THE COLLECTION AND USE OF FEDERALLY REQUIRED

SPECIAL EDUCATION DATA AT STATE EDUCATION AGENCIES

by

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(ABSTRACT)

The Education for All Handicapped Children Act (P.L.
94-142), had extensive data collection and reporting
requirements for state education agencies (SEAs). An
investigation was made into how special education units at
SEAs collected these federally required data and to what
extent the data have been used for state level management
and planning tasks.

The major focus of the study centered around the uses
of information to make special education management
decisions at the state level. The systems analysis theory
of the levels-of-uses of information was used as a
framework for categorizing state level special education
management decisions. Using the Delphi technique five
experts in the field of state and federal special education
administration were selected to participate in interviews.
As a result of three rounds of interviews a product
resulted which was a list of suggested state level

management and planning activities categorized into the three levels-of-uses of information for federally required child, personnel, and setting data.

The findings are based upon individual responses from a mailed questionnaire. Fifty-three out of 57 state level administrators (states and jurisdictions) responded to the instrument. The use of computerized management information systems for data collection as well as trends and reasons for changes in the federal data collection process are described. The use of federally required data when conducting management and planning tasks at the three levels-of-uses (operational, tactical, and strategic) is also discussed. Findings suggest that federally required data are valued more for lower level operational uses than higher level tactical and strategic tasks.

The study concludes with recommendations for special education state directors, technical assistance providers, and suggested topics for future research related to information needs of decision makers.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

CHAPTER ONE

THE STUDY AND ITS PURPOSE

Introduction

Part B of the Education of the Handicapped Act, as amended by Public Law 94-142, the Education for All Handicapped Children Act of 1975 (P.L. 94-142), required state education agencies (SEAs) to be the single agency responsible for assuring a free, appropriate, public education to its handicapped children. All programs for handicapped children in a state are under the general supervision of the SEA, which reports back to the federal agency -- the ultimate monitoring entity and dispenser of funds. The data collection and reporting requirements of P.L. 94-142 required of states, were extensive (Thomas, 1980; Turnkey, 1981).

Increased administrative requirements have been manifest in the creation and/or addition of administrative staff at SEAs, and a shift from regulation to monitoring, evaluation, and resource allocation. While special education units at state education agencies (referred to as SE/SEA in the remainder of this document) have increased their staff, funding shortages coupled with the high cost of such administrative staff have not made it easy for state directors of special education to manage these federal requirements in addition to their own states'

requirements (U.S. General Accounting Office, 1985; Turnkey/NASDSE,1983; MAC/NASDSE,1977).

State directors of special education have identified several problems they encounter when dealing with federal data collection and reporting requirements. These include:

1. Implementing efficient ways to use staff time due to increased paper work;

2. Assuring the accuracy of information collected from local education agencies (LEAs);

3. Devising systems which address the changing nature and uncertainty of reporting requirements; and

4. Being convinced of the usefulness of such required information.

SE/SEAs have varied in their approaches used to address the above-mentioned problems.

Statement of the Problem

Decisions related to managing, planning, and projecting future needs of special education programs should be based on accurate, timely information rather than on guesswork. If states have information systems in place, then federally required data can be easily accessed by decision makers. It is unknown how SE/SEAs manage the data collection process. Further, it is unknown if SE/SEAs use the federally required data for more than just reporting purposes, and to what extent this information is used in administrative and planning tasks. These are the problems addressed in this study.

Research Questions

The research questions to be addressed in this study fall into three categories. In the first category, a descriptive area, questions are designed to ascertain federally required data collection practices in SEAs. The second category adresses trends and perceived areas which may have impact on trends in the data collection process. Responses to the third area of questions address actual uses of the federally required data. In addition to describing data use practices, the nature of relationships among demographic variables and perceived value of federally required data to conduct management activities are explored.

The first set of questions asks how special education units at state education agencies collect and transmit federally required data.

1.1. Through which intermediate educational agencies do the data flow?

1.2. To what extent are intermediate educational agencies used in the data collection process?

For purposes of this study, the term intermediate educational agency refers to any public agency other than LEAs which is under the general supervision of the SEA established for the purpose of providing special education services to handicapped children within the state. (adapted

from Title 34 of the Code of Federal Regulations, Section 300.7, 1981).

1.3. To what extent are data transmitted electronically from local agencies to the SEA?

1.4. Are computerized management information systems (MIS) in place at SEAs?

1.5. What types of MIS arrangements, in terms of access to special education data, are being used by SE/SEAs?

In the next area questions center on trends in the data collection process.

2.1. To what extent did perceived changes in federal data collection occur in the past?

2.2. What areas include the most changes?

2.3. What reasons are attributed to past changes?

2.4. To what extent are changes predicted to occur in federal data collection in the future?

2.5. What areas will have the most changes?

2.6. What reasons will be attributed to future changes?

The final set of research questions address data use at the state level.

3.1. How can federally required special education data be used at the state level for purposes other than reporting back to federal agencies?

3.2. To what extent do SE/SEAs conduct management activities at the three levels-of-uses defined as operational, tactical, and strategic?

3.3. To what extent do SE/SEAs find federally required data useful for conducting such activities?

A sub-area under data use research questions addresses the relationships between perceived usefulness of federally required data and demographic characteristics involving personal and organizational variables.

3.4. Do responses concerning the usefulness of data differ according to the position of the person?

3.5. Do responses concerning the usefulness of data differ according to the length of time in position of the person who works with the data?

3.6. Do responses concerning the usefulness of data differ according to the existence of computerized MIS at the SEA?

Purpose of the Study

Part B of the Education of the Handicapped Children Act (EHA - B) required that data be collected and reported to the funding federal agency. The purpose of this study was to gather information about practices used by SE/SEAs in their management and use of federally required data. The objectives of this study are to:

1. Examine ways federally required data can be used for more than just reporting purposes.

2. Categorize the uses of special education data within a framework used for management information systems;

3. Describe ways in which data have been collected and used at the state level;

4. Depict trends which are occurring in the data collection process;

5. Compare states' uses of required data with the suggested uses by experts in special education in relation to the levels-of-uses hierarchy; and,

6.   Determine if relationships occur among
usefulness of required data and various personal and
organizational variables.

Significance of the Study

There is not an abundance of information available on
special purpose divisions within state departments of
education.   Research conducted on implementation of federal
programs most often centers on Chapter 2 (formerly Title I)
programs and typically focus on the efforts of local
agencies. This study could add to the thin literature base
in which the state education agency is the focus.   Results
of this study could be used by special education state
directors as well as providers of technical assistance such
as the National Association of State Directors of Special
Education (NASDSE); United States Office of Special
Education and Rehabilitation Services, Division for
Assistance to States; Regional Resource Centers;
universities; and management consultants to pinpoint areas
in need of technical assistance and to identify those
states with best practices.

BACKGROUND

Federal Reporting Requirements

There are 57 states and jurisdictions who participated
in the EHA - B grant. One state, New Mexico, did not
participate until 1983-84; however, that state did

administer local special education programs using state data collection requirements that paralleled federal requirements (Schipper, 1985).

From 1976 until February 1984 several types of information from states have been required by the United States Department of Education. Some of the information required from states was based upon projections such as data relevant for achieving a full services goal of serving children birth through 21 years of age. For purposes of this study, these projection-based data were not investigated. This study was limited to three federally required data elements which represented hard data, and were related to programs or direct services. While the information is reported through several different documents, there were three required data elements which were common to all SEAs-- (a) child count; (b) personnel count; and (c) educational settings that serve handicapped students, or setting count. The focus of study is on the federal data categories rather than their component items. A brief description of each data element is presented below.

The child count reporting requirements are a consequence of two federal laws, EHA - B and P.L. 89-313. The state was required to provide information on the number

of handicapped children receiving a free, appropriate, public education, as well as the estimated number of handicapped children who needed special education services. These data must be provided for each disability category (Code of Federal Regulations, 1981).

Information related to special education personnel was required by Section 300.139 of the EHA - B amendment. The state was required to generate two personnel related figures; (a) the number of personnel employed; and (b) the estimated number of personnel needed (Code of Federal Regulations, 1981).

In addition to information about handicapped children and special education personnel, EHA - B required that data be collected on the number of handicapped children served by types of settings. Local education agencies must report to the state the number of handicapped children within each disability category who are served in each type of placement, such as homebound, separate school, separate class, resource room, etc. (Code of Federal Regulations, 1981).

In order to collect this information from LEAs, staff in SEAs have been charged with responsibilities related to the data collection requirements. The highest administrator in special education (referred to in this study as the state director of special education) is typically

responsible for approving data collection procedures and held accountable for accuracy. Designing data collection forms, ensuring the accuracy and completeness of data submitted by LEA administrators, and consolidating data for various uses is usually delegated to someone on the state director's staff. Thus, in most SEAs there are staff whose primary responsibility is to handle federally required data, but in some states the state director serves as the data handler.

Federal Data Collection Process

Two broad areas that are common across the states address (a) the information flow, and (b) the technology of information collection. These are components of the information handling process that have been the subject of training and technical assistance for state special education directors and their staff since 1977, when data collection and reporting were first federally mandated.

The "flow of information" refers to the procedures in each state that dictate how data are transmitted and received (by whom and through which infrastructures). For example, some states may manage this information flow by using an intermediate agency as an arm of the state to collect data from LEAs on a regional basis. Other states may obtain their data directly from the LEAs. The "technology of information collection" relates to how the

raw data are collected, stored, transmitted, and retrieved. For example, some states may use computer technology to automate the process, others may use a combination of automated and manual procedures, and others only manual.

Regardless of how data or information travels from local special education agencies through the system, the result is the same for every state-- a product that consists of information about local special education programs and services. As depicted in Figure 1.1, the data collected by the SEA are transformed into information which the SE/SEA can use for various purposes.

Although EHA - B, as amended by P.L. 94-142, requires that the state serve as a conduit to report accurate information to federal sources, there are other ways which this same required information can be used (Schipper, 1975; Code of Federal Regulations, 1981; Thomas, 1980; NASDSE,1985; Cullar, 1985; Kaufman, 1985; Tyrell, 1985). Examples of the uses of federally required data are:

1. Monitor local programs;

2. Identify LEAs in need of technical assistance;

3. Evaluate local and state operated programs;

4. Perform research with local programs;

5. Coordinate locals to work together;

6. Disseminate information to local administrators;

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 ---------                    ---------       • monitor
:         :                   :       :       • assist
:  L E A  :    ---------       : S E A :       • evaluate
:         :     ---------      :       :       • research
:         :    ---------       :       :       • coordinate
 --------                       --------       • disseminate
   ::             ::              ::           • influence
   ::             ::              ::           • plan
   ::             ::              ::
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I N P U T   P R O C E S S   O U T P U T

d a t a   \\   f l o w &   \\   u s e s
          //   t e c h n o l o g y //
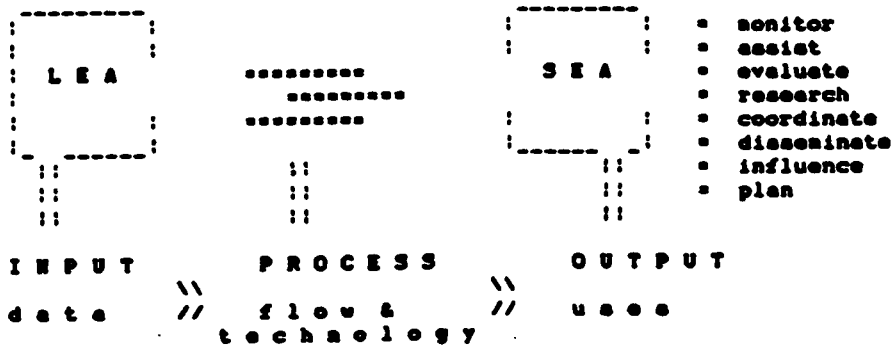

FIGURE 1.1: A SYSTEMS APPROACH TO COLLECTING AND USING DATA
             FROM LOCAL SPECIAL EDUCATION PROGRAMS

             (adapted from Schipper, 1975)

7. Influence individuals and groups with power (e.g., state governing officials; special interest groups);

8. Develop long-range plans to include resource allocation.

Such varied uses of information by the SE/SEA require knowledge of special education programs and practices in the state, and decisions to be made reflecting state-wide priorities. In order to maximize its use of data, however, the SE/SEA must assume a proactive role and exert leadership.

Role of the State Education Agency

The role of the state education agency in all areas of education has become broad in scope. Federal initiatives provided an impetus for strengthening SEAs. For example, Title V of the Elementary and Secondary Act of 1965 provided resources to stimulate and assist states in strengthening their leadership resources. In his analysis of the impact of Title V on selected states, Murphy (1974) emphasized the need for SEAs to play a leadership role in education. Leadership, in this sense, has been defined as "to guide or direct by persuasion or influence" (Maher, 1985; Guralnik, 1980).

Through the Education of the Handicapped Act, SEAs were given the legal responsibility of insuring that all the requirements of the Act were carried out. The SEA is not only responsible for programs provided through educational agencies, but also for supervising programs

provided to handicapped children through other state agencies, private, and voluntary agencies. This general supervision provision was intended to assure a single line of responsibility with regard to the education of handicapped children and to assure that all provisions of the EHA be implemented.

In 1975, when P.L. 94-142 was enacted, William Schipper, Director of Training Projects of the National Association of State Directors of Special Education (NASDSE), raised even more prescribed leadership roles of SEAs with regard to special education. The following areas were identified by Schipper for SEAs to direct initiatives and provide leadership:

1. Organize, coordinate, and conduct state planning;

2. Establish sound foundation programs of financial support;

3. Establish minimum standards for achievement and quality controls; and

4. Assist localities in developing more adequate education programs and evaluating results.

Furthermore, good information systems on the facts and conditions of education were considered by Schipper as crucial for SE/SEAs to realize such diversity in leadership (MAC/NASDSE, 1977; Schipper, 1975).

Information Systems

With the advent of computer technology, information has become a commodity. With the use of an organized

scheme, raw data can be converted into information valuable to various people at different organizational levels. The purpose of this section is to explain the concept of levels-of-uses of information and its application to this study.

The handling and use of information has become a discipline in the past 20 years referred to as "planning and control systems." In the late 1950's, the work of Simon, at the Carnegie Institute of Technology laid the groundwork for management science's information systems analysis. Since then, research and development of management information systems (MIS) has been a major focus within the field of business management (Keen, & Scott Morton, 1978).

Information systems have evolved in conjunction with advances in computer technology. Once the general purpose computer was developed (early 1950's) with its electronic storage capabilities, data input, storage, and retrieval applications ensued. Improved accuracy and increased speed in collecting and retrieving information resulted. Although clerical staff became data processors and were the first to actually use computers for this purpose, it did not take long for middle and upper management to reap the benefits associated with the new technology.

