849.
Deviations in the pattern of preferences stated by respondents among the five choices from the expected random pattern did not result in divergences between the expected and observed large enough to be significant in Colorado, Maryland, and Rhode Island. In those three subgroups, maximum divergences of .1042, .2364, and .1714, respectively, for the three states were not statistically significant. This pattern represented a difference from the levels of significance occurring with regard to the other hypotheses in that the usual pattern was one or two Ds failing to be statistically significant. In this case, three of the four subgroups fell into the category as the point of maximum divergence between the expected random pattern and the observed pattern of responses was not significant at the .05 level.

For the subgroup of school districts divided by size, the maximum divergence of .3005 for small-sized school districts exceeded its critical value of D required for significance at the .05 level by .2295, to represent the largest difference between the computed D and the critical value of D. A total of 154 respondents indicated "usually" for this item in the small-sized school districts. Had the random pattern of no differences expected for the null hypothesis occurred for this item, 72.8 respondents would have selected each of the five choices.

Medium-sized school districts showed a similar pattern. Had the no-differences random pattern occurred for this subgroup, 36.2 respondents would have selected each of the five ranks. The numerical D of .2133, representing selection of the rank of "usually" by 66 subjects, results in a point of maximum divergence which is
statistically significant at the .05 level.

For the subgroup of large-sized school districts, the no-differences random distribution expected would have shown 10 subjects selecting each of the five ranks. In the observed distribution, 22 subjects selected the rank to indicate that their state departments of education usually express a desire for state-level and local-district goal compatibility to result in a numerical D of .2800 which was large enough to be significant at the .05 level and not to be due to chance.

Summarizing the analysis of data related to hypothesis three, the largest number of respondents indicated that their state departments of education usually express a desire for state-level and local-district goal compatibility. The differences between the random pattern of choices expected for the null hypothesis and the observed choices were significant enough not to be due to chance in the overall sample and in four of seven subgroups; Michigan, small-sized districts, medium-sized districts, and large-sized districts. The point of maximum divergence between the random distribution expected on the basis of the null hypothesis and the observed distribution of respondent choices in the overall sample occurred at the rank called "usually".

State Goals and Assessment Program Structure

Hypothesis four examined whether respondents felt that educational assessment programs in their states were structured to evaluate educational outcomes in light of educational goals. The statement to which subjects were asked to respond by indicating a preference among the choices of "always," "usually," "sometimes,"
"infrequently," and "never" was:

Our state's assessment program is structured to evaluate educational outcomes in light of state-level educational goals.

Table 8 presents data related to the responses of subjects to this item.

**TABLE 8.—Percentage of respondents selecting each of five ranks related to their state's assessment program measuring educational outcomes in light of state-level goals**

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Percentage Selecting Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Always</td>
</tr>
<tr>
<td>Colorado</td>
<td>6.80</td>
</tr>
<tr>
<td>Maryland</td>
<td>9.09</td>
</tr>
<tr>
<td>Michigan</td>
<td>36.50</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>17.86</td>
</tr>
<tr>
<td>Small</td>
<td>28.95</td>
</tr>
<tr>
<td>Medium</td>
<td>25.14</td>
</tr>
<tr>
<td>Large</td>
<td>25.00</td>
</tr>
<tr>
<td>Total Sample</td>
<td>27.47</td>
</tr>
</tbody>
</table>

For the overall sample of 595 subjects responding to this item, 218 or 35.86 percent indicated that they feel their state's assessment program is usually structured to measure educational outcomes in light of state-level goals. Of the 595 superintendents responding, 30 or 4.93 percent indicated their state's assessment program was never structured to measure educational outcomes in
light of state-level goals. These two figures represent the preference indicated most often and least often by respondents. A total of 63.33 percent, or 385 of the 608 respondents, indicated that their state's assessment program was either "always" or "usually" structured to measure educational outcomes in light of state-level goals. Conversely, 103 respondents, representing 16.94 percent, selected the ranks of "infrequently" and "never" for this item. The data indicates that superintendents feel their state assessment programs are usually structured to measure educational outcomes in light of state-level educational goals.

For the subgroup of states, the largest number of respondents indicated that the rank of "usually" best represented the structure of their states assessment program to measure educational outcomes in light of state-level goals in all four of the subgroups. The largest percentage selecting the rank of "usually" was in Maryland, where 54.55 percent of the respondents chose it. In Colorado, 29.92 percent, representing 44 of 147 respondents, selected the rank of "usually" for the smallest majority among the four states. Colorado was also the subgroup which differed to the greatest extent from the pattern set by the overall sample as the percentage of respondents selecting the five ranks was most evenly divided among the five preferences in terms of the state's assessment program being structured to measure educational outcomes in light of state-level educational goals. In Maryland, not one respondent selected the rank of "never" related to this item.

For the subgroup of school districts divided by size, the pattern resembled the overall choices. For all three subgroups,
respondents favored the rank identified as "usually" to indicate the structuring of their state's assessment program to measure educational outcomes in light of state-level goals. The largest number of times the rank of "usually" was selected among the three subgroups was 46.15 percent, or by 24 of 52 respondents, in the large-sized school districts. The overall pattern of choices in the subgroup of states divided by size resembled the overall pattern in which respondents indicated they felt their state's assessment program was usually structured to measure educational outcomes in light of state-level goals at the local-district level.

The null hypothesis tested specified that there would be no significant difference in the number of times respondents would indicate their state's assessment program was "always," "usually," "sometimes," "infrequently," and "never" structured to measure educational outcomes in light of state-level goals at the local-district level. In order to determine if there was a significant difference in the number of times each of the choices was selected, or if any of the choices were favored to a significant extent over the others, the Kolmogorov-Smirnov nonparametric test was applied. This test compared the number of times each rank was selected with the number of times that rank would have been chosen if respondents choices were in a random pattern. It located that point in the comparison where the largest divergence between what was expected according to randomness and what actually occurred, appeared. This point was assigned D. The point of the largest divergence between the random pattern expected and the pattern observed choices was compared to a critical value of D which must be equalled or exceeded.
at the specified level of significance, .05 for this study, for the divergence to be statistically significant and not to be due to chance.

Had the expected random of responses occurred on this item, 119 respondents would have selected each of the five ranks. The data reveals that 218, or 99 more than would have occurred in the random pattern expected, said their state's assessment programs usually structured to measure educational outcomes in light of state-level goals in local school districts. The rank of "usually" is the rank at which the maximum divergence occurred between the random pattern of no differences expected and the actual pattern of responses by subjects.