With the advent of relatively inexpensive, smaller stand-alone hardware it became possible for managers and executives to have access to the information that was stored in the computer. Subsequently, total systems had to be developed that took into account the collection, storage, retrieval, and uses of information throughout an organization. In the operation of an organization, it became important to determine a hierarchy of the uses of information in order to determine which data to collect and how to handle or massage those data according to the needs of decision makers using such information (Adams et al, 1984; Sprague, & Carlson, 1982; Alter, 1980; Keen, & Scott Morton, 1978).

A theoretical model depicting the hierarchical relationship of information uses was developed by Robert Anthony in the 1960's and continues to be used by information systems analysts (Anthony, 1965; Head, 1967; Sprague & Carlson, 1982). Depicted in Figure 1.2, a triangle was used to represent Anthony's theoretical classification scheme as a visual model to characterize an information system. The levels of management and the main functional areas of the organization are represented.

The three levels of an organization with their corresponding functions are found in Figure 1.2. These represent the three levels-of-uses of information that are

the framework used for content analysis in this study.

As indicated in Figure 1.2, the levels are hierarchically related and are similar to typical levels in organizations. The bottom third of the triangle represents the operational level; the middle third represents the tactical level; and the top, the strategic level. The bottom level is called the operational or transaction level because the major function is to maintain records and facilitate the flow of work. The major focus at this level is on data collection and storage. The next higher step in the levels-of-uses of information categories is the tactical control level. Here, information becomes the focus because reports incorporating the raw data are developed for review. Thus, results of operations can be compared with plans so that plans and/or operations can be adjusted accordingly for management's control.

The third level-of-use of information corresponds to top management. Different from the lower management functions of daily operations and control, the strategic level requires information to use for more general planning purposes. This planning use of information has decision making as a focus because long-term policy decisions and planning for future commitment of resources are involved. Unlike the other two levels, this planning level typically requires external or environmental data, as well as internal (within the organization) data.
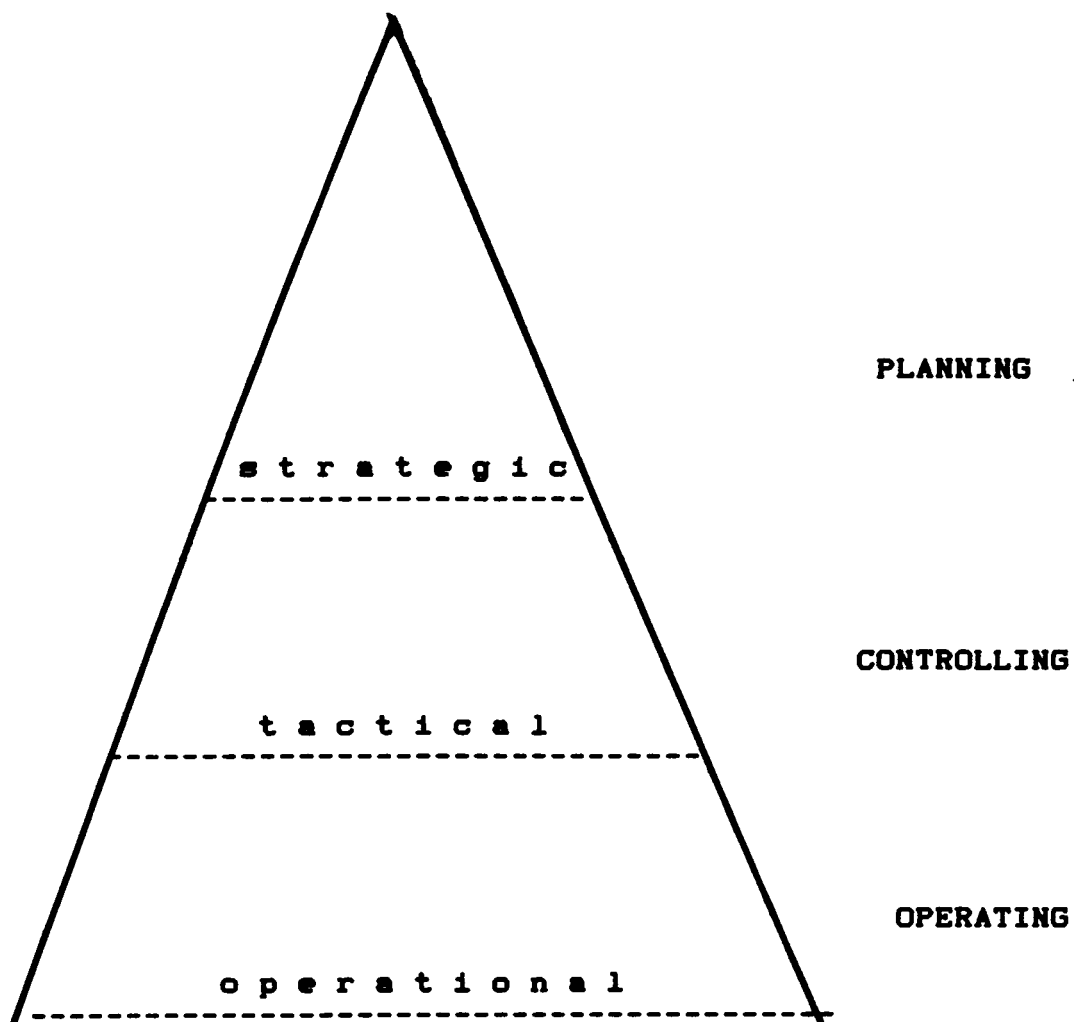
FIGURE 1.2: LEVELS OF USES OF INFORMATION

The SE/SEA is a public service organization which may use practices similar to business and industry. As a result of the federal reporting requirements, the SE/SEA must collect specific data elements mentioned previously. One way states may assume their role as leader is to use existing data to influence people to move in a desired direction. This can be accomplished with implementation of systematic ways to collect, store, and retrieve data for operational, control, and planning purposes.

It is generally known that the states have been in compliance with EHA - B federal regulations concerning past data reporting requirements. In no instance have federal funds been withheld from a state for not reporting a count of handicapped children. What is not known however, is whether the SE/SEAs have systematized the information handling process, and how such data were used for purposes other than reporting to the federal agency.

Information regarding the "nuts and bolts" of information handling and ways in which required data were used by SEA special education staff will be valuable for gaining a national perspective of the SE/SEA practices. The federal data requirements continue to evolve. The Education of the Handicapped Act Amendments of 1983 have set forth changes in data collection requirements for SEAs. These changes in data reporting reflect a shift from

quantity (numbers of children served/unserved) to quality in assessing the impact of the EHA, and in the requirement to assess which children need improved services and which services are in need of improvement.

These recent changes which have occurred in data requirements serve as both justification and limitation of the Data Collection and Use study. The fact that changes have and will continue to occur in the requirements and uses of information justifies the study of the data collection and use process to better understand it. On the other hand, the timing of the new data requirements may have implications in terms of the difficulty of obtaining accurate information from state education agency officials, and interpreting such information. Attempts were made to overcome this limiting factor, however, by focusing on the old reporting requirements mandated by P.L. 94-142 as suggested in interviews with state directors of special education.

The next sections of this document explain in more depth the procedures for gathering information in order to provide answers to the research questions presented earlier. In Chapter Two related literature is reviewed and associated with development of questionnaire items. The research design is described in Chapter Three. In Chapter Four the results of the study are presented. The findings of the study and recommendations are discussed in Chapter Five.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

Identified in the previous chapter was the problem of increased information requirements by the federal government incurred in special education units of state education agencies (SE/SEAs). These information requirements, imposed by law, required that three types of data be reported to the federal Department of Education in order for states to qualify for federal funding. These three areas are: (a) child count - number and ages of children in each disability category; (b) personnel count - number of qualified and non-qualified personnel working with handicapped children; and (c) setting count - number of handicapped children served in different settings ranging from regular classes to special purpose facilities. It should be made clear that the uses of information at the federal level is not a topic which this study addresses. The major area of focus is the utilization of these data at the state level.

In order to make the assumption that data can be useful when making decisions involving special education administration, literature in several areas was utilized. Starting from a broad perspective, the first area consulted was knowledge/research utilization. Two studies in the review addressed when and how research has an influence on

decision makers in various federally supported health agencies.

The next area of literature consulted was educational management by use of information in both general and special education. The findings of the four studies reviewed in this area emphasize the importance of having a systematic method for information collection, storage, and retrieval when administering educational programs at the local and state levels.

The last area of literature found to be relevant to the Data Collection and Use study addresses the variation that exists among states in the implementation process. The two studies reviewed explored the organizational and contextual aspects of the SEA which vary from state to state and are, typically, associated with differential implementation of federal categorical programs.

The eight studies which compose the literature review are believed to have an impact on the Data Collection and Use study being conducted. The purpose of reviewing this literature is twofold: (a) to present a critical analysis thereby identifying a gap in the literature regarding SEA management-by-information practices; as well as, (b) to integrate the results and implications of the research in conceptualizing hypotheses and thus, formulating questionnaire items for the study being conducted.

Knowledge/Research Utilization

This is the broadest area in which literature was sought for this study. In 1980 a series of studies conducted by Carol Weiss was published that dealt with social science research and decision making of government agency managers. When and how information from research has an influence on decision makers in various health agencies were the focus of the research. This area of investigation is used by this researcher as a theoretical background for subsequent studies that examine how educational administrators use data/information to make decisions.

Conducted during the mid-1970s but published later, Weiss and Bucuvalas (1980) studied the use of knowledge to aid the decision-making process. Stimulated by the reputed neglect of social science research by practicing decision makers, the authors made inquiries using interviews, regarding the salient features of research that met the demands of decision makers.

The intent of the interview was to simulate the presentation of real research to decision makers (mental health professionals) and discover their responses on measures of usefulness. The authors defined the concept of "use" as the person's judgment that research was useful. Respondents were asked to read abstracts of research

reports supported by federal mental health funding, and rate them according to several measures of usefulness, including the likelihood that they would use the study and the contribution that its information and ideas could make to their work. Information was collected on the respondents' position, pattern of research use on the job, sources of information, and their attitudes toward research. Other background information about each respondent included was: length of time in agency, prior experience, education, professional field, publications, political orientation, age, and sex.

In addition to characteristics of the research, the authors investigated the effects of decision makers' position, experience, and background characteristics and how they affect judgments of usefulness. Weiss and Bucuvalas used the adoption of innovation literature as a basis for investigating the relationship between respondent characteristics and information use. For instance, some of the individual characteristics that have been found to influence the adoption of innovations are age, education, professionalism , extensive contacts, communication, and exposure to information.

Noteworthy in the study are the findings related to personal characteristics of decision makers and perceptions of research information usefulness. According

to Weiss and Bucuvalas the findings suggest that:

1. Length of education is a poor predictor of the likelihood of decision makers' using research studies.

2. Time in position is negatively associated with judgments of usefulness. People who have spent a longer time in the same position are less likely to expect to use the information from research. People, on the other hand, who have been on the job for a short time are more likely to consider research studies useful.

3. Neither age, sex, or political orientation were significantly related to research information use.

4. People who have been exposed to research-- who reported seeking research in the past-- are likely to find information from studies useful in the present (119-138).

Weiss and Bucuvalas' results have limited applicability since their dependent variable, research use, reflects intentions on the part of decision makers rather than actual behavior. People's behavior is often different from how they say they would behave. The findings are based upon intent-to-use perceptions rather than indicators of actual use. The actual use of information by decision makers would require studying the nature of applying such data or information to practices within the organization. The literature on using information to conduct management activities, however, suggests that using data for making information-based decisions is not representative of reality.

Utilization Focused Evaluation

Michael Patton (1978) conducted a series of studies which applied Weiss and Bucuvalas' findings to using information resulting from program evaluation. In his review of the literature on decision makers' use of evaluation studies, he found nonutilization of information particularly characteristic as illustrated by the following quotes:

> Producing data is one thing! Getting it used is quite another. (House, 1972: 412)

> In the final analysis, the test of effectiveness of outcome data is its impact on implemented policy. By this standard, there is a dearth of successful evaluation studies. (Williams & Evans, 1969: 46)

> The recent literature is unanimous in announcing the general failure of evaluation to affect decision-making in a significant way. (Wholey et. al., 1970: 46)

> There is little evidence to indicate that government planning offices have succeeded in linking social research and decision-making. (Cohen & Garet, 1975: 19)

Patton brought the theoretical framework of research utilization from social science to education. The purpose of Patton's study was to understand how information from evaluation research is used in making decisions. Twenty evaluation studies were selected from files in the U.S. Office of Health, Evaluation, Department of Health, Education, and Welfare (HEW). The interview method was used to study the effects of evaluation use.

Patton addressed the definition of information use as well as variables related to such use. His findings contradict previous research where the theme of nonutilization is dominant. The author explained his findings by allowing the definition of "impact" to emerge in his study as opposed to pre-defining impact as done in previous studies.

The indicators of impact that emerged from interviews with decision makers and evaluators were different from the definition of utilization which emphasized immediate, concrete program actions. Rather, the impact most often reported by the respondents was one where the evaluation findings reduced uncertainty in making program and policy decisions, as suggested by the following:

> Information leads to knowledge; knowledge reduces uncertainty;reduction of uncertainty facilitates action; and action is necessary to the accumulation of power. While the actual role of information in decision-making is not always obvious or direct, there is evidence that information can make a difference (48).

Patton criticized past utilization studies for using too narrow a definition of impact, which resulted in failure to find evidence of use of information from evaluation research.

Synthesis of Research Utilization Studies

A conceptual leap must be made between the use-of-research/evaluation studies reviewed and the use-of-

information study being conducted. The outcome in both centers on the use of information, derived in a rational manner, to make short and long term decisions about programs. The two major studies selected for review investigated several overlapping areas concerning the use of information.

The first area studied the nature of the use of information from social science research (Weiss, & Bucuvalas, 1980); the second studied the nature of utilization and impact of information derived from evaluation studies (Patton, 1978). The studies were similar in the following aspects:

1. Background literature consulted was the adoption of innovation research which focused on nonuse of innovations.

2. The definition of use was a major consideration in the conduct of the studies. Weiss and Bucuvalas treated use as perceived value of the information by decision makers. Patton allowed the concept of utilization to emerge from respondents' real world perspective.

3. Both studies' designs used interview techniques with a qualitative emphasis.

4. The sample used in the studies were from the population of high level officials in decision-making roles in public agencies.

The above stated aspects were used to guide the process in the Data Collection and Use study. Based upon these researchers' investigations, in order to operationally define "use", information must be valued by

the user. The impact resulting from the use of information, accordingly, can emerge from the field. These notions have been addressed by the data use component of the Data Collection and Use study in several ways. First, the actual uses of federally required data as well as ideal uses emerged from education professionals. Second, the question of usefulness of specific data elements was assessed along a continuum of their perceived value to the information user.

Findings in both studies related to the component that investigated certain characteristics of users of information. Personal characteristics considered significant were, newness to job and agency, and past history of seeking information (Weiss & Bucuvalas, 1980). Findings from Patton (1978) suggested that individuals who were accustomed to seeking information were in a position to be personally involved in using such information to add credibility to themselves when making program decisions.

The findings of Weiss and Bucuvalas (1980) and Patton (1978) were considered in the design of questionnaire items related to the Data Collection and Use study being conducted with state directors of special education. Several questions appear in the Demographics section of the survey instrument which address the position and amount of time a respondent has had in the job. In this way, the

present study is attempting to provide congruence with past research findings of selected characteristics which may be associated with information use.

An element not developed by the Weiss and Bucuvalas and Patton studies relates to the organizational variables involved in use of information. How easy the organization makes it to obtain information may correspond to the use of such information for decision-making. Weiss and Bucuvalas (1980) touched upon this notion when they admitted that presenting carefully selected abstracts of research to decision makers, as they did in their study, was an unrealistic way to simulate the diffusion of information in mental health agencies. Patton (1978) did not address organizational variables in his study. The Data Collection and Use study does address the organizational variables as facilitating information diffusion by investigating if the existence and type of management information systems in place affect perceptions of usefulness of data.

In bureaucratic organizations, the task of obtaining the right information at the right time may be difficult if not impossible (Crozier, 1964). With an increasing demand for accountability in education by the public, management by information is a strategy used by administrators to influence legislators, school boards, parents, and communities. Studies reviewed in the next

section address the methods used in education administration to systematize the information flow.

Educational Management by Use of Information

Information diffusion within the organization has been addressed in the management science literature that deals with automated systems designed to diffuse information, popularly known as management information systems (MIS). In the field of education, management by use of information is commonly practiced such as when using test scores to plan curriculum changes, using census data to close schools or build new ones, or the like. What is new to education is the computerization of information so that such data can be accessed in usable form more easily by educational administrators. Studies in this area have addressed two topics; (a) evaluation of a management information system (MIS) in place; and/or (b) developing a model MIS for education administration.

As accountability for student achievement increases, a system of bringing information to decision makers is believed to extend the bounds of rational decision making. According to Mellor (1977):

> Educational administrators need to be presented
> not only with better information for the
> selection of alternative courses of action, but
> also with more efficient means of processing that
> information into usable forms (92).

In 1975 Mellor conducted a study in Oregon to assess the Oregon Total Information System (OTIS), a state-wide MIS. OTIS is a computer-based data processing and educational information system which served 150,000 people at the time of the study. Use of OTIS allows administrators to obtain specially manipulated information from the data files for the purpose of supporting problem solving and decision-making.

The purpose of Mellor's study was to conduct ongoing research into the needs and problems of decision makers. Mellor used management's three levels-of-uses of information (strategic planning, tactical control, and operational control) as a framework for identifying information user needs. The study consisted of two components. First, respondents were asked about decision area priorities, and second, respondents were asked to indicate the use of various sources of information.

Data analyses produced a taxonomy of school district information needs that could be addressed by OTIS. The five areas considered to be most consuming of administrative time and in most need of information support were budget projections, curriculum development, contract negotiations, salaries, and personnel evaluation. Mellor indicated that these areas fall in the strategic level of the management uses-of-information hierarchy. In addition,

six areas were considered in need of information support: cost accounting, scheduling, legal requirements, instructional methods, program evaluation, and building design and maintenance-- which Mellor considered at the operational and management control levels of decision-making. The author found that many of the decision areas derived from the operational level such as personnel movements, equipment, support services, and certification, were considered to be of lesser importance to the district administrator.

Mellor concluded that the information contained in the files most accessed was relevant only to the operational level of the uses-of-information framework. This finding confirmed the hypothesis that OTIS services are used most for decision areas of lower priority. Based upon his findings, Mellor recommended that OTIS be upgraded to include services in the higher level decision-making areas, and that the decision-making function of automated information systems be clarified for educational administrators.

Mellor's findings indicate needs in two areas. One area addressed the topic of training and technical assistance to education administrators concerning the use of computer-based MIS to assist in making higher level planning decisions. The other area focuses on the nature of

the decisions made by administrators. Mellor recommended that future research address the analysis of such decisions in order to structure data into potentially useful information for decision-making. The Data Collection and Use study addresses this "information-structuring" recommendation by applying the levels-of-uses of information hierarchy to administrative tasks involving decisions in special education.

Information Systems in Special Education

There is a dearth of literature concerning the use of MIS in special education. Maher (1979) identified a gap between MIS technology and its application to the field of special education administration. He believed that federal and state compliance legislation has required special education professionals to develop more accountable service delivery systems which focus on producing information necessary to make more accurate programmatic and management decisions. A conclusion Maher reached after a review of the decision-making literature was that the act of using data to make informed judgments among decision alternatives is essential. The acquisition of useful information, however, in public schools has been reported to be a difficult task.

Special education professionals, typically, have various sources of information in the form of people and

records to which they turn for making judgments. Maher contends that it is the development of "systems" of information for programmatic decision-making that is absent at all levels of special education. The term system, in this sense, is used to describe a logical method by which information can flow through the organization to the decision maker to be ultimately used for decision-making purposes. Focusing at the local level, Maher developed guidelines for special education MIS design, implementation, and evaluation.

In his article, Maher was able to identify in a general sense the information needs of special education professionals at the local or school district level. Maher's ideas reflected a position based upon his personal experience rather than on findings derived from empirical analyses. Further, he did not address the information needs at the state level. Considered for the Data Collection and Use study, however, is Maher's notion of using the various components of the organization to establish a system for collecting, locating, and retrieving information. Thus, questionnaire items have been included that will provide descriptive information concerning the process used by states to collect and transmit data.

The last two studies concerning MIS in special education discuss areas not touched by Maher: (a) empirical

findings addressing MIS use, although at the local level; and (b) MIS in special education at the state level.

Commissioned by the Council of Administrators of Special Education (CASE) to determine the current status of electronic technology in the management of special education, a study was conducted by Burrello et.al. (1983). A questionnaire was sent to all CASE members surveying local administrators' MIS use. Seven open-ended questions comprised the survey instrument which focused on: (a) MIS in place; (b) advantages and disadvantages of MIS; (c) types of software used with MIS; and (d) future plans to develop MIS. A total of 348 responses were received out of 3,600 mailings to CASE members.

The results of the survey fell into three major categories:

1. Incidence of computerized MIS;

2. Person responsible for the system; and,

3. Uses of computerized MIS.

Nearly all (95%) of the respondents were interested in obtaining more knowledge about the use of computers in special education management. However, only approximately one-half of them replied that they were currently using a computerized MIS.

Burrello et. al. found that local special education administrators were moving toward the use of computerized

MIS in their work. Survey findings showed that local special education administrators responsible for program decision-making, as opposed to data specialists, are becoming more directly involved with computers. Two thirds of the respondents who had direct responsibility of their MIS were special education managers. Uses of MIS were distinguished by identifying software used in relation to special education management tasks. Specialized single functions included, student enrollment, business accounting, student programs, and word processing. The multipurpose functions were business filing, and statistical analysis.

Findings suggested that the preponderance of single-purpose uses of MIS at the local level reflect a reactive versus a proactive attitude toward the use of data. In business and industry, computerized MIS have been used to increase efficiency by processing data more quickly thus accessing data to produce reports which are designed to aid management when making planning decisions. The major payoff of computerized MIS in special education, however, has been to reduce clerical and staff time in responding to pre-defined information requirements contained in state and federal regulations.

Burrello et. al. concluded with recommendations that special education administrators consider an alternative

approach to using MIS in such a limited, reactive way. The authors were able to characterize most of the survey sample as functioning with a "file-drawer" system, representative of the operational use-of- information. Respondents' desire for future uses of computerized MIS, however, suggest improving the quality of decisions made in special education settings. The authors suggested that there is potential to move beyond file drawers and use data to improve decision-making by special education administrators by extending the potential of electronic information processing systems. Similar to Mellor's recommendations, Burrello et.al. suggest that the three levels-of-uses of information (operational, tactical, and strategic) be used to hierarchically arrange administrative tasks. The Data Collection and Use study assesses the feasibility of using such an hierarchy for categorizing special education related decisions.

The findings from Burrello et.al. are limited due to less than adequate sampling procedures used and the low response rate. Since the sample surveyed was not randomly selected, results obtained may be biased in the sense that only administrators who had an interest in MIS responded. Therefore, it is difficult to generalize findings to all local special education administrators.

Special education administrators at the state level were the target population of a project jointly conducted by NASDSE and the Management Analysis Center (NASDSE/MAC, 1979). The purpose of the federally funded project was to provide technical assistance to SE/SEAs in the area of MIS. The NASDSE/MAC project was a response to the need for a system to deal with additional federal and state reporting requirements. The authors defined a management-by-information system as:

> ... a system that organizes people, equipment, procedures, and communications to collect and present accurate data that administrators can use to make decisions and to provide information to state and federal governments (vii).

Further, the authors believed that such a system needs to be concerned with more than just procedures for data collection and reporting-- also addressed must be the total means of satisfying managers' needs for information.

The resulting product, "Management-by-Information Guide", was developed by studying practices in selected SEAs. Using a case study approach, the authors compared information systems across five states selected on the basis of having exemplary MIS practices. Site visits to states included a review of the aspects which included, organization of SEA administrative structure; personnel and computer requirements of information systems; procedures used to collect, process, and report information; and,

strengths and weaknesses of the information system. MAC staff synthesized the aspects reviewed in the five states to develop guidelines for other state administrators to develop and/or adapt their management-by-information systems.

The NASDSE/MAC project was descriptive in nature. Its purpose was to identify and describe exemplary practices when implementing a MIS at the state level in special education. Consequently, the project looked at only one aspect of MIS-- system design and implementation-- it did not address the aspect of using data generated by the system.

There appear to be no investigations conducted with state level special education administrators on the aspect of data use. On the one hand, special education professionals may use data for various purposes such as monitoring and evaluating local programs, disseminating state-wide information back to local districts, and making future resource allocation decisions. That some state directors use federally required data in these different ways, however, is anecdotal information only available through those privy to informal discussions with state level staff. Further, it is also unknown how special education units in SEAs, as organizations, have continued to adapt their data systems for changing information needs.

Collecting federally required data from LEAs is no easy task. Complaints from state level administrators have focused on the increased burden data collection has placed on SE/SEA staff (NASDSE/Turnkey, 1984). SEAs have addressed the concerns of special education directors in different ways. Some states have been able to cope with the increased burden more efficiently than others (MAC, 1979). In order to explain the variation in how states respond to federal mandates, the notion of "state role orientation" is helpful. The final area of literature reviewed addresses state level variation in the implementation of federal categorical programs.

Variation Among States

. There is a body of literature which documents variation among states in the ways they respond to federal directives (Murphy, 1974; Ingram, 1977; Kritek, 1976; Goettel et.al.,1977; Wirt,1977). More recent studies addressing implementation variation have constructed models based upon such research findings (Turnkey,1982; Orland & Goettel, 1982).

In 1982 Education Turnkey Systems, Inc. (Turnkey) conducted a study to validate an implementation model for use by federal agencies in their relations with states. Nine states used in the study were contacted to collect and synthesize information on SEA contextual variables.

Information about government structure and contextual variables was integrated into the validation model.

Implications emerged from Turnkey's findings which suggest that the state's role, as perceived by SEA staff, in relation to federal directives would be useful for understanding the impact of federal law on SEAs. In addition, certain contextual variables which are peculiar to each state, were used by Turnkey to explain the responsiveness or lack of responsiveness of SEAs to selected aspects of federally mandated programs. They were:

1. Number and size of LEAs;

2. Existence and types of infrastructures such as administrative agencies other than LEAs;

3. State's method of funding special education; and,

4. Legal considerations such as state laws and court decisions.

The state contextual variables of interest in the Data Collection and Use study being conducted are: (a) size as defined by number of operating school districts; (b) infrastructures such as intermediate educational agencies; and, (c) the existence of a management information system (MIS). The capability of states to use systems that are in place, such as computerized MIS, may affect how federally required data are used and valued. If managers of SE/SEAs are merely using computerized MIS to decrease the paperwork burden, then the states which contain many school districts

would be the ones implementing computerized data systems. States, therefore, can be grouped on the size variable to look for patterns with respect to the existence and type of management information system in place.

The infrastructure refers to the type of special education administrative agencies that exist in a state. States vary in the functional role of these intermediate educational agencies-- some act independently, some serve as liaison between the LEAs and SEA; while in other states they function as an arm of the SEA. It is unknown at this time if special education units in state education agencies (SE/SEAs) have delegated some responsibility for data collection and reporting to these intermediate agencies.

Another variable which may explain information use is related to funding. There is evidence which suggests that when money is made contingent upon information, data are used more extensively (MAC/NASDSE, 1979; Turnkey, 1982). For example, child count data may be treated with priority by SE/SEAs because federal funding is based upon how many handicapped children are served.

Data may vary in relation to how the decision makers at the SEA perceive their role in relation to both, the local agencies who they monitor and the federal agency who monitors them and provides the funding. Although the Data Collection and Use study will not directly address how SEA

staff perceive their state's role, variations in states' use of data may be partially explained by the notion of "state's role".

State's Role

Another implementation model of state administered federal programs was developed by Orland and Goettel (1982). According to the authors the basic premise of the framework is that implementation of policy throughout various governmental levels is strongly affected by expectations and administrative action in combination with contextual variables.

Orland and Goettel's intergovernmental implementation framework consists of three components; (a) the context of intergovernmental implementation; (b) key intergovernmental implementation variables; and (c) state role orientation. The first component, context, refers to the state and/or local organizational contexts which serve as either a barrier or facilitator to the meeting of federal program objectives. The second component, key intergovernmental variables, determine whether local implementation of federal programs will be consistent with federal performance expectations. Orland and Goettel identified three conditions necessary for subordinate administrative agencies to meet such expectations. The first is knowledge of what the superordinate agency expectations in

fact are; the second is commitment to meeting these expectations; and the third condition is the administrative capacity to meet such expectations. The final component in the authors' framework is the state role orientation. The authors identified this as a central analytic tool for understanding implementation of federal mandates. The concept of state role warrants a more detailed discussion than the other two components, in relation to the Data Collection and Use study being conducted.

In state administered federal categorical aid programs such as P.L. 94-142, the SEA serves as a critical link by translating federal requirements into state administrative actions which will affect local implementation efforts. Some variation among states in program implementation can be explained by organizational and contextual variables, and by varying levels of knowledge, commitment, and administrative capacity. Orland and Goettel asked the question, "Why might an identical federal requirement lead to the federally desired behavior in one state and not in another?". The authors believe that the concept of state role orientation can explain most of the variation phenomenon. State role orientation is defined as, "how the state implementors of federal categorical programs perceive their appropriate role or mission within the intergovernmental administrative system" (148).