As shown in table 9, application of the Kolmogorov-Smirnov test showed a numerical maximum divergence, or D of .2471. For the divergence to be significant and not due to chance, a D of .055 or larger was required.

The computed D of .2471 exceeded this critical value by .1921, indicating that such a large number of respondents indicating they usually consider their state's assessment program to be structured to measure state-level goals represented a significant pattern and was not due to chance.

For the sub-group of states, the divergences between the expected random pattern of no differences and the observed choices were significant. The largest maximum divergence was in Maryland where the numerical D of .3545 was shown. Deviations in the pattern of preferences stated by respondents among the five choices from the expected random pattern were not large enough to be
significant in the subgroup of Rhode Island. With the exception of
the rank called "usually" and "sometimes," selected by 9 and 3
respondents, respectively, in Rhode Island, the distribution of choices
resembled the expected random pattern, indicating the maximum diver­
gence, or numerical D of .1000 was not significant at the .05 level.

TABLE 9.--Differences between the computed maximum divergence and
critical value of D required for significance at the .05 level
related to state goals and assessment program structure

<table>
<thead>
<tr>
<th>By States</th>
<th>Respondent Groups</th>
<th>Number of Respondents</th>
<th>Computed D</th>
<th>Critical Value of D Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Colorado</td>
<td>137</td>
<td>.1270*</td>
<td>.116</td>
</tr>
<tr>
<td></td>
<td>Maryland</td>
<td>22</td>
<td>.3545*</td>
<td>.282</td>
</tr>
<tr>
<td></td>
<td>Michigan</td>
<td>408</td>
<td>.3426*</td>
<td>.067</td>
</tr>
<tr>
<td></td>
<td>Rhode Island</td>
<td>28</td>
<td>.1000</td>
<td>.249</td>
</tr>
<tr>
<td>By Size</td>
<td>Small</td>
<td>360</td>
<td>.2917*</td>
<td>.071</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>183</td>
<td>.1760*</td>
<td>.100</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>51</td>
<td>.3255*</td>
<td>.190</td>
</tr>
<tr>
<td></td>
<td>Total Sample</td>
<td>595</td>
<td>.2471*</td>
<td>.055</td>
</tr>
</tbody>
</table>

* Significant at the .05 level

For the subgroup of school districts divided by size, the
maximum divergence between the expected random pattern of no differ­
ences and the observed choices of respondents of .2917 for small­
sized school districts exceeded its specified critical value of .071
by .2207 to represent the largest difference between the computed D
and the critical value of D. A total of 141 of 360 respondents
indicated "usually" for this item in small-sized school districts. Had the random pattern of no differences expected for the null hypothesis occurred for this item, 72 respondents would have selected each of the five choices. This would indicate that superintendents in the small-sized school districts in the sample feel that their state's assessment program is usually structured to measure educational outcomes in light of state-level goals.

Medium-sized school districts showed a somewhat different pattern. With 142 of 183 respondents selecting the ranks of "usually," "always," and "sometimes," the point of maximum divergence occurred at the third rank, called "sometimes." The numerical D of .1760 was statistically significant at the .05 level and not due to chance.

The pattern in large-sized school districts resembled the pattern established by the overall sample. The maximum divergence between the expected random pattern of no differences and the observed choices showed a numerical D of .3255 which exceeded the critical value of D of .190 specified for significance at the .05 level.

Summarizing the analysis of data related to hypothesis, four the largest number of respondents indicated they usually consider their state's assessment program to be structured to measure attainment of state-level goals at the local district level. The differences between the random pattern of no differences among choices expected for the null hypothesis and the observed choices of respondents were significant enough not to be due to chance in the overall sample in all subgroups but Rhode Island. The point of
maximum divergence between the distribution expected on the basis of
the null hypothesis and the observed distribution occurred at the
rank called "usually" with the exception of medium-sized districts
where it occurred at the rank called "sometimes."

State Goals and Assessment Program Adequacy

Hypothesis five examined the extent to which superintendents
felt their state's assessment program was adequate as a vehicle for
measuring attainment of state-level goals at the local-district
level. The statement to which subjects were asked to respond by
indicating a preference among the choices of "always," "usually:"
"sometimes," "infrequently," and "never" was:

Our state's assessment program is an adequate vehicle for
measuring attainment of state-level goals by local districts.

Table 10 presents data related to the responses of subjects
to this item.

For the overall sample of 595 subjects responding to this
item, 245 respondents, or 40.30 percent of the overall sample,
indicated that their state's assessment program was sometimes ade-
quate for measuring attainment of state-level goals at the local-
district level. Of the 595 superintendents responding, 23, or 3.78
percent, indicated that their state's assessment program was never
an adequate vehicle for measuring attainment of state-level goals
at the local-district level. These two figures represent the pre-
ferences indicated most often and least often by respondents. A
total of 199 subjects representing 32.73 percent of the respondents
selected the upper two ranks called "always" and "usually." Con-
versely, 151 subjects or 24.84 percent of those responding
selected the lower ranks of "infrequently" and "never" related to the adequacy of their state's assessment program to measure attainment of state-level goals at the local-district level. Responses to this item show a different pattern with a greater balance being shown between the upper two ranks and lower two ranks than for any of the other items. The percentage of respondents selecting the upper two ranks generally exceeds the number selecting the lower two ranks.

TABLE 10.—Percentage of respondents selecting each of five ranks related to state-level goals and assessment program adequacy

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Percentage Selecting Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Always</td>
</tr>
<tr>
<td><strong>By States</strong></td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>2.72</td>
</tr>
<tr>
<td>Maryland</td>
<td>0.00</td>
</tr>
<tr>
<td>Michigan</td>
<td>4.14</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>7.14</td>
</tr>
<tr>
<td><strong>By Size</strong></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>3.75</td>
</tr>
<tr>
<td>Medium</td>
<td>3.28</td>
</tr>
<tr>
<td>Large</td>
<td>5.77</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td>3.78</td>
</tr>
</tbody>
</table>

For the subgroup of states, the largest number of respondents indicated that their state's assessment program sometimes provided an adequate vehicle for measuring attainment of state-level
goals at the local-district level. This rank was selected most often in all four subgroups, with Maryland being the highest at 45.45 percent, and Colorado the lowest at 27.89 percent.

The distribution of percentages among the five ranks was very similar for all four subgroups and resembled the pattern established for the overall sample. In the state of Maryland, not one respondent selected the rank of "always" related to this item.