The concept of state role orientation can be used to explain fundamental variations in the nature of state implementation behavior. Attempts have been made to operationalize the concept of state role orientation. Findings from case studies conducted by Goettel et.al. (1977) suggest that state role variations occur along three dimensions which are: (a) state directiveness; (b) substantive thrust; and (c) state autonomy. The three dimensions are displayed in Figure 2.1. For each dimension the continuum of administrative action along which states vary is depicted.

The first dimension, state directiveness, refers to the degree SEAs are willing to interfere with the LEA administrative routines. In other words, some states are content to function as a conduit for federal funds, while others use federal mandates to promote their own priorities. According to Goettel et.al. (1977), the directive SEAs enacted state policies and procedures which instructed LEAs to run their programs in a state prescribed manner. The nondirective states' procedures, on the other hand tended to be locally determined. The second dimension, substantive thrust, refers to the general substance of state administrative expectations. For example, in the Goettel et.al. study, certain SEA program units almost exclusively concerned themselves with regulatory or

State Directiveness

Nondirective   Directive

Substantive Thrust

Regulatory   Program
Oriented   Oriented

State Autonomy

Federally
Responsive   Autonomous
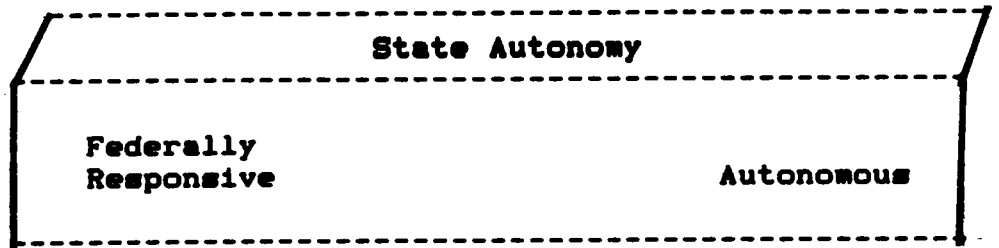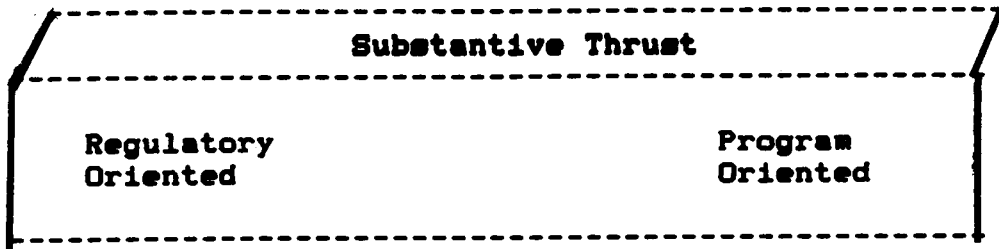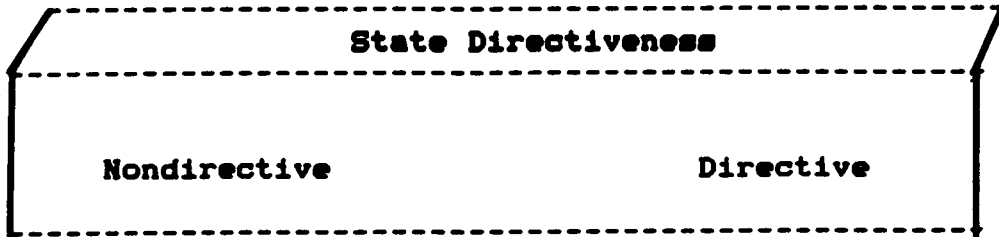
FIGURE 2.1:   THREE DIMENSIONS IN STATE ADMINISTERED
   IMPLEMENTATION OF FEDERAL CATEGORICAL PROGRAMS

bureaucratic aspects of local programs while others focused more on local program quality, development, and improvement. Thus, states with a more bureaucratic role were regulatory oriented and tended to spend a large amount of time and resources on monitoring LEAs for compliance as opposed to providing technical assistance efforts. The programmatically oriented states tended to be more concerned with the substantive content of local programs and the planning and evaluation process involved.

The third dimension, state autonomy, refers to how states define their mission in relation to the federal agency. This dimension differs from the other two because its focus is on the federal/state relationship, whereas the first two dimensions focus on the state/local relationship. Orland and Goettel identified a continuum along which states may vary consisting of the endpoints: (a) federally responsive; and, (b) autonomous. Federally responsive states view their role as one of implementing federal programs. Thus, the state administrative activities most emphasized will be ones associated with the federal requirements. Autonomous states, on the other hand, will tend to define their implementation responsibilities independently of federal demands. For example, one could hypothesize that SE/SEAs which primarily use federally required data at the operational level will tend to be

federally responsive; whereas those SE/SEAs which employ data more for control and strategic levels-of-uses may perceive themselves as autonomous in relation to the federal agency.

Of the three dimensions identified by Orland and Goettel, the states' autonomy is seen as the aspect which has the most impact on SEA messages to LEAs. According to the authors, the state's autonomy determines the levels of knowledge, commitment, and capacity states bring to meet federal program expectations. Thus, the local districts receive messages about how to administer federal programs. For example, Goettel et.al. (1977) found that although federal Title I statutes mandate requirements for evaluating local compensatory education programs, the message received by LEAs in nondirective, bureaucratically oriented states is that reporting is important, but evaluation for local use is not. As a result, in these states few LEAs related their evaluations to program decisions because they lacked knowledge, commitment and/or the capacity to do so.

The Data Collection and Use study being conducted is not a policy analysis investigation, nor is it a policy implementation study. The concepts developed in the Turnkey (1980) model and the Orland and Goettel (1982) framework, however, are useful for discussing implications

of the findings.   As Goettel et.al. (1977) found in their
case study, the state role orientation was manifest in the
way the SEA program unit dealt with federal reporting
requirements.   Likewise,   in looking at SEA   special
education units' administrative activities associated with
federal reporting requirements, state role orientation may
be used to understand variation in the perceived usefulness
of federally required data by staff in SE/SEAs.

Summary

The   three   areas   of   literature   reviewed,
knowledge/research utilization, information management in
education, and SEA contextual variables all contributed to
the Data Collection and Use study being conducted.

The first section, knowledge/research utilization,
contained findings related to characteristics associated
with use of information from research and evaluation.
Personal characteristics were found to be related to the
use of information. Respondents' position and length of
time in the job were related to the intent to use
information for program change. A topic not addressed in
the knowledge/research use literature is the role of the
organization in diffusing information to decision makers.

The public education system has come under increasing
pressure to be accountable to its constituencies.   With
declining test scores and resultant Presidential Task Force

reports, public education has received criticism in this regard. Consequently, educators have identified a need to extend the bounds of rational decision-making when administering educational programs (Mellor, 1975; Maher,1979; MAC/NASDSE,1979; Burrello et.al., 1983). The literature dealing with information management systems in education focuses on developing and/or updating a system of bringing information to decision makers.

Where automated information systems are in place, it appears that administrators may not be making optimum use of them. Although administrators say they want assistance with higher-level strategic concerns, when data are categorized into types of uses (operational, tactical, and strategic), the automated information system is most often used for lower-level operational decisions. (Mellor, 1975; Burrello, 1983). These were findings from investigations conducted with both regular and special education administrators at the local agency level.

Only one project was found that addressed management by use of information in special education at the state agency level (MAC/NASDSE, 1979). A planning guide was developed from examining exemplary information management practices in five states. The nature of the MAC/NASDSE project was descriptive and designed only to provide advice for staff at SEAs regarding the implementation of a

management information system. The project did not address
the use of information collected by the MIS. MAC/NASDSE
described the variation in selected states regarding the
commitment and capabilities involved in the different
information systems, but no attempt was made to provide
explanations for such variation.

Although federally mandated educational programs
specify the same directives for all states, what factors
account for differences in program implementation among
states? This question was addressed by Turnkey (1982) and
Orland and Goettel (1982) in the final area of literature
reviewed. Both studies depicted models that were developed
to explain the phenomenon of differential program
implementation. Where Turnkey reached conclusions drawn
from federally mandated special education, Orland and
Goettel's model was developed from examining the efforts of
Chapter 2 (formerly Title I) of the Elementary and
Secondary Act of 1965 on program implementation.

The two models from the state-level contextual
variables literature differ in complexity. Turnkey
identified specific organizational variables in states
which may have an impact on program implementation. They
include number and size of LEAs, the function of
intermediate educational agencies, and the existence of
infrastructures such as computerized information systems in

place. agencies. On the other hand, Orland and Goettel drew implications related to a more general framework which included a dimension where SEAs, as organizations, define their role in the milieu of intergovernmental activities. A pattern found by Orland and Goettel in Title I implementation studies was that SEAs gave messages to LEAs in relation to areas of emphasis in program implementation. How the state defines itself in terms of autonomy was identified as impacting on program implementation activities. The state's autonomy orientation appeared to fit along a continuum which included as endpoints; (a) regulation compliance (use of data for reporting), and (b) program improvement (use of data for evaluation).

The _Data Collection and Use_ study does not intend to classify states according to their intergovernmental role orientation. This construct, however, is believed to be useful as a focul point for discussing the findings. Obtaining as much relevant descriptive information as possible and investigating the relationships among variables identified in the literature are goals of the _Data Collection and Use_ study. The process used for accomplishing these goals is described in Chapter Three.

CHAPTER THREE

RESEARCH DESIGN

Information pertaining to special education units' at state education agencies (SE/SEA) data collection practices and use of those data for administering special education programs state-wide, is believed to be useful for technical assistance providers. The purpose of this study was to gather information about practices used by SE/SEAs in their management and use of federally required data. The objectives of this study were to:

1. Examine ways federally required data can be used for more than just reporting purposes.

2. Categorize the uses of special education data within a framework used for information management systems.

3. Describe ways in which data are currently collected and used at the state level.

4. Depict trends which are occurring in the data collection process.

5. Compare states' uses of required data with the suggested uses by experts in special education in relation to the levels-of-uses hierarchy.

6. Determine if relationships occur among usefuleness of required data and various personal and organizational variables.

Target Population

The target population was comprised of the 50 United States, the District of Columbia, the five Trust Territories (American Samoa, Guam, Mariana Islands, Puerto Rico, Virgin Islands), and the Bureau of Indian Affairs--

which is a total of 57 states. For purposes of this study the term states includes all of the above mentioned jurisdictions. Each of the 57 state directors of special education was given an opportunity to respond to a mail questionnaire. The following information describing the population has been excerpted from the NASDSE State Profiles (1981) document.

The relatively small number of cases (57) and the organization of special education at the state level make the target population accessible to study. Within each SEA is a special education unit which is charged with administering special education programs throughout the state. By comparison, these units are equal in the SEA hierarchy to the administrative unit responsible for vocational education in 73% of the states, above in status in 5% of the states; and below in status in 22% of the state agencies (NASDSE, 1981). Most states are organized such that one SE/SEA directs multiple local operating school districts (states range from 1 to 1068 local units). More than 50% of the states have intermediate educational agencies such as Intermediate Educational Units (IEUs), Cooperatives (Coops), and/or Regional Offices. Five states function as one unitary system and have been treated in this study as having one operating school district.

Between 1977 and the present the federal contribution to special education has increased. The federal fiscal contribution grew from 6% in 1977 to the present 9% figure (Council for Exceptional Children, 1984). While there have been some changes in states' funding formulae, most (over 75%) have continued to use the same formula for distributing funds that was used in 1980 which included, excess cost (38%), per pupil (20%), personnel (29%), FTE (16%), unit (24%), other (16%), and some combination of these types (31%).

The position of director of special education has shown a general elevation within the SEA hierarchy since 1977. According to NASDSE state profiles, in 1977 there was an average of 1.73 positions between the state director and the Chief State School Officer (CSSO). In 1980 the average was 1.55 positions, and recent estimates indicate a continuing trend of upgrading the director position in the SEA hierarchy. Each state director, reportedly, participates in the special education budget making process. The contract status of state directors is of several types. In more than 50% of the states, directors are appointed by the CSSO or State Board; while in an estimated 30%, directors have civil service status. Others serve under either one-year contracts or other contractual arrangements.

A picture of the typical state director was portrayed by NASDSE in 1981. The average director was a 45 year old male (43 males, 13 females); had been in the position less than five years; and was elevated to the position from within the SEA. The age range of state directors was 32 to 65 years. Tenure in the position ranged from less than one year to 23 years. The only change from above which has occurred since 1981 is a slight increase in women state directors (40 males, 17 females).

Since implementation of EHA - B as amended by P.L. 94-142 there has been a trend for SE/SEAs to initiate changes in emphases placed on their administrative functions. For example, the average percentage of SE/SEA time spent on regulatory activities of LEAs was 56% in 1980, an increase from 47% in 1977. In 1980 staff time spent on technical assistance activities was 44%, compared to 53% in 1977. It is estimated that 80% of the SE/SEAs have authority to monitor state standards for the education of handicapped children served in special education programs operated by other state agencies, with a result of more than 90% having negotiated interagency agreements.

Questionnaire Development

Questionnaire items were developed using variables as they emerged from related literature reviewed for this study, through consultation with NASDSE and Turnkey

officials, and by conducting interviews with state directors and "experts". Interviews with six state directors of special education were conducted during their annual meeting with federal Department of Education agency officials. These interviews were tape recorded and transcribed. Open-ended questions guided discussions focused on obtaining, (a) information to facilitate questionnaire item wording with both experienced and new state directors; and, (b) suggestions for assuring a high response rate. The guiding questions were:

1. What do you do with the federally required data collected for child count, personnel count, and setting count?

2. How would you phrase the above question to ask other state directors?

3. If you, or other state directors were asked how federally required data were collected in 1977-78 (8 years ago), could you accurately answer that question? How easy would it be to recapture that information now?

A content analysis was conducted on the state directors' comments which resulted in two developments. First, including sample federal forms with the questionnaire to remind state directors and staff of the three data elements of focus in the study; and second, keeping as separate items the conduct of management tasks from the judgment of usefulness of federally required data to perform those tasks. Responses to the third inquiry, if

state directors could recall past information regarding data collection, suggested that such questions be treated with caution as recent turnover in position may result in inaccurate responses.

Data Use Questions

In order to capture how SE/SEAs can make use of federally required data for more than reporting purposes, the Delphi method was used to conduct interviews with five experts. The Delphi research technique typically contains three elements. First, a number of people identified as having expertise in a particular area provide their professional judgment on the matter in question. Second, the experts have an opportunity to reformulate their opinions based upon information fed to them in more than one session. Lastly, the feedback from the experts is synthesized into a single body of information (Dalkey & Helmer, 1963).