For the subgroup of school districts divided by size, the pattern resembled the selections in the overall sample. The largest number of respondents in all three subgroups indicated that their state's assessment program was sometimes an adequate vehicle for measuring attainment of state-level goals at the local-district level, with the highest percentage selecting that rank in medium-sized districts at 44.26 percent and the lowest percentage in large-sized districts at 38.46 percent.

The null hypothesis tested specified that there would be no significant difference in the number of times respondents would indicate they "always," "usually," "sometimes," "infrequently," or "never" felt that their state's assessment program was an adequate vehicle for measuring attainment of state-level goals at the local-district level. In order to determine if there was a significant difference in the number of times each of the choices were selected, or if any of the choices were favored to a significant extent over the others, the Kolmogorov-Smirnov nonparametric test was applied. This test compared the number of times each rank was selected with the number of times that rank would have been chosen if respondents choices were in a random pattern of no differences. It located that
point in the comparison where the largest divergence between what was expected according to randomness and what actually occurred, appeared. This point was assigned D. The point of greatest divergence between the random pattern of no differences expected and the pattern of observed choices was compared to a critical value of D which must be equalled or exceeded at the specified level of significance, .05 for this study, for the divergence to be statistically significant and not due to chance.

Had the expected random pattern of no differences in the responses occurred on this item, 119 respondents would have selected each of the five ranks. The data reveals that a total of 245 respondents, or 126 more than would have occurred in the random pattern expected, said that sometimes their state's assessment program was an adequate vehicle for measuring attainment of state-level goals at the local-district level. This represented the largest difference between the random pattern expected and the actual pattern of subjects responses.

As shown in table 11, application of the Kolmogorov-Smirnov test showed a numerical maximum divergence, or D, of .1613. For the divergence to be significant and not due to chance, a D of .055 or larger was required.

The computed D of .1613 exceeded this critical value by .1063, indicating that such a large number of respondents indicating that they felt their state's assessment program was sometimes adequate for measuring attainment of state-level goals at the local-district level represented a significant pattern and was not due to chance.
TABLE 11.—Differences between the computed maximum divergence and critical value of D required for significance at the .05 level related to state-level goals and assessment program adequacy

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Number of Respondents</th>
<th>Computed D</th>
<th>Critical Value of D Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>By States</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>138</td>
<td>.1710*</td>
<td>.115</td>
</tr>
<tr>
<td>Maryland</td>
<td>22</td>
<td>.2182</td>
<td>.282</td>
</tr>
<tr>
<td>Michigan</td>
<td>407</td>
<td>.2231*</td>
<td>.067</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>28</td>
<td>.1857</td>
<td>.249</td>
</tr>
<tr>
<td><strong>By Size</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>363</td>
<td>.1769*</td>
<td>.071</td>
</tr>
<tr>
<td>Medium</td>
<td>183</td>
<td>.1672*</td>
<td>.100</td>
</tr>
<tr>
<td>Large</td>
<td>49</td>
<td>.1551</td>
<td>.194</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td>595</td>
<td>.1613*</td>
<td>.055</td>
</tr>
</tbody>
</table>

* Significant at the .05 level

For the subgroup of states, the maximum divergences between the expected and observed patterns were significant in Colorado and Michigan. The largest maximum divergence was in Michigan at .2231. Deviations in the pattern of preferences stated by respondents among the five choices from the expected random pattern were not large enough to be significant in Maryland and Rhode Island. In the state of Rhode Island, the distribution of respondent choices among the five ranks was nearly the same as the 5.6 subjects per rank which was expected in the random distribution. Exceptions to this pattern in Rhode Island were ranks called "always" and "sometimes." This explains why the maximum divergence was not large enough to be
significant.

For the subgroup of school districts divided by size, the maximum divergence of .1769 for small-sized school districts exceeded its specified critical value of $D$, or .071, by .1059 to represent the largest difference between the computed $D$ and critical value of $D$. A total of 144 respondents indicated "usually" for this item in small-sized school districts. Had the random pattern of no differences expected for the null hypothesis occurred for this item, 72.6 respondents would have selected each of the five choices. This would indicate that superintendents in small-sized school districts feel that their state's assessment program is usually adequate for measuring attainment of state-level goals at the local-district level.

The pattern in medium-sized school districts was much like that shown in small-sized districts. The computed $D$, representing the point of maximum divergence between the expected and observed distribution of respondents' choices, was .1672, which exceeded the critical value required by .0672. In large-sized school districts, the point of maximum divergence between the expected random pattern of no differences and the pattern of observed choices by respondents was not large enough to be significant at the .05 level.

Summarizing the analysis of data related to hypothesis five, the largest number of respondents indicated they felt the state's assessment program was sometimes adequate for measuring attainment of state-level goals at the local-district level. The differences between the random pattern of choices expected for the null hypothesis and the observed choices were, at the point of
their maximum divergence, significant enough not to be due to chance in the overall sample and in all but three of the subgroups, Maryland, Rhode Island, and small-sized districts. The data would indicate that the rank called "sometimes" was preferred for this item.

State Goals Providing Direction and Purpose

Hypothesis six examined the extent to which local district superintendents in the study felt that their state-level goals were providing purpose and direction to educational programs in the local districts of the state. The item to which respondents were asked to respond by indicating a preference among the choices of "always," "usually," "sometimes," "infrequently," and "never" was:

The educational goals of our state give purpose and direction to the educational program of our state.

Table 12 presents data related to the responses of subjects to this item.

For the overall sample of 604 subjects responding to this item, 244 or 40.13 percent indicated that their state's educational goals usually provide purpose and direction to local-district educational programs. Of the 604 superintendents responding, 33, or 5.43 percent, indicated that they felt the rank of "never" best described the purpose and direction provided by state-level goals to local-district educational programs in their states. These two figures represent the preferences indicated most often and least often by respondents. A total of 46.05 percent or 280 respondents indicated they felt their state's educational goals either always or usually give purpose and direction to local-district educational
programs. Conversely, 113 subjects, or 18.59 percent of those responding, selected the lower two ranks of "infrequently" and "never" related to this item. The data indicated that superintendents participating in the study feel that state-level goals usually provide direction and purpose to local-district educational programs in their state.