For this study, five experts were selected to address various uses, both practical and ideal, of federally required data at the state level. The purpose of using the Delphi technique was to determine some ideal uses of federally required data at the state level to employ as a standard with which to identify the extent to which management tasks, beyond the operational level, are

conducted in practice. The experts were selected based upon the following criteria:

1. Extensive involvement with state level planning;

2. Knowledge of special education administration; and

3. User of information/data in management and planning tasks.

To summarize, the experts, in a collective sense, had knowledge of SE/SEAs responsibilities with respect to the data they collect, and have had comparable responsibilities (using information for planning) at the state and/or national levels. The five individuals who participated in the Delphi were:

1. Dr. Pete Fanning - Director Kennedy Institute for Handicapped Children, Johns Hopkins University; Past State Director of Special Education for the state of Colorado.

2. Martin Gerry, Esquire - Attorney specializing in civil rights issues and past Director for the U.S. Office for Civil Rights. Mr. Gerry, during the past six years, consulted with over 40 state education agencies.

3. Mr. Jim Harper - Staff Specialist for the Maryland State Department of Education, Mr. Harper is closely involved with the state's special education MIS.

4. Dr. Garry McDaniels - President of TestMaster, Inc.; Past Director of Special Education Programs, U.S. Department of Education; Deputy Director for Institute for Program Evaluation at the U.S. General Accounting Office; and Director of the Division of Assistance to States, Bureau of Education for the Handicapped.

5. Dr. William Schipper - Associate Director, National Association of State Directors of Special Education.

The Delphi consisted of three rounds which were two individual interviews with the researcher, and one communication through written means. During the first round the experts were asked to brainstorm ways in which child, personnel, and setting count data can be used at the state level. Each session was tape recorded and transcribed for use in analyzing the discussions. The experts' responses were categorized according to their fit into one of the levels, operational, tactical, or strategic using a sorting technique.

Ensuing discussion during the second round with the experts completed the content analysis especially where some overlap occurred. The result was a synthesis report containing the experts' suggested activities categorized as either operational, tactical, and strategic (see Appendix A for the Delphi product). The activities which comprised the operational category emphasized the capture and recording of data, transaction processing, record keeping, and reporting. On the other hand, activities at the tactical and strategic levels emphasized monitoring and facilitating adjustment in local operations as well as deciding on objectives of the SE/SEA, changes in such objectives, and on the policies that govern the acquisition, use, and disposition of resources.

Finally, for the third round, the experts responded to a draft document that was to comprise the section of the questionnaire eliciting responses concerning the use of data. The experts were asked to verify that the activities represented what they said during the interviews, and to indicate final concerns they may have had regarding the content. The Delphi procedure addressed only development of the data use section of the questionnaire.

Demographic Questions

Questions addressing other relevant information concerning the states' data collection process and trends were developed by consulting various sources. First, a review of literature produced a list of variables related to the use of information in program implementation. Selected variables were considered when developing demographic questions. The use of related literature for conducting the Data Collection and Use study was discussed in depth in Chapter Two. In addition to using related literature, individuals who have been providing technical assistance to SEAs in the area of developing and using management information systems were consulted.

The Collection of Information from States

Through the National Association of State Directors of Special Education (NASDSE), an attempt was made to elicit

responses from the current population of state directors of special education using a questionnaire sent by mail.

Taking the three areas mentioned above into account (Delphi, literature review, and consultation with knowledgeable sources), the Data Collection and Use Questionnaire was developed. The instrument was composed of three sections: the first section was designed to collect demographic information regarding salient variables which emerged from the literature review. The second section sought to obtain responses describing the special education data collection process and trends.

The third and last section of the questionnaire was designed to elicit information regarding the various state uses of federally required data. In order to tap this information, individuals were asked to respond in two areas:

1. Whether the suggested activity (which emerged from the Delphi) was regularly conducted by the SE/SEA; and,

2. How useful on a scale of 1 (useless) to 4 (very useful), the federally required data were for conducting the activity.

In order to mask the appearance of a hierarchical arrangement, the activities were first coded according to the levels-of-uses categories then randomly arranged within the three data element classifications (child, personnel,

setting). The Data Collection and Use Questionnaire and accompanying cover letter are in Appendix B.

Adequate response rates to mail questionnaires often depend upon the quality of the instrument. Therefore, the questionnaire was field-tested with individuals who have served in the capacity of state director of special education. The two individuals that participated in the field test were:

    1. Dr. Pete Fanning, past state director of Colorado and one of the experts used in the Delphi; and

    2. Ms. Dee John, past state director of Missouri.

The instrument packet was also reviewed by Committee members and the Delphi experts and appropriate revisions were made. The Data Collection and Use questionnaire was revised incorporating suggestions from the field reviewers, experts, and Committee members.

The questionnaires were mailed with an accompanying cover letter written by a representative from NASDSE to the 57 state directors of special education. NASDSE's endorsement was considered crucial by state directors and experts for obtaining as close to 100 percent response rate as possible.

Data Analysis Procedures

The findings of the study were analyzed using content as well as quantitative analyses. Open-ended responses

from the questionnaire were collapsed into categories which could be coded along with the forced choice responses. A codebook for the instrument was developed so that the responses could be entered into a computerized statistics program for analyses.

The findings are presented in terms of frequencies. First, frequencies on all items were obtained. Tables and graphs display averages and percentages for ocular analyses in order to make comparisons among variables of interest. The extent to which SE/SEAs conducted the management activities suggested by the experts is also displayed using frequency analyses.

Responses concerning data use were treated differently than the data collection and trends responses. The mean usefulness ratings for activities were computed for each respondent. To investigate possible relationships among demographic variables and perceived usefulness of required data, the average computed means were compared across data element categories and levels-of-uses categories. The findings are presented in Chapter Four.

CHAPTER FOUR

RESULTS

Introduction

The problem addressed by this study was the lack of information available concerning the methods by which federally required data are gathered and the subsequent use of those data when administering special education programs at the state level. If states have information systems in place, then these federally required data can be easily accessed by decision makers. It was unknown how SE/SEAs manage the data collection process and what types of changes have occurred in data collection. Further, it was unknown if SE/SEAs use the federally required data for more than just reporting purposes, and to what extent this information was used in administrative and planning tasks.

The research questions addressed in this study fell into three categories. First, a descriptive area, where questions were designed to ascertain federally required data collection practices. The second area addressed trends and areas perceived to have impact on past and future changes in the data collection process. Responses to the third area of questions addressed actual uses of the federally required data. In addition to describing data use practices, the nature of relationships among demographic variables and perceived value of federally required data to conduct management activities were explored.

Respondents

Without a 100 percent response rate it is difficult to assess the extent to which respondents are representative of the target population. Therefore, several follow-up efforts were undertaken to obtain as many responses as possible. At the end of the first mailing, 24 questionnaires were returned; another 21 were received after the second mailing. Another follow-up activity used a memorandum from NASDSE reminding non-respondents to complete the questionnaire. After a two month time period, eight additional questionnaires were returned. In addition to written communication, follow-up phone calls were conducted with individuals for which there were questions concerning their responses. After all these steps were undertaken to assure a high response rate, a total of four state directors did not respond.

To assess the extent to which the respondents represented the target population, an investigation was made into the nonresponding states concerning the variables of interest in this study. By comparing the characteristics of both responding states and nonrespondents in Tables 4.1A and 4.1B, no patterns emerged to suggest respondent bias.

T A B L E 4.1 A

Demographic Characteristics of Responding States [a]

```
----------------------------------------------------------------
                         DEMOGRAPHIC CHARACTERISTICS
                 -----------------------------------------------
                 Size          Funding        Intermediate
 STATE           (No. LEAs)    Formula        Agencies
----------------------------------------------------------------
```

STATE	Size (No. LEAs)	Funding Formula	Intermediate Agencies
Alabama	130	Unit	None
Alaska	55	Per Pupil	None
American Samoa	1	Personnel	None
Arizona	230	Per Pupil	State Reg. Office
Arkansas	231	Per Pupil	Local Reg. Center
Bureau Indian Affairs	1	Excess Cost	Other
California	1042	Unit	Coop
Connecticut	165	Other	Coop
Washington, D.C.	1	Other	None
Delaware	19	Per Pupil	None
Florida	67	FTE	None
Georgia	187	Unit	Coop
Guam	1	- [b]	IEU
Idaho	116	Unit+FTE	State Reg. Office
Illinois	1000	Excess Cost+ Per Pupil	Coop
Indiana	304	Excess Cost+ Per Pupil	Coop

'

Table 4.1A, continued

Iowa	436	Per Pupil	IEU
Kansas	304	Unit	Coop
Kentucky	180	Per Pupil	Coop
Louisiana	73	Personnel+ Other	State Reg. Office
Maine	283	Per Pupil+ Personnel	None
Maryland	24	Excess Cost	None
Massachusetts	436	FTE	State Reg. Office
Michigan	507	Excess Cost	IEU
Minnesota	168	Personnel	Coop
Mississippi	154	Unit	None
Missouri	345	Personnel	Coop
Montana	400	Other	Coop
Nebraska	955	Excess Cost	IEU
Nevada	17	Unit	None
New Hampshire	169	Excess Cost+ Other	Coop
New Jersey	592	Excess Cost+ Per Pupil	Other
New Mexico	88	Other	Coop+Local Reg. Center
New York	735	Excess Cost	Coop
North Carolina	141	Per Pupil	None
Northern Mariana Islands	11	Other	None
Ohio	616	Unit	Local Reg. Center

69

Table 4.1A, continued

State			
Oklahoma	613	Per Pupil	State Reg. Office
Oregon	309	Excess Cost	IEU+Local Reg. Center
Pennsylvania	501	Excess Cost	IEU
Puerto Rico	100	FTE	None
Rhode Island	40	Excess Cost	Coop
South Carolina	94	Per Pupil	Coop
South Dakota	194	Per Pupil	IEU+Coop
Tennessee	141	Per Pupil	None
Texas	1068	FTE	Coop+Local Reg. Center
Utah	48	Per Pupil	Coop
Vermont	277	Excess Cost+ Personnel	None
Virginia	135	Excess Cost	Coop
Washington	296	-b	IEU
West Virginia	55	Per Pupil+ Personnel	IEU
Wisconsin	457	Personnel	IEU
Wyoming	49	Other	Local Reg. Center

----

a all information is given as reported by respondents

b missing information

T A B L E 4.1 B

Demographic Characteristics of Nonresponding States

STATE	Size (No. LEAs)	Funding Formula	Intermediate Agencies
Colorado	181	Excess Cost	IEU
Hawaii [a]	1	-	-
North Dakota	325	Personnel	IEU
Virgin Islands [a]	-	-	-

[a] Information unavailable in published form

The individuals who completed the questionnaire fell into several position types. While the state director received the questionnaire and was ultimately responsible for the accuracy of responses, most directors selected one of their staff members to complete the instrument. Nineteen (36%) of the respondents were considered data managers, and 25 (47%) were supervisors of the data collection process as described by their job responsibilities; the remaining nine (17%) were in the position of state director. A major limitation of the study is that the results may be inaccurate and/or biased because the information is based on self-reports by responding individuals.

The results presented below are based upon responses from 53 states and are reported in terms of frequencies and/or percentages. Tables, charts, and graphs are used for ease in interpretation. The findings are presented in relation to the research questions posited in Chapter One. There are three areas in which results are presented:

1. Data collection process;

2. Trends in data collection; and

3. Use of data.

Federal Data Collection Practices

The first set of research questions asked how special education units at State Education Agencies (SE/SEAs)

collect federally required data. The questions targeted for responses were:

1.1. Through which administrative agencies do the data flow?

1.2. To what extent are administrative agencies used in the data collection process?

1.3. To what extent are data transmitted electronically?

1.4. Are computerized management information systems (MIS) in place at SEAs?

1.5. What types of MIS arrangements are being used by SE/SEAs?

Data Collection and Transmission

The paths through which the data flow vary. Depicted in Table 4.2, three categories indicate whether or not data flow through an intermediate agency such as intermediate units, (IEU) cooperatives (Coop), and others such as state and local regional centers. Results indicate that more of the data flow directly from LEAs to the SEA, without the use of an intermediate agency. This flow seems to be stable for the three data elements.

When the data flow path is compared with the existence of intermediate agencies, one can judge if, on a national basis, administrative agencies are being used in the capacity of data collection. According to Figure 4.1. seventy-seven percent of the states have some sort of intermediate administrative agency. By comparing the information in Table 4.2 and Figure 4.1., although 77% of

T A B L E 4.2

**Frequencies and Percentages of States Where Federally Required Data
Flow Through Intermediary Administrative Agencies**

```
---------------------------------------------------------------
          D A T A   E L E M E N T
          -----------------------------------------------------

PATH OF FLOW    Child         Personnel      Setting
                F    X        F     X        F    X
          -----------------------------------------------------

LEA to SEA      37   69.8     38    71.7     36   67.9

LEA to IA to SEA 13  24.5     12    22.6     13   24.5

Other            3   5.7       3    5.7       4   7.5
          -----------------------------------------------------
```
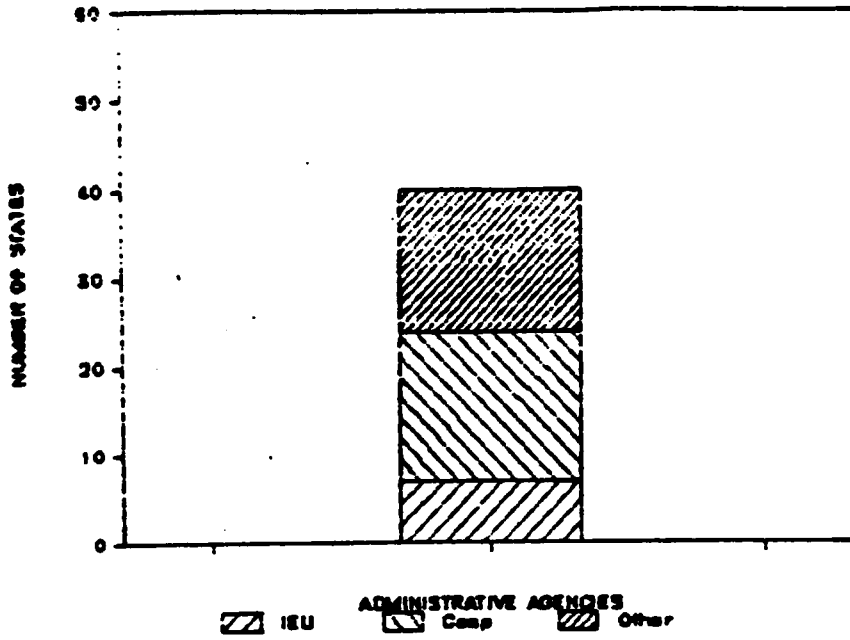
Figure 4.1: Types of Educational Administrative
Agencies in States

the states have some sort of intermediate educational
agency, only 24% of SE/SEAs use them to assist with
collecting federally required data.