TABLE 12.--Percentage of respondents selecting each of five ranks related to local program direction and purpose being given by state-level educational goals

<table>
<thead>
<tr>
<th>Respondent Groups</th>
<th>Percentage Selecting Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Always</td>
</tr>
<tr>
<td>By States</td>
<td></td>
</tr>
<tr>
<td>Colorado</td>
<td>7.48</td>
</tr>
<tr>
<td>Maryland</td>
<td>0.00</td>
</tr>
<tr>
<td>Michigan</td>
<td>4.87</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>14.29</td>
</tr>
<tr>
<td>By Size</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>6.17</td>
</tr>
<tr>
<td>Medium</td>
<td>5.46</td>
</tr>
<tr>
<td>Large</td>
<td>5.77</td>
</tr>
<tr>
<td>Total Sample</td>
<td>5.92</td>
</tr>
</tbody>
</table>

For the subgroup of states, the rank called "usually" was favored by three of the subgroups, with 39.46 percent in Colorado, 41.36 percent in Michigan, and 28.57 percent in Rhode Island preferring it. In the state of Maryland, 36.36 percent selected the rank called "usually," while 45.45 percent indicated that they
felt their state-level goals sometimes provides direction and purpose to local-district educational programs.

The subgroup differing to the greatest extent from the pattern set by the overall sample was Maryland, where, in addition to the rank of "sometimes" being preferred more often than "usually," no respondents selected the rank of "always" and the preferences were more evenly distributed across the five ranks than in the other states.

For the subgroup of school districts divided by size, the pattern nearly resembled the overall choices and almost duplicated the pattern set in the subgroup of states. Subjects in the small-sized school districts preferred the rank of "usually" most often with 43.97 percent selecting it, while subjects in medium-sized and large-sized school districts felt that their state's educational goals sometimes provides direction and purpose to local-district educational programs as 37.16 percent and 38.46 percent respectively, chose the rank most often.

The null hypothesis tested specified that there would be no significant difference in the number of times respondents would indicate that their state-level goals either "always," "usually," "sometimes," "infrequently," or "never" provided purpose and direction to local-district educational programs. In order to determine if there was a significant difference in the number of times each of the choices were selected, or if any of the choices were favored to a significant extent over the others, the Kolmogorov-Smirnov non-parametric test was applied. This test compared the number of times each rank was selected with the number of times that rank would have.
been chosen if respondents choices were in a random pattern. It located that point in the comparison where the largest divergence between what was expected according to randomness and what actually occurred, appeared. This point was assigned D. The point of maximum divergence between the random pattern expected and the pattern of observed choices was compared to a critical value of D which must be equalled or exceeded at the specified level of significance, .05 for this study, for the divergence to be statistically significant and not to be due to chance.

Had the expected random pattern of no differences occurred on this item, 120.8 respondents would have selected each of the five ranks. The data reveals that 244 respondents, or 123.2 more than would have occurred in the random pattern expected, said they felt that state-level goals in their state usually provide direction and purpose to local-district educational programs. This represented the largest difference between the random pattern expected and the actual pattern of choices by respondents.

As shown in table 13, application of the Kolmogorov-Smirnov test showed a numerical maximum divergence, or D, of .2129. For the divergence to be significant and not due to chance, a D of .055 or larger was required.

The computed D of .2129 exceeded the critical value by .1579, indicating that such a large number of respondents indicating that they feel their state-level goals usually provide direction and purpose to local-district educational programs represented a significant pattern and was not due to chance.

For the subgroup of states, the maximum divergences between
the random, no-differences pattern expected and the observed choices were statistically significant and not due to chance in Colorado, where a numerical D of .1236 was shown, and in Michigan, where a numerical D of .2585 resulted. The largest maximum divergence among the four states was in Maryland where it was .2636. This maximum divergence was not statistically significant, however, as a critical value of .282 or greater was needed to state that the point of maximum divergence between the expected and observed pattern of respondent choices was statistically significant and not due to chance. For the state of Rhode Island, the numerical D of .0571 was not statistically significant, as a D of .249 or greater was required.

TABLE 13.—Differences between the computed maximum divergence and critical value of D required for significance at the .05 level related to state-level goals providing direction and purpose

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Respondents</th>
<th>Computed D</th>
<th>Critical Value of D Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>144</td>
<td>.1236*</td>
<td>.113</td>
</tr>
<tr>
<td>Maryland</td>
<td>22</td>
<td>.2636</td>
<td>.282</td>
</tr>
<tr>
<td>Michigan</td>
<td>410</td>
<td>.2585*</td>
<td>.067</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>28</td>
<td>.0571</td>
<td>.249</td>
</tr>
<tr>
<td>Small</td>
<td>370</td>
<td>.2378*</td>
<td>.070</td>
</tr>
<tr>
<td>Medium</td>
<td>183</td>
<td>.1596*</td>
<td>.100</td>
</tr>
<tr>
<td>Large</td>
<td>51</td>
<td>.2235*</td>
<td>.190</td>
</tr>
<tr>
<td>Total Sample</td>
<td>604</td>
<td>.2129*</td>
<td>.055</td>
</tr>
</tbody>
</table>

* Significant at .05 level
For the subgroup of school districts divided by size, the maximum divergences between the expected no-differences random pattern and the actual observed pattern of respondents' choices were significant at the .05 level in all three cases. In small-sized districts, the critical value of .070 was exceeded by .1678, in medium-sized districts, the critical value of .100 was exceeded by .0596, and in large-sized districts, the critical value of .190 was exceeded by .0335. The point at which the maximum divergence appeared in all three of the subgroups was at the rank called "sometimes" in the school districts divided by size. In small-sized districts, the random no-differences pattern expected for the null hypothesis would have shown 74 respondents selecting each of five ranks, and 123 selected the rank called "sometimes." In medium-sized districts, it was expected that 36.6 respondents would select each rank, and 68 selected the rank of "sometimes." In large-sized districts, the expected pattern would have shown 10.2 respondents selecting each of the ranks and 20 subjects indicated that they felt their state-level goals 'sometimes' provides direction and purpose to local-district educational programs.

Summarizing the analysis of data related to hypothesis six, the largest number of respondents indicated that state-level goals in their states usually provide direction and purpose to local-district educational programs. The differences between the random pattern of choices expected for the null hypothesis and the observed choices were significant enough to not be due to chance in the overall sample and in all but two of the subgroups, Maryland and Rhode Island. The point of maximum divergence between the distribution
expected on the basis of the null hypothesis and the observed distribution of respondent choices in the overall sample occurred at the rank called "usually." This was also true in two of the subgroups.

**Summary of Results**

For each of the six null hypotheses tested, the point of maximum divergence (D) between the no-differences theoretical distribution of respondents rank selections theorized to test the null hypothesis (Fo(X)) and the actual observed distribution of those choices by respondents (Sn(X)) was determined. This point of maximum divergence between the two distributions was designated D. The numerical D was compared to a critical value of D that must be equalled or exceeded for the maximum divergence between the expected and observed distributions to be statistically significant at the .05 level.

With the same measurement applied to each of the seven subgroups in addition to the overall sample for each of the six hypotheses, it was determined that the point of maximum divergence was statistically significant for all six hypotheses in the overall sample. It was determined that the point of maximum divergence between the theoretical equal distribution specified to test the null hypothesis and the actual observed distribution of rank selections by respondents was not statistically significant in all seven subgroups for any of the six hypotheses.

The point of maximum divergence (D) was significant in six of seven subgroups for hypotheses two and four, and in five of seven subgroups for hypotheses one and six; and for hypotheses three and five, the point of maximum divergence between the expected and
observed distributions was significant at the .05 level in four of seven subgroups.

The data revealed no reason for the difference in the frequency with which the null hypotheses were rejected in the subgroups of Maryland and Rhode Island and in the subgroups of Colorado and Michigan. None of the six null hypotheses tested were rejected in Rhode Island and two were rejected in Maryland. Five of the six null hypotheses tested were rejected in Colorado, and six of six were rejected in Michigan.

Although not part of the original design of the study, analysis of the data revealed a need for additional investigation, thus the following analysis was undertaken.

School districts in which the study was conducted were sub-grouped by size in order to determine if size of the districts influence the use made of state-level goals. Investigation of the breakdown of school districts by size in the states of Maryland and Rhode Island revealed dissimilarities, indicating this was not the reason for these two subgroups deviating from the overall pattern. In Maryland, one district, or 5 percent, was in the small-sized category, 9, or 41 percent, in the medium, and 12, or 54 percent, in the large. In Rhode Island, 11, or 39 percent, were categorized as small; 14, or 50 percent, medium; and 3, or 11 percent, large. In Colorado, 109, or 74 percent of the districts, were categorized as small-sized; 29, or 20 percent, as medium sized; and 9 districts, or 6 percent, as large-sized. In Michigan, 239, or 58 percent, were categorized as small-sized; 144, or 35 percent, as medium-sized; and 28, or 7 percent, of the districts as large-sized.
Since analysis of the data revealed dissimilarities in the breakdown of local districts according to size among all four states studied, and within the pairs of states revealing similarities in the pattern of rejection of the null hypotheses, a further analysis was conducted. The Kolmogorov-Smirnov analysis was applied to school districts divided by size, by state. Data resulting from this test reflected the data resulting from analysis of the overall sample and from analysis by subgroup. Data from this test revealed that 9 of the 12 null hypotheses tested were rejected by state, by school district size. For small-sized districts, computed Ds of .3106, .1,000, and .2915 were rejected at the .05 level in Colorado, Maryland, and Michigan, respectively. The computed F of .3125 failed to reject in Rhode Island. For medium-sized districts, Ds of .3605 in Colorado, .5246 in Maryland, and .2974 in Michigan were rejected at the .05 level. The D of .3261 failed to reject in Rhode Island. For large-sized districts, Ds of .5263 in Colorado, .5381 in Maryland, and .4976 in Michigan were rejected at the .05 level. The D of .700 failed to reject in Rhode Island.

This analysis indicates that school-district size for the overall sample, for each of the seven subgroups, and for subgroups of districts by size by state, all show a similar pattern, indicating that school-district size is not the determining factor in the pattern of rejection of the null hypotheses.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study, conclusions reached on the basis of data analyzed, and recommendations for further research on the topic. The sections of the chapter are discussed in order with appropriate sub-headings for each section. The summary and sub-headings are discussed in the first section of the chapter.

Summary

The summary contains four sections which briefly describe the purpose of the study, the literature review, instrumentation, population and delimitations, and analysis of data and the findings of the study.

Purpose

The development of state-level goals for education in the school systems of America is one component of a recently popular educational concern called accountability. From approximately 1967 to the present day, conditions related to accountability and state-level goal development are changing on an almost daily basis.

The purpose of this study was to investigate the extent to which state-level educational goals were being used in the development of local-school-district educational goals and in the determina-

95
tion of local-school-district educational programs. To examine the extent of use, six areas were investigated:

1. The influence of state-level educational goals on goal development for local school districts.

2. The influence of state-level educational goals on program determination at the local-school-district level.

3. The extent to which local-school-district officials feel that state departments of education are seeking compatibility in the educational goals of state and local school systems.

4. The extent to which local-school-district officials feel that statewide assessment programs based upon state-level goals are being used to evaluate educational outcomes at the local district level.

5. The extent to which local-school-district officials look upon state assessment programs as being adequate for measuring state-level goal attainment at the local district level.

6. The extent to which local-school-district officials feel state-level goals provide direction and purpose for educational programs in local school districts.

The rationale for the study was based upon the fact that investigation of the processes and procedures of state-level educational accountability programs invariably showed that the starting point and the foundation was the specification of educational goals.

Six hypotheses were developed for the study, one for each of the above six areas investigated in the research.
Review of Literature

Efforts to identify and specify the purposes and aims of educational systems have been a part of the educational process throughout history. Consistent in the specification of these aims has been their reflection of the values and needs of the society being served by the educational system. As times changed and societies differed through the ages, so changed the purposes of the educational processes. This was traced through various periods of time in the literature.

The concept of stating goals for education in terms of measuring outcomes is a recent phenomenon. It too reflects the mood of society, which today in America demands an accounting for dollars spent. The clamor for accountability in education resulted in legislation, the development of state-level educational goals, as well as statewide assessment programs to measure educational outcomes.

The literature of recent years reflects the fact that a great deal of diversity exists across America in the status of accountability programs and in the development and use of educational goals. A great deal has been written about how people feel about goals. The literature reveals that the situation is fluid, but that enough stability exists to begin assessing the effectiveness of state-level goals and other accountability measures in terms of programs and student attainment at the local district level.

Instrumentation, Population, and Delimitations

The instrument used in the study was a six-item survey developed by the researcher calling for responses by the selection...
of one of five ranks designated as "always," "usually," "sometimes," "infrequently," and "never" to indicate conditions in the local school district related to the topic of the item. One item was included to examine each of the six areas investigated in the study. The prestamped postal cards along with covering letters were mailed in April 1977 to 766 public school superintendents in the states of Colorado, Maryland, Michigan, and Rhode Island.