There was a fairly even distribution of the type of
intermediate agency used in the data collection process.
Intermediate Units were most representative of the type of
intermediate agency used; Regional State Agencies were
least represented. There were seven states with
Intermediate Units who reportedly flow data through them:

    1. Bureau of Indian Affairs (Area Agencies)
    2. Iowa
    3. Michigan
    4. Oregon (child count data only)
    5. Pennsylvania
    6. Texas (setting count data only)
    7. Washington

There were four states which flow the required data through
intermediate agencies which more closely resemble Regional
State Agency offices:

    1. Massachusetts
    2. New Jersey
    3. Oklahoma
    4. Puerto Rico

Six states who reported using their Cooperatives and/or
Locally Controlled Regional Centers in the data collection
process were:

    1. California
    2. Kansas
    3. Illinois
    4. Indiana
    5. Ohio
    6. Texas (setting data only)

Data transmission practices at SE/SEAs, for the most part, continue to reflect manual methods. As set forth in Table 4.3, an average of 76% of the states transmit data using paper; only an approximate 2.5% use electronic means exclusively. There is some variation in the way data elements are treated in the transmission process. It appears that child data are more often transmitted by electronic or a combination of electronic and manual means than the personnel and setting data. The states who use a combination of manual and electronic means for transmitting data exhibit a wide range in their estimates of the percentage of local agencies who send data electronically, anywhere from 2% to 99%.

Related to data transmission is the receiver of data. Results shown in Table 4.4 suggest that there are three major receivers of federally required data: (a) the special education division, (b) the finance/budget division, or (c) the data/information services division. In most states (79% to 84%) the special education unit receives the data rather than other divisions within the general operation of the SEA.

TABLE 4.3

Frequencies and Percentages of States Where Data is Transmitted Through Different Methods

METHOD OF TRANSMISSION	DATA ELEMENT					
	Child		Personnel [a]		Setting [a]	
	F	%	F	%	F	%
Paper	38	71.7	44	83.0	39	73.6
Electronic	2	3.8	1	1.9	1	1.9
Combination	13	24.5	7	13.2	11	20.7
% Electronic	2% - 95% [b]		10% & 50% [c]		2% - 99% [c]	

[a] 1 missing case
[b] 4 missing cases
[c] 6 missing cases

T A B L E 4.4

**Frequencies and Percentages of SEA Divisions Who Are
Receivers of Federally Required Data**

	DATA ELEMENT					
	Child[a]		Personnel		Setting[b]	
RECEIVER SEA DIVISION	F	%	F	%	F	%
Special Education Unit	43	82.7	42	79.2	43	84.3
Finance	2	3.8	1	1.9	0	0
Data Services	4	7.7	9	17.0	5	9.8
Other	1	1.9	1	1.9	1	2.0
More than 1 Division	2	3.8	0	0	2	3.9

[a] 1 missing case

[b] 2 missing cases

Computerized MIS

Computerized management information systems (MIS) at SEAs seem to be more popular than manual ones. Thirty-eight states (72%) have a MIS. Thirty-seven of those indicated which MIS type exists at their SEA. The types of MIS arrangements are illustrated in Figure 4.2. Sixteen of 37 states have a Dual MIS arrangement where there is a MIS for general education and a separate MIS for special education. The following states reported this MIS type:

Alaska	Michigan
Arizona	Minnesota
Connecticut	Nebraska
Illinois	Ohio
Indiana	Pennsylvania
Iowa	Texas
Louisiana	Utah
Maryland	Washington

One state, Michigan, is in the process of establishing an Integrated arrangement which is described below.

Eleven have an Integrated arrangement where special education data are accessible only within the larger general system. These states reported an Integrated type:

California	North Carolina
Florida	New Jersey
Guam	South Dakota
Idaho	Virginia
Maine	Wisconsin
New York	

Six states have the General type, where special education data are incorporated in the general system but
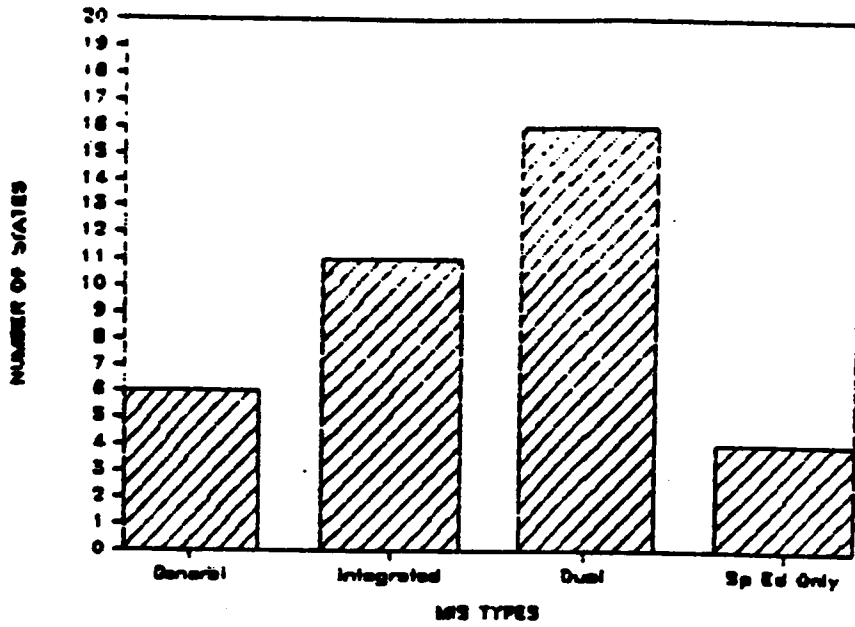
Figure 4.2: MIS Arrangements in States

are difficult to access. The states who classified their systems within the General type were:

    Delaware
    Massachusettes
    Missouri
    Oregon
    Puerto Rico
    Wyoming

Finally, four states have MIS for special education only, but there is no computerized system reported to be in existence at the SEA for general education. These states are:

    Montana
    New Hampshire
    Tennessee
    Vermont

A relationship between the existence of MIS and size of the state was discovered. Results of a crosstabulation between MIS and size of state (as defined by number of operating school districts) are displayed in Table 4.5. A chi square at the .02 probability level resulted indicating that size of state is related to existence of MIS. It appears that large and medium size states are more likely to have computerized MIS at the SEA. According to comments from several respondents, however, the above finding may be questionable in the near future. As viewed in Table 4.6 five small states and three medium states reported that a MIS will be implemented within the next year.

T A B L E 4.3

**Existence of Computerized Management Information System (MIS)
in Relation to Size of State**

```
-------------------------------------------------------------
                    M I S   AT   STATE   AGENCY
          -------------------------------------------------
                                                      a
SIZE OF STATE           No        Yes       Row Total
-------------------------------------------------------------
                    |        |         |
Small (0 - 99)      |    9   |    8    |        17
                    |        |         |
Medium (100 - 399)  |    5   |   16    |        21
                    |        |         |
Large (400 - 1068)  |    1   |   14    |        15
  -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
Column Total        |   15   |   38    |        53
                    |        |         |
-------------------------------------------------------------
```

a
  size as defined by number of operating school districts

p = .02

TABLE 4.6

States Who Mentioned SIZ in Progress

SIZE[a]	STATE

SMALL

55	Alaska
1	Washington, D.C.
73	Louisiana
1	Northern Mariana Islands
35	West Virginia

MEDIUM

165	Connecticut
187	Georgia
296	Washington

---

[a] size as defined by number of operating school districts

Trends in Data Collection

Questions regarding changes in the data collection process were incorporated into this study. The ten year period (1978/79 - 1988/89) was used to frame questions about the past and future. The objective was to describe the general tendency or course of events from the perspective of state directors concerning the data collection process. The research questions asked were:

2.1. To what extent did perceived changes occur in the past?

2.2. What areas were perceived to include the most changes?

2.3. What reasons were perceived to be attributed to past changes?

2.4. To what extent are changes predicted to occur in the near future?

2.5. What areas are perceived to include the most future changes?

2.6. What reasons are perceived to be attributed to future changes?

The majority of respondents indicated that there had been changes in data collection and there were likely to be changes in the future as well. More respondents think there will be future changes (85%) than were past changes (77%). The areas and reasons for changes to which directors were asked to respond are displayed in Table 4.7.

T A B L E 4.7

Frequencies and Percentages of States Indicating
Areas of Changes and Reasons for Changes

C H A N G E S	PAST				FUTURE			
	No		**Yes**		**No**		**Yes**	
AREAS	F	%	F	%	F	%	F	%
Transmission	18	34.0	23	43.4	9	17.0	36	67.9
Verification	13	24.5	28	52.8	31	58.5	14	26.4
Compilation	14	26.4	27	50.9	17	32.1	28	52.8
Analysis	20	37.7	21	39.6	18	34.0	27	50.9
Report Generation	16	30.2	25	47.2	15	28.3	30	56.6
Use	24	45.3	17	32.1	28	52.8	17	32.1
Other	41	77.4	0	0	41	77.4	4	7.5
REASONS								
Federal Project	36	67.9	5	9.4	43	81.8	2	3.8
Federal Reqmnts.	18	34.0	23	43.4	19	35.8	26	49.1
State Reqmnts.	27	50.9	14	26.4	36	67.9	9	17.0
Available Staff	29	54.7	12	22.6	41	77.7	4	7.5
State Court Order	39	73.6	2	3.8	44	83.0	1	1.9
New SEA Role	31	58.5	10	18.9	36	67.9	9	17.0
Telecommunication	37	69.8	4	7.5	25	47.7	20	37.7
Computer Hardvare	21	39.6	20	37.7	16	30.2	29	54.7
Computer Softvare	26	49.0	15	28.3	16	30.2	29	54.7
Other	40	75.5	1	1.9	42	79.2	3	5.7

The findings concerning areas of change and reasons for changes suffer from limitations and should be considered with caution. The respondents were given instructions on the questionnaire to select three of the listed items which represent the most significant areas of change and reasons for changes for both the past and future. These instructions, however, were not followed by most individuals. Therefore, each item listed for area of change and reason for change was analyzed as receiving either a "yes" or "no" response. Criteria used for most significant areas of change and reasons for changes as perceived by respondents was that, at least, 50% of the respondents indicated "yes" to the item.

Considering the above mentioned limitations, several findings emerged concerning areas of change and reasons for changes. As seen in Table 4.7, the most significant changes which occurred from 1978 to 1984 were in the areas of, (a) data verification; and (b) data compilation. No other areas of past changes were submitted by respondents than the ones listed on the questionnaire. It was difficult to assess reasons for these past changes as no one reason obtained 50% affirmative responses. One respondent, however, suggested a reason other than those listed, which was that the original data system at the SEA was too complex and costly.

More areas of change were selected to occur in the future. The four areas which received at least 50% affirmative responses included, (a) data transmission, (b) data compilation, (c) data analysis, and (d) report generation. Three states suggested that other areas of data collection may be affected, but did not identify them. There emerged two reasons for the above future changes received. Availability of computer hardware, availability of computer software were two reasons. The third reason which received close to a 50% (49.1%) affirmative response rate was the category of new federal reporting requirements. Other reasons submitted for future changes included lack of staff, and a growing committment at the SEA to implement an automated MIS.

Reversals in trends were found to occur in both areas of change and reasons for changes. The area of data verification is perceived as becoming less significant as an area of change. Perceived as increasingly important as reasons for changes in data collection, with the passage of time, is the availability of computer technology -- both hardware and software. The fact that changes are perceived to occur in these areas indicates that people at the state level who have to work with these data are still not satisfied with their present data collection and use practices.

There are several areas and reasons for change which reflect wide differences in perceptions from the past to the future. Two areas of change which were identified by respondents as significant future trends are data transmission and data analysis. Sixty-eight percent of the respondents indicated that changes in transmission will occur in the future, compared to 43% who said such changes had ocurred in the past. Likewise 51% respondents indicated future changes in data analysis, compared to 40% who thought past changes had occurred.

Two reasons for such changes emerged as evidenced from relatively wide differences between perceptions of reasons for change in the past compared with the future. Seventy-eight percent of the respondents indicated that available staff at SEAs would not be a reason for future changes, compared to 55% who said that availablility of staff was not a reason for past changes. This finding suggests that the lack of staff may be more a reason for changes to occur in data collection than an increasing SEA staff. In addition to a dwindling staff, the availability of telecommunication emerged as one of the more key reasons for future changes, with 38% identifying it as a reason for future changes, compared to 8% who perceived it as a reason in the past.

Data Use

The last set of research questions focused on the use of federally required data at the state level. The questions posited addressed several aspects of data use. The first aspect concerned the SE/SEA's conduct of activities at the three management levels-- operational, tactical, and strategic; along with the perceived usefulness of federally required data when those activities are conducted. Another area concerning data use addressed relationships which occur among demographic variables and perceived usefulness of required data. The data use research questions asked were:

3.1. How can federally required special education data be used at the state level for purposes other than reporting back to the federal agency?

3.2. To what extent do SE/SEAs conduct management activities at the three levels-of-uses defined as operational, tactical, and strategic?

3.3. To what extent do SE/SEAs find federally required data useful for conducting such activities?

3.4. Do responses concerning the usefulness of data differ according to the position of the person who works with the data?

3.5. Do responses concerning the usefulness of data differ according to the length of time in positon of the person who works with the data?

3.6. Do responses concerning the usefulness of data differ according to the existence of computerized MIS at the SEA?

The findings are reported in three areas concerning data use which are; (a) the conduct of management activities at the SE/SEA according to the levels-of-uses hierarchy; (b) the perceived usefulness of federally required data when conducting such activities; and, (c) the relationships between perceived usefulness and demographic variables.

The tasks involved when administering special education at the state level were qualitatively categorized into three levels-of-uses of information which were, (a) operational, (b) tactical, and (c) strategic (refer to Chapter One for discussion of the levels-of-uses hierarchy). Findings from the Delphi phase of the study resulted in expert consensus on the fit of the management activities to the categories in the hierarchy (see Appendix A).

Results suggest that SE/SEAs conduct considerably fewer activities at the tactical and strategic levels than at the operational level-of-use. The average number of occurrences for conducting management activities at the the three levels-of-uses according to child, personnel, and setting data are set forth in Table 4.8.

There were different amounts of activities in each data element category. Of the 20 activities using child data, six were at the operational level, seven were at the

T A B L E 4.8

Average Number of No and Yes Occurrences for Activities Conducted

```
-------------------------------------------------------------------
                    ACTIVITIES CONDUCTED W/IN DATA ELEMENT
-------------------------------------------------------------------
```

	Child		Personnel		Setting		Row Average	
LEVELS-OF-USES	No	Yes	No	Yes	No	Yes	No	Yes
Strategic	26.4	25.3	20.7	31.7	24.2	28.6	24	28
Tactical	18.7	33.4	23.9	28.0	25.3	27.1	23	29
Operational	5.3	47.3	13.0	40.0	12.2	40.4	10	43
Column Average	17	35	19	33	20	32		

tactical level, and seven were at the strategic level. The 24 activities using personnel data had six at the operational level, twelve were at the tactical level, and six at the strategic level. The last d category listed 17 activities using setting dta; of th five were at the operational level, seven wer at the tacical level, and five were at the strategic leel.

There are greater differences among levels-of-uses than among the data elements. The distinction the respondents made between the tasks considered operational and activities at the higher tactical and strategic levels is exemplified in Figure 4.3. The activities which comprised the operational category emphasized the capture and recording of data, transaction processing, record keeping, and reporting. On the other hand, activities at the tactical and strategic levels emphasized monitoring and facilitating adjustment in local operations as well as deciding on objectives of the SE/SEA, changes in such objectives, and on the policies that govern the acquisition, use, and disposition of resources. As set forth in Table 4.8, activities conducted at the operational level obtained an average of 43 occurrences, compared to 29 for tactical tasks and 28 for activites categorized as strategic.

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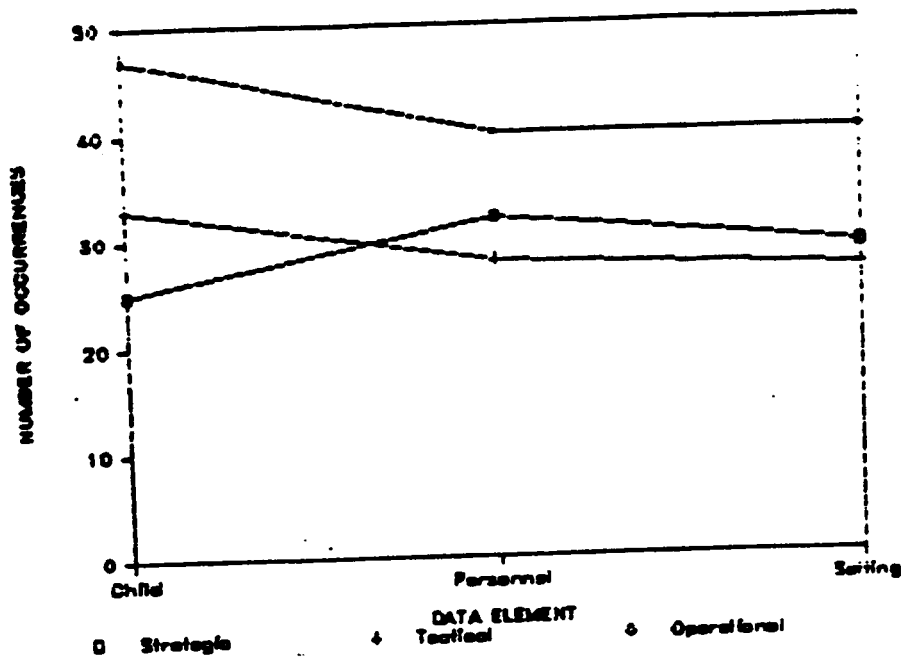
Figure 4.3: Average Occurrences of
             Activities Conducted

A list of the most and least frequently conducted activities is presented in Table 4.9. The criterion used to identify the most frequently conducted activities was, at least, 75% affirmative response that the activity was conducted. The criterion employed to indicate the least frequently conducted tasks was a response of 25% or less occurrences of the conduct of the activity by the SEA.

Findings from the perceived usefulness of federally required data when conducting management activities were observed to parallel the above findings concerning the conduct of activities. Depicted in Table 4.10 are the mean usefulness ratings of federally required data for conducting the management activities. The scale for usefulness ratings included 1 (useless), 2 (not very useful), 3 (somewhat useful), and 4 (very useful). Findings emerged which suggest that these data are not put to use for higher level management tasks. The required data are perceived to be more useful when conducting operational tasks (mean rating of 3.0) than when conducting tactical (2.4) and/or strategic ones (2.2). The respondents' distinction between activities at the operational level and ones at the higher levels-of-uses are illustrated in Figure 4.4. There was not as great a distinction made between the tactical and strategic levels as was made between the operational and the two higher levels.

T A B L E   4.9

Most and Least Frequent Mentions of Activities Conducted
Using Child, Personnel, and Setting Data
With Associated Level-of-Use Category and Mean Usefulness Rating

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Key

Level-of-Use - O=operational, T=Tactical, S=Strategic

Frequency - by number of occurrences

Mean Use Rating - scale from 1 - 4:
                  1=useless; 2=not very useful;
                  3=somewhat useful; 4=very useful

CHILD DATA ACTIVITIES

MOST FREQUENT MENTIONS:	LEVEL OF USE	FREQUENCY ACTIVITY CONDUCTED	MEAN USE RATING
1. Prepare required reports for federal agencies.	O	53	3.5
2. Compile data over several years to develop projections and forecasts (> 5 years), such as which handicapping categories are growing and which are declining.	S	44	3.5
3. Prepare required reports for state agencies.	O	45	3.2
4. Conduct desk audit to target monitoring priorities such as compliance site visits to review referral and assessment practices.	T	42	3.1
5. Prepare required reports for groups other than federal or state agencies.	O	44	3.2
6. Apply for funds from federal and state agencies.	O	44	3.4
7. Distribute state funds to local districts.	O	42	3.0

Table 4.9 continued

LEAST FREQUENT MENTIONS:

1. Develop long-term plan (+ 5 years) for resource allocation among state agencies for developing interagency agreements.	S	14	2.7
2. Calculate costs of alternative services to plan for future resource allocation (+ 5 years).	S	15	2.3
3. Plan for program improvement by encouraging capacity building for local district self-analysis or self-evaluation.	S	20	2.9

PERSONNEL DATA ACTIVITIES

	LEVEL OF USE	FREQUENCY ACTIVITY CONDUCTED	MEAN USE RATING
MOST FREQUENT MENTIONS:			
1. Apply for federal and state funds.	O	46	3.2
2. Prepare information upon request such as to LEAs, SOPs, INEs, advocate groups, Chief State School Officer, etc.	O	50	2.9
3. Identify personnel shortages.	T	46	3.1
4. Identify training shortages and/or problems.	T	45	2.8
LEAST FREQUENT MENTIONS:			
1. Compare state with other states such as develop rankings of states using Annual Report to Congress.	T	19	2.5
2. Compare local districts to each other such as construct LEA profiles or rankings showing certified and noncertified personnel.	T	18	2.7
3. Compare personnel ratios with other programs such as Chapter I, Bilingual, and Vocational Education.	T	10	2.3

Table 4.9 continued

SETTING DATA ACTIVITIES

	LEVEL OF USE	FREQUENCY ACTIVITY CONDUCTED	MEAN USE RATING
MOST FREQUENT MENTIONS:			
1. Prepare required reports for federal agencies.	O	51	3.5
2. Prepare required reports for groups other than federal and state agencies such as advocate groups, parents, IHEs.	O	41	3.2
3. Prepare information upon request such as for LEAs, advocate groups, Chief State School Officer, parent groups.	O	46	3.1
LEAST FREQUENT MENTIONS:			
1. Consult other setting count data to corroborate multi counts.	T	19	2.9
2. Compare state with other states (e.g., develop state rankings using Annual Report to Congress or other documents).	T	20	3.1

T A B L E 4.10

Mean Usefulness Ratings of Federally Required Data [a]

```
-----------------------------------------------------------------
              D A T A   E L E M E N T
          -----------------------------------------------------
```

LEVELS-OF-USES	Child	Personnel	Setting	Row Average
Strategic	2.5	2.1	2.0	2.2
Tactical	2.7	2.6	2.0	2.4
Operational	3.3	2.9	2.8	3.0
Column Average	2.8	2.5	2.2	

[a] scale for usefulness ratings:
   1 (useless)
   2 (not very useful)
   3 (somewhat useful)
   4 (very useful)
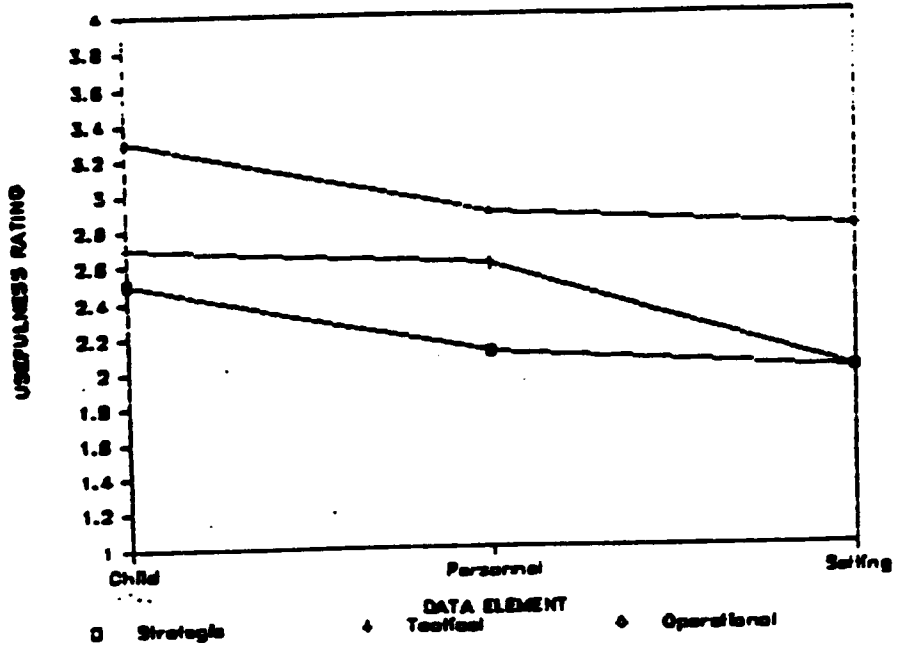
Figure 4.4: Mean Use Ratings of Federally
             Required Data

Although variations among the three levels-of-uses were greater, there were slight variations among the three data elements regarding their usefulness ratings. Child data emerged as perceived to be the most useful data when conducting management activities at any level. On the other hand, setting data were perceived to be the least useful data element.

Relationships Among Variables

Ratings of usefulness were compared with three demographic variables across data elements and levels-of-use. Two of the variables were personal characteristics: (a) position of respondent, and (b) experience as defined by length of time in position. The third variable, the existence of a computerized management information system (MIS), was an organizational characteristic. The mean usefulness ratings were computed to make comparisons among demographic variables of interest. The results of the analysis are shown in Tables 4.11, 4.12, and 4.13.

Several patterns emerged regarding the nature of the relationships of demographic variables and usefulness ratings. Findings depicted in Table 4.11 indicate that the data managers and supervisors were similar in their usefulness ratings of the federal data (mean 2.6 and 2.5, respectively) but the special education director differed from the other two groups with a mean rating of 2.8.

T A B L E   4.11

Mean Usefulness Rating for Position

By Data Element By Level-of-Use [a]

POSITION	DATA ELEMENT by LEVEL-OF-USE									
	CHILD			PERSONNEL			SETTING			
	O	T	S	O	T	S	O	T	S	Total
Manager (N = 18)	3.4	2.5	2.3	2.9	2.7	2.4	2.9	1.9	2.5	2.6
Supervisor (N = 26)	3.2	2.7	2.3	2.8	2.5	2.0	2.8	2.1	1.9	2.5
Director (N = 9)	3.4	3.2	3.3	3.1	3.0	3.1	2.1	1.8	1.8	2.8

[a]

Usefulness Rating Code:

1 = useless
2 = not very useful
3 = somewhat useful
4 = very useful

Level-of-Use Code:

O = Operational
T = Tactical
S = Strategic

T A B L E   4.12

Mean Usefulness Rating for Experience
By Data Element By Level-of-Use [a]

	DATA ELEMENT by LEVEL-OF-USE									
EXPERIENCE	CHILD			PERSONNEL			SETTING			
	O	T	S	O	T	S	O	T	S	Total
0 - 5 Yrs. (N = 22)	3.1	2.8	2.6	2.9	2.6	2.4	2.9	2.0	2.2	2.3
6 - 15 Yrs. (N = 25)	3.3	2.7	2.3	2.9	2.4	1.7	2.0	1.9	2.0	2.4
16+ Yrs. (N = 6)	3.6	3.2	3.0	2.9	3.0	2.7	2.1	1.9	2.2	2.7

[a]
Usefulness Rating Code:

1 = useless
2 = not very useful
3 = somewhat useful
4 = very useful

Level-of-Use Code:

O = Operational
T = Tactical
S = Strategic

T A B L E   4.13

Mean Usefulness Rating for Existence

of Management Information System (MIS)[a]

By Data Element By Level-of-Use

	DATA ELEMENT by LEVEL-OF-USE									
	CHILD			PERSONNEL			SETTING			
M I S	O	T	S	O	T	S	O	T	S	Total
NO (N = 15)	3.4	2.9	3.0	3.2	3.0	2.7	3.1	2.0	2.5	2.9
YES (N = 36)	3.2	2.7	2.4	2.8	2.5	2.0	2.7	2.0	1.9	2.5

[a] Usefulness Rating Code:

1 = useless
2 = not very useful
3 = somewhat useful
4 = very useful

Level-of-Use Code:

O = Operational
T = Tactical
S = Strategic

For both child and personnel data categories the director
valued federal data more than the individuals in positions
of manager and supervisor. The largest distinction
occurred with child and personnel data at the strategic
level-of-use. The setting data category, however, was
considered to be of least value to the respondents in the
director position.

Findings displayed in Table 4.12 suggest a
relationship between experience and usefulness ratings of
federally required data that follow a pattern similar to
the relationship between position and usefulness ratings in
the previous discussion. Child and personnel data were
considered more useful for conducting activities at the
higher tactical and strategic levels by respondents with
more years experience as evidenced by the mean usefulness
rating of 2.7 compared with 2.3 and 2.4 ratings of the
other groups. Usefulness ratings of setting data by
respondents with more years experience, however, were lower
than usefulness ratings of individuals with less
experience.

The existence of computerized MIS at the state
education agency appear to be related to usefulness ratings
of federally required data. As shown in Table 4.13, there
are differences in mean usefulness ratings between states
that have MIS (average mean rating 2.5) and those who do

not have MIS (2.9). Although these differences are minimal,
a pattern emerges which suggests that those respondents who
have MIS in their organization do not value the federally
required data as highly as the respondents who do not have
a computerized system. The findings suggesting
relationships between variables and ratings of usefulness
of the data are discussed further in Chapter Five.