After two follow-up mailings to non-respondents from the previous mailing, a total of 608, or 80 percent, of the questionnaires mailed out were returned. From Colorado, 147 of 179, or 82 percent, were returned. From Maryland, 22 of 24, or 91 percent, were returned. From Michigan, 411 of 544, or 76 percent, were returned, and from Rhode Island, 28 of 30, or 93 percent, were returned.

Four delimitations were stated for the study. The first stated that the sample represented four states. The second delimitation stated that the sample of states was determined on the basis of conditions existing in 1973. A third delimitation stated that superintendents represented local school districts as respondents, and a fourth stated that only K-12 school systems were selected for the study.

Analysis of Data and Findings

Analysis of the data was accomplished by use of the Kolmogorov-Smirnov nonparametric test. This statistical test identifies the point of greatest divergence between a theoretical equal distribution of no differences, stated for the null hypothesis, and the actual observed distribution of ranks selected by respondents.
Following identification of that maximum divergence called D, it is compared to a critical value of D which was specified at the .05 level of significance. If the computed D, or maximum divergence, is equal to or exceeds the critical value of D specified at the appropriate level of significance, .05 in this study, it is concluded that the divergence between the specified and actual distributions is large enough that it was not due to chance and that it was statistically significant. If the D was statistically significant, the hypothesis was retained.

The data in the study were presented in two types of tables. One type of table showed the percentage of respondents selecting each of the five ranks for the overall sample and for each of the seven subgroups. The second type of table listed the number of respondents, the computed D, or point of maximum divergence, and the critical value of D specified at the .05 level of significance which the maximum divergence needed to meet or exceed to be statistically significant at the .05 level.

Each of the six hypotheses are described and summarized in the next section of this chapter.

State goals and local district goal development

The first part of these findings concerned hypothesis one, which stated that:

State-level educational goals influence the determination of local school district educational goals in the states selected.

This hypothesis was retained. A significant difference was found at the point of greatest divergence between the theoretical equal distribution among the five ranks specified for the null hypothesis and the actual observed distribution of respondents' rank
selections. With a maximum divergence of .2853, which exceeds the
critical value of .055 specified for significance at the .05 level,
the null hypothesis was rejected for the overall sample.

Null hypothesis one was rejected at the .05 level of signifi-
cance in the subgroups Colorado, Michigan, small-sized districts,
medium-sized districts, and large-sized districts. Subgroups in
which the null hypothesis failed to reject because the point of max-
imum divergence, D, was less than the size of the divergence necessary
to conclude it was not due to chance, were Maryland and Rhode Island.

Rejection of null hypothesis one for the overall sample
indicates that state-level goals influence the determination of local-
district goals in states in which the study was conducted.

**State goals and local-district program determination**

The next part of these findings concerned hypothesis two,
which stated that:

State-level educational goals influence the development of local-
district educational programs in the states selected.

This hypothesis was retained. A significant difference
was found at the point of greatest divergence between the theoretical
equal distribution among the five ranks specified for the null hypo-
thesis and the actual observed distribution of respondents' rank
selections. With a maximum divergence of .2730, which exceeds the
critical value of .055 specified for significance at the .05 level,
the null hypothesis was rejected for the overall sample.

Null hypothesis two was rejected at the .05 level of signi-
ficance in the subgroups Colorado, Maryland, Michigan, small-sized
districts, medium-sized districts, and large-sized districts. The
subgroup in which the null hypothesis failed to reject because the point of maximum divergence, D, was less than the size of divergence necessary to conclude it was not due to chance was Rhode Island.

Rejection of null hypothesis two for the overall sample indicates that state-level goals influence the development of local-school-district programs in states in which the study was conducted.

**State and local goal development**

The next part of these findings concerned hypothesis three, which stated that:

Selected local-school-district superintendents perceive that their state departments of education view local-district and state-level goal compatibility as being desirable.

This hypothesis was retained. A significant difference was found at the point of greater divergence between the theoretical equal distribution among the five ranks specified for the null hypothesis and the actual observed distribution of respondents' rank selections. With a maximum divergence of .2723, which exceed the critical value of .055 specified for significance at the .05 level, the null hypothesis was rejected for the overall sample.

Null hypothesis three was rejected at the .05 level of significance in the subgroups Michigan, small-sized districts, medium-sized districts, and large-sized districts. The subgroups in which the null hypothesis failed to reject because the point of maximum divergence necessary to conclude it was not due to chance were Colorado, Maryland, and Rhode Island.

Rejection of null hypothesis three for the overall sample, indicates that superintendents of the local school districts in which the study was conducted perceive that their state departments of
education view local-district and state-level goal compatibility as being desirable.

State goals and assessment program structure

The next part of these findings concerned hypothesis four, which stated that:

Selected local-school-district superintendents perceive their state's assessment program as being structured to evaluate educational outcomes in light of their state's educational goals.

This hypothesis was retained. A significant difference was found at the point of greatest divergence between the theoretical equal distribution among the five ranks specified for the null hypothesis and the actual observed distribution of respondents' rank selections. With a maximum divergence of .2471, which exceeds the critical value of .055 specified for significance at the .05 level, the null hypothesis was rejected for the overall sample.

Null hypothesis four was rejected at the .05 level of significance in the subgroups Colorado, Maryland, Michigan, small-sized districts, medium-sized districts, and large-sized districts. The subgroup in which the null hypothesis failed to reject because the point of maximum divergence necessary to conclude it was not due to chance was Rhode Island.

Rejection of null hypothesis four for the overall sample indicates that superintendents of local school districts in which the study was conducted perceive their state's assessment program as being structured to evaluate educational outcomes in light of their state's educational goals.
State goals and assessment program adequacy

The next part of these findings concerned hypothesis five, which stated that:

Selected local-school-district superintendents perceive their state's assessment program as being adequate for measuring attainment of state-level goals by local school districts.

This hypothesis was retained. A significant difference was found at the point of greatest divergence between the theoretical equal distribution among the five ranks specified for the null hypothesis and the actual observed distribution of respondents' rank selections with a maximum divergence of .1613, which exceeds the critical value of .055 specified for significance at the .05 level, the null hypothesis was rejected for the overall sample.

Null hypothesis five was rejected at the .05 level of significance in the subgroups Colorado, Michigan, small-sized districts, and medium-sized districts. The subgroups in which the null hypothesis failed to reject because the point of maximum divergence, D, was less than the size of divergence necessary to conclude it was not due to chance were Maryland, Rhode Island, and large-sized school districts.