Summary of Findings

The findings were presented according to the research
questions addressed by each section of the questionnaire.
To summarize the results, highlights of the Data Collection
and Use findings are presented according to first, the data
collection process; second, trends in data collection; and,
last, the use of data. The data use discussion addresses
both data use practices and relationships between
demographic variables and perceived usefulness of required
data.

The data collection process in most states is in the
early stages of becoming systematized using computer
technology. Although there are intermediate educational
agencies in the state organization, they, for the most
part, have not been incorporated into the system used to
collect data. At this time, local and state agencies who
use electronic means to transmit raw data vary greatly in
their capacities to do so.

SE/SEAs are moving toward computerization for collecting data. Although states with many local operating districts are more likely to have MIS than states with fewer operating school districts, the smaller and medium-size states are rapidly becoming users of computerized MIS.

The MIS arrangement which is most widely used addressed the unique information needs of SE/SEAs. The MIS type of arrangement used most often by SE/SEAs is the Dual type, where two MIS exists-- one for general education and a separate one for special education. This Dual arrangement can more easily accomodate changing information needs of special education administrators.

By examining perceived trends in data collection, it is apparent that changes have occurred and will continue to occur in the data collection process. Areas of change in the past were data verification and compilation. Future changes are perceived to continue to occur in compilation, in addition to transmission and analysis of data, and report generation. Reasons for future changes were availability of computer technology and telecommunication, a dwindling SE/SEA staff, as well as new federal reporting requirements.

Data use patterns address both the levels-of-uses hierarchy and the perceived usefulness of federally

required data. The distinction between levels-of-uses was greater between operational and the higher tactical and strategic levels; and not as great between the tactical and strategic levels. SE/SEAs conducted fewer activities at the tactical and strategic levels than at the operational level.

The respondents considered federally required data most useful when conducting activities at the operational level. Child count data were perceived as the most useful data element across levels-of-uses; whereas setting data were considered least useful.

Relationships among demographic variables and perceived usefulness of federally required data resulted from analyses of computed means of usefulness ratings of respondents. Patterns emerged concerning position, and experience-- in terms of number of years in position. The position with the highest authority and accountability, special education director, tended to place a higher value on using federally required child and personnel data to conduct management activities at the tactical and strategic levels than those respondents in lower positions. Similarly, those respondents with more years experience in their position regarded the child and personnel data more useful for conducting higher level activities than those with less years experience. Both categories of director

position and person with most years experience in their position regarded the federally required setting data less useful than the other groups of respondents.

There were slight differences between responses of those respondents from states which have computerized MIS in the organization and those who do not. Respondents from SEAs which did not have a MIS indicated that federally required data were more useful than those who reportedly had a MIS.

In the final chapter of the Data Collection and Use study (Chapter Five), the findings presented above are interpreted and discussed. They are discussed in relation to literature reviewed in Chapter Two, in addition to other ideas which stem from practices in state level special education administration. Discussion focuses on addressing issues in federal reporting requirements, specifically the recent regulations for special education data collection (P.L. 98-199) which went into effect during the 1984/85 year. Additional discussion centers around the potential application of systems analysis theory and computer technology to administration of special education. Recommendations are provided for practitioners at the state level, and technical assistance providers concerning collecting and using information for conducting management tasks. In addition, directions for future research are suggested.

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

Introduction

From 1976 to 1984 states have had to comply with the data requirements of EHA Part B as amended by P.L. 94-142 in order to qualify for federal funds for their special education programs. A problem identified by state directors of special education was that these reporting requirements were so extensive that they placed a burden on administrators of special education units in state education agencies (SE/SEAs). Yet, very few studies have been conducted which have gathered information concerning how SE/SEAs collected the federally required data, and how valuable they considered the data they collected to use for management and planning purposes.

The purpose of this study was to gather information concerning practices used by SE/SEAs in their management and use of federally required data. Asking the questions such as the ones posited in this study are believed to shed light on understanding states' practices in relation to data collection and use. This understanding comes at a time when information needs are increasing regarding the evaluation of programs for this nation's handicapped children. Prior to discussing the findings of the Data Collection and Use study which investigated past data

requirements, it is important for the reader to be aware of the intent of recent legislation requiring even more extensive collection, reporting, and use of data because there are lessons to be learned from looking at past practices.

New Federal Reporting Requirements

The new amendments to the EHA related to evaluation give the Secretary of the federal Department of Education the responsibility of collecting data from state education agencies. The purposes of the data collection requirements under the Act are: (a) to assess the effectiveness of state and local efforts to provide a free, appropriate, public education to handicapped children and youth; and, (b) to provide Congress with information to assist in policy decisions as well as to provide information relevant to program management and administration to state and local educational agencies. (The Education of the Handicapped Act Amendments of 1983, Public Law 98-199).

These new data requirements have occurred eight years after the enactment of P.L. 94-142. Congress felt it was time to begin to evaluate what the requirements of, and additional funding provided under the Education for All Handicapped Children Act laws have accomplished. The intent of P.L. 98-199, the most recent EHA amendment, was to address issues of quality as opposed to the past emphasis

on quantity, as illustrated by the language in the Senate report: "The evaluation component of Part B specifies evaluation activities and refocuses the special studies from implementation to impact of the Education of the Handicapped Act" (S.Rep. 191, 98th Cong., 1st Sess. 11-14 (1983)).

The fact that more than 4.3 million children are receiving special education and related services, or at least are being counted for funding for such services, does not shed light on what procedures are in place to assure that programs are appropriate and individually designed. The legislative history of the 1983 amendments involves the purpose of having the federal government, local systems, and the state agencies work cooperatively to look at the status of services for the handicapped and to evaluate programs and make changes. Data received from state educational agencies are the primary vehicle through which this evaluation is to be conducted. The requirement of data from SEAs is not new. The findings which emerged from the Data Collection and Use study begin to portray how states treated data they were required to collect so that future questions can focus on practices involving information systems and the use of data to make informed decisions concerning special education programs.

Discussion of Findings

In Chapter Five the findings of the Data Collection and Use study are discussed. The results which were presented in the previous chapter are reintroduced, accompanied by interpretations which, in part, were gathered by interviews with individuals involved in special education administration at both state and federal levels. At the state level there are phenomena that may facilitate or inhibit the collection and subsequent use of federally required data, in addition to such forces at the federal level. These forces are provided as explanations for the findings obtained in this study. They are conjectural in nature and are not intended to be regarded as significant in a quantitative sense.

The contents of Chapter Five are arranged according to the research questions of the study. Therefore, interpretations, implications for technical assistance providers, and recommendations for future research are interwoven among the broader sections which address the research questions. Issues involving federal reporting requirements are addressed within a context of federal/state roles. Whereas, discussion of state level practices center around the potential application of systems analysis theory and computer technology to administration of special education. Recommendations

include advice for practitioners, directions for technical assistance providers concerning collecting and using information for conducting management tasks, and related areas for future research.

States' Federal Data Collection Practices

The first set of research questions asked how special education units at state education agencies collected and transmitted federally required data. Questions regarding data collection practices addressed the flow of data from local sources to the state agency.

1.1. Through which intermediate educational agencies do the data flow?

1.2. To what extent are intermediate agencies used in the data collection process?

In most states data flow directly from LEAs to SEA without the use of an intermediate agency. Although 77% of the states have some type or combination of intermediate agencies, only 24% of them use the agency to assist with collecting federally required data.

The model developed by Turnkey (1982) which helped explain how state contextual variables were associated with the responsiveness or lack of responsiveness of SEAs to federally mandated programs identified infrastructures such as intermediate educational agencies, as important in this process. According to Turnkey (1982) in states where there was no conflict between the intermediate agencies and the

SEA, and states which did not have any infrastructures, it was easier to implement the P.L. 94-142 regulations than in states that already had powerful, autonomous infrastructures in place. The powerful intermediate agencies were opposed to the new federal mandate because it required changes in their existing system. Of the states who have some type of intermediate educational agency, most do not use them in the data collection process.

Where the intermediate agencies have a legal responsibility and the associated funding goes through them, they are more likely to be involved in the reporting process. For example, intermediate agencies in Iowa, Kansas, Michigan, and Pennsylvania all have legislated responsibilities making them as autonomous as local districts. In these instances, the above mentioned states did indicate that child, personnel, and setting data flow through their intermediate agencies. Other models of intermediate agencies which do not have legal responsibility would have more of a role in service delivery than in management and administration.

Implications emerge that those states with autonomous intermediate agencies in place may be more opposed to changes in mandated reporting requirements because they would have to make changes in their existing system. It is likely that the administrators in states with politically

powerful intermediate agencies voice the most complaints regarding the new federal reporting requirements associated with The Education of the Handicapped Act Amendments of 1983 (P.L. 98-199). A question for further study could address the power associated with the various types of intermediate agencies. In the states which have more autonomous infrastructures, it may be beneficial to target technical assistance to the intermediate educational agencies in addition to the state agency.

Additional questions concerning data collection addressed transmission practices employed by state agencies in relation to computerized information systems.

> 1.3. To what extent are data transmitted electronically from local agencies to the SEA?

> 1.4. Are computerized management information systems (MIS) in place at SEAs?

> 1.5. What types of MIS arrangements, in terms of access to special education data, are being used by SE/SEAs?

Most data continue to be transmitted to the SEA through manual methods. There is some variation in the way data elements are treated in the transmission process. It appears that child data are more often transmitted by electronic or a combination of electronic and manual means than the personnel or setting data.

It is not surprising that the data related to child count are treated with priority because federal funds are

allocated based on the number of children receiving special education. There are implications for the federal funding agency when revising their reporting requirements. If the federal intent is twofold -- to monitor states' compliance as well as require information that can be of use to decision makers at SE/SEAs -- then federal funding mechanisms should include allocation based upon a variety of information which incorporates both quantitative and qualitative data. This notion is discussed further in the section addressing **Data Use**.

The states who use electronic methods of transmission exhibit a wide range in their estimates of the percentage of LEAs which send data electronically. In addition to the varied capacity of local agencies to purchase and use computers in special education administration, such wide variation may be a manifestation of current practices generated by nonstandard computer hardware.

Findings indicate that there are three receivers of federally required data at the SEA; (a) the special education unit, (b) the finance/budget division, or (c) the information services division. In most states the special education unit receives the data rather than the other divisions. In very few instances, more than one state department division receive the same data. This finding suggests that it would be

practical for the special education unit, itself, to develop and maintain a computerized information system, since most of the data arrive there.

Management Information Systems at State Agencies

Computerized management information systems (MIS) at SEAs seem to be more popular than manual systems. Thirty-eight states (72%) reportedly have a computerized system. Those states with MIS vary in their capacity to access special education data. The most popular type is a Dual arrangement where there are two systems, one for general education and one for special education data. Next in popularity is the Integrated arrangement where special education data are accessible within the larger general education system. The General arrangement where special education data are difficult to access, exists in six states who have MIS. The arrangement least used is Special Education Only, where there is a computerized system for special education but no general system exists.

The popularity of the Dual arrangement, where there are two separate systems, may reflect the efforts of state directors to address the unique information needs of special education administrators. In addition to obtaining more detailed information about programs in special education, dual systems are more flexible to accommodate changing information needs as new requirements and uses

evolve. The results from a survey conducted by Coe (1985) which addressed computer use in evaluation units at SEAs suggested that most SEA units required the flexibility and access of microcomputers (used in the unit) and the storage and power of a mainframe (used for the larger, general system). Together the two computer resources allowed the evaluation unit staff to maximize each of the technological resources for data base management, spreadsheet development, and graphics. SE/SEAs with a Dual type arrangement may realize these same benefits.

A relationship between existence of MIS and size of state was obtained. It appears that large and medium size states were more likely to have computerized MIS at the SEA than states with low numbers of operating school districts. The existence of a computerized system does not necessarily suggest that the system is of high quality. In fact, findings from Turnkey's (1983) work with states' implementation of computer technology suggest that larger states were forced to use computers earlier than smaller states to generate data and reports, the quality of which is less than many manual systems or microcomputer-based systems developed at a later time in smaller states.

According to comments from several respondents the above finding of the tendency of larger states to have MIS may be questionable in the near future. Five small states,

and three medium size states reported that a MIS will be implemented within the next year. It appears that computerized data and information systems will be common practice in state level administration of special education in the near future. It is not known if such systems will be utilized for federal data collection and subsequent use.

The application of computer technology to facilitate decision making is a topic which technical assistance providers have been addressing, and will continue to address for educational administrators. Several researchers have criticized educational administrative organizations for improper use of information systems (Mellor, 1977; Clemson, 1978; Burrello et.al., 1983). Both Mellor (1977) and Burrello et.al. (1983) found that implementation of computer systems by educational administrators have focused only on lower level uses such as record-keeping. In fact, systems analysts, when designing such systems, should make a distinction between lower and higher level types of information (Anthony, 1965; Adams, Wagner, & Boyer, 1983). It is unclear whether MIS for educational administrators are poorly designed or not optimally used.

It is important for technical assistance providers to assess whether SE/SEAs have poorly designed computer systems, or if administrators do not use the data in the systems at an optimum level. If MIS at state education

agencies are poorly designed, then those individuals providing technical assistance to state level decision makers will need to understand the differences among the levels-of-use of information as applied to special education administration to design new systems or update old ones.

The levels-of-uses hierarchy provides a model which can be applied to practices in information management and use. According to Anthony (1965), data in a system at the operational level are in real time and relate to individual events, whereas tactical data used for management's control are either prospective or retrospective and summarize many separate events. Further, when designing a system for use by management for decision making, information about a specific event should only show up when the event is exceptional. Therefore, it is essential that rules or standards be built into an information system with which to compare the raw data. For example, a standard figure can be derived which indicates an acceptable proportion of noncertified special education personnel to certified personnel in a state. As local data are reported and entered into the system, personnel counts can automatically be compared to the standard; then the exceptions can be generated as output to be brought to the attention of those responsible for monitoring the operation of local programs.

Data used to make strategic planning decisions are of a broader nature than operational or tactical. Projections must be made in order to recognize trends, then these trends must be questioned as to whether they accurately reflect policies.

Concern with MIS began with the perception that managers were not making adequate decisions. Clemson (1978) suggested that designers of MIS for education have lost sight of the problem (inadequate decision making) and have focused on building bigger data banks instead. After a review of the literature on the nature of decision making in organizations, Clemson (1978) identified five characteristics of the organizational decision maker:

> 1. **Satisficing:** Organizations generally search for solutions to problems only until a satisfactory answer appears. They seldom try to find an optimal solution.
>
> 2. **Information Overload:** Most