Rejection of null hypothesis five for the overall sample indicates that superintendents of local school districts in which the study was conducted perceive their state's assessment program as being adequate for measuring attainment of state-level goals by local school districts.

State goals providing purpose and direction

The next part of these findings concerned hypothesis six, which stated that:
Selected local-school-district superintendents perceive their state's educational goals as providing purpose and direction for their state's educational program.

This hypothesis was retained. A significant difference was found at the point of maximum divergence between the theoretical equal distribution among the five ranks specified for the null hypothesis and the actual observed distribution of respondents' rank selections. With a maximum divergence of .2129, which exceeds the critical value of .055 specified for significance at the .05 level, the null hypothesis was rejected for the overall sample.

Null hypothesis six was rejected at the .05 level of significance in the subgroups Colorado, Michigan, small-sized districts, medium-sized districts, and large sized districts. The subgroups in which the null hypothesis failed to reject because the point of maximum divergence necessary to conclude it was not due to chance were Maryland and Rhode Island.

Rejection of null hypothesis six for the overall sample indicates that superintendents of local school districts in which the study was conducted perceive their state's educational goals are providing purpose and direction for their state's educational program.

Conclusions

From an analysis of the data, eight conclusions were reached with regard to local-school-district use of state-level educational goals in the states of Colorado, Maryland, Michigan, and Rhode Island.

Findings from the data reported on the six null hypotheses for the overall sample reported a significant difference for all six
null hypotheses at the point of maximum divergence between the expected random distribution of no differences among the rank selections by respondents and the actual observed distribution of respondents' rank selections. The findings further indicated that the divergences between what was expected and what was found in terms of respondents' rank selections consisted of respondents consistently favoring the higher ranks to a greater extent than the lower ranks. On the basis of these findings, the researcher formed the following conclusions:

1. State-level educational goals are influential in the determination of local-district goals among school districts in the states of Colorado, Maryland, and Michigan.

2. State-level educational goals are influential in the development of local-district educational programs among school districts in the states of Colorado, Maryland, and Michigan.

3. Superintendents of local school districts in the states of Colorado, Maryland, and Michigan feel their state departments of education view local-district and state-level goal compatibility as desirable.

4. Superintendents of local school districts in the states of Colorado, Maryland, and Michigan feel their state's assessment program is structured to evaluate educational outcomes in light of state-level educational goals.

5. Superintendents of local school districts in the states of Colorado, Maryland, and Michigan feel their state's assessment program is adequate for measuring attainment of state-level goals by local school districts.
6. Superintendents of local school districts in the states of Colorado, Maryland, and Michigan feel their state's educational goals provide purpose and direction for the educational programs in their states.

7. A comparison of the findings reported on individual states in which the study was conducted indicated that all six null hypotheses were rejected in Michigan, five in Colorado, two in Maryland, and none in Rhode Island. This led the researcher to conclude that state-level educational goals are viewed as useful at the local-school-district level to the greatest extent in Michigan and to the least extent in Rhode Island, where none of the six null hypotheses were rejected among the four states in which the study was conducted.

8. A comparison of the findings reported on the subgroups of school districts divided by size indicated that all six null hypotheses were rejected in small-sized districts and in medium-sized districts. In large-sized districts, five null hypotheses were rejected, with number five, related to the adequacy of the state's assessment program, being the only one which failed to reject. Further investigation of the pattern of rejection of the null hypotheses in subgroups of school districts divided by size was conducted with an analysis of subgroups of school districts by size, by state. Data from this analysis reflected a similar pattern of results of analysis of school districts by size for the overall sample. This led the researcher to conclude that school district size had no influence on the use made of state-level educational goals at the local-district level.
Implications

With participants in the study consistently selecting high ranks for each of the items on the survey instrument, it would appear that state-level goals for education are a vital force in providing leadership for local school districts as they develop goals, determine programs, and measure educational outcomes. Other states might benefit from some of the activities of the states in which this research was conducted.

The findings of this study reveal similarities in the pattern of rejection and the frequency of rejection of null hypotheses between two groups of states. Maryland and Rhode Island state educational systems are made up of a fewer number of districts than Colorado and Michigan. Maryland and Rhode Island are considered eastern states, while Colorado and Michigan are midwestern and western states. Only two of six null hypotheses tested were rejected in Maryland and one was rejected in Rhode Island. All six null hypotheses were rejected in Michigan and five of the six in Colorado. The type of structure existing within a state's school system may have some effect on the use of state-level goals and the total accountability system within a given state.

The findings of this study have implications for the continuation of the establishment of state-level goals as part of accountability activities at the state level. Local-district-school officials in the states of Colorado, Maryland, and Michigan, as reported by this study, feel good about the leadership provided through state-level goals and feel that direction and purpose are provided by them. States considering changes in their programs might benefit from
practices in the states of Colorado, Maryland, and Michigan, which were a part of this study.

The findings of this study imply that state-level educational goals are effective and should be a part of the educational process in the future.

**Recommendations**

The following recommendations for further research are made on the basis of this study:

1. Knowledge gained from the study could be expanded by further research into the degree of consideration given and methods used to incorporate state-level goals into local-district goal development and program determination.

2. This study replicated in states not meeting criteria specified for participation in this research would be valuable in equating the effectiveness of legislated accountability practices with those practices in states not having the same mandate.

3. Since this study was undertaken in states meeting specified criteria as of 1973, the results reflect several years of involvement in the accountability movement. A study on a broader sample of states whose accountability activities are more recent might result in an even broader picture of the significance of state-level accountability activities at the local level.

4. Because of the differences seen in the data of this study between Rhode Island and the other states in the sample, further study into a comparison of conditions in Rhode Island and one of the other states would appear to be valuable.
The purpose of this study was to examine local-district use of state-level educational goals in four states. State-level goals constitute an integral part of the American educational phenomenon called accountability. The four states in which the study was conducted have been involved with the educational accountability movement for at least four years. It is hoped that the completed research contributed to a broadening of the educational accountability information base and that it calls attention to areas for further study on the topic.
APPENDIX A

LETTER FROM ALPHEUS L. WHITE

REGARDING STATE-LEVEL EDUCATIONAL GOALS
MAY 12 1976

Senator Edward W. Brooke
United States Senate
Washington, D.C.

Dear Senator Brooke:

Thank you for your recent letter on behalf of Philip B. Lambert of Mishawaka, Indiana.

All States now have State-level educational goals; they vary in formulation and motivation. The U.S. Office of Education's administration of education assistance programs enacted by Congress is directed toward helping the States raise those goals, and to encourage States which had not previously had such goals to adopt them. In its administration of the programs, the Office has required proof that appropriated funds have been used in ways prescribed by the statutes, but it has lacked the resources and the mandate to make a detailed compilation that would reflect the formulations and motivations Mr. Lambert seeks.

Mr. Lambert in his reference to "the various State departments of education" has mentioned the best and most dependable sources of the information he seeks. Others might include the following:

Sincerely yours,

Alpheus L. White
State Assistance
APPENDIX B

LETTER FROM WILLIAM J. GRUVER

REGARDING THE SIGNIFICANCE OF THE STUDY
Mr. Philip B. Lambert  
11817 Bowman Drive  
Mishawaka, Indiana 46544

Dear Mr. Lambert:

Dr. Trotter has asked me to thank you for your letter of April 27 seeking references to assist your research.

Your completed dissertation will make a significant contribution in assessing the relationship between legislative mandate and the education goals of the State Department of Education.

However, other than a direct survey instrument mailed to the State Coordinator of Title IV ESEA, I know of no other single source of data for each State.

It is possible that the Research Department of the National Education Association, 1600-16th Street, NW., Washington, D.C., may have a current compilation of the data you seek.

I have included a list of the Title IV coordinators for each State as this office does not have the clearinghouse capability you require.

Best wishes in your acquisition of the doctoral degree.

Sincerely yours,

[Signature]

William J. Stover  
Senior Program Officer  
Eastern Program  
Operations Branch

Enclosure
APPENDIX C

COVER LETTER TO RESPONDENTS
If you throw this in the waste basket unopened, a capsule of water inside will break, spilling onto a dehydrated gorilla. He will then jump out and hug you to death. ★

★ To escape the embrace, open!
Seriously though...

Thank you for your cooperation in completing the enclosed questionnaire related to my dissertation research. Seriously, only two minutes and seven "check marks" are necessary!

The topic of my research is "Local School District Use of State Level Educational Goals in Selected States." Subjects are the seven-hundred-sixty-six local district superintendents in the states of Colorado, Maryland, Michigan and Rhode Island.

Of primary interest is the use made of state level goals related to various local district activities and accountability components.

Complete anonymity for yourself and the district are assured throughout the research and eventual publication.

So, please take the two minutes, make the seven check marks and drop the card in the mail for return--today.

Appreciatively!

Phil Lambert
Directions: Please check the column ("Always" being high and "Never" being low) which best represents your perception of the relationship of each of the six statements to your school district.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Infrequently</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As local district goals are developed in our school district an intentional effort is made to assure they are compatible with the educational goals of our state.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. As local district educational programs are developed in our school district an intentional effort is made to design them with attainment of our state's educational goals in mind.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Our State Department of Education expresses the desire that our local district goals and state-level educational goals be compatible.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Our state's assessment program is structured to evaluate educational outcomes in light of state-level educational goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Our state's assessment program is an adequate vehicle for measuring attainment of state-level goals by local districts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The educational goals of our state give purpose and direction to the educational program in our local school district.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

District Student Population (Check One)

- Under 5,000 [ ]
- 5,001 to 10,000 [ ]
- Over 10,000 [ ]

Thank you,
Philip Lambert
APPENDIX E

KOLMOGOROV-SMIRNOV ANALYSIS PROCEDURE
<table>
<thead>
<tr>
<th>N=10</th>
<th>Rank Chosen</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>f= number of subjects choosing that rank</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Fo(X)= theoretical cumulative distribution of choices under Ho</td>
<td>1/5</td>
<td>2/5</td>
<td>3/5</td>
<td>4/5</td>
<td>5/5</td>
<td></td>
</tr>
<tr>
<td>Sn(X)= cumulative distribution of observed choices</td>
<td>0/10</td>
<td>1/10</td>
<td>1/10</td>
<td>6/10</td>
<td>10/10</td>
<td></td>
</tr>
<tr>
<td>Difference Fo(X) - Sn(X)</td>
<td>2/10</td>
<td>3/10</td>
<td>5*/10</td>
<td>2/10</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

* = maximum divergence between theoretical and observed distribution

\[ \frac{5}{10} = .500 \]

\[ D = .500 \]

Illustration 3.--Kolmogorov-Smirnov analysis used to identify D, or point of maximum divergence (Siegel, 1956, p. 50)

The maximum divergence between the theoretical (expected for the null hypotheses) random equal distribution and the cumulative distribution of observed scores is 5/10 or .500. Thus, \( D = .500 \).

The critical value of \( D \) at the .05 level of significance for \( N=10 \) which must be equalled or exceeded for the maximum divergence, or \( D \) to be statistically significant is .410. Since the \( D \) of .500 exceeds the critical value of \( D \) specified in a pre-determined sampling distribution, the decision is to reject the null hypothesis.

For an \( N \) over 35 the critical value of \( D \) at the .05 level is determined by the formula:

\[ \frac{1.36}{\sqrt{N}} \]
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Grady, Michael J. *Using Indicators for Program Accountability.* Denver: Cooperative Accountability Project, 1974.


State of Indiana vs. Haworth, 122 Ind. 462, 23 N.E. 946, 7L.R.A. 240.


**VITA**

<table>
<thead>
<tr>
<th>Name</th>
<th>Philip B. Lambert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth and Place</td>
<td>March 1, 1939 Covington, Kentucky</td>
</tr>
<tr>
<td>Schooling</td>
<td>Carter Township High School, Dale, Indiana Diploma - 1957</td>
</tr>
<tr>
<td></td>
<td>Indiana State University, Terre Haute, Indiana B.S. - English - 1964</td>
</tr>
<tr>
<td></td>
<td>Xavier University, Cincinnati, Ohio</td>
</tr>
<tr>
<td></td>
<td>University of Cincinnati, Cincinnati, Ohio M. Ed. - Educational Administration - 1967</td>
</tr>
<tr>
<td>Professional Experience</td>
<td>Harrison High School, Harrison, Ohio 1964-1968 - English Teacher - Administrative Intern</td>
</tr>
<tr>
<td></td>
<td>Springboro High School, Springboro, Ohio 1968-1970 - Principal</td>
</tr>
<tr>
<td></td>
<td>Southmont High School, New Market, Indiana 1970-1972 - Principal</td>
</tr>
<tr>
<td></td>
<td>Penn High School, Mishawaka, Indiana 1972-Present - Principal</td>
</tr>
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<tr>
<td></td>
<td>Indiana Association Junior Senior High School Principals</td>
</tr>
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</table>

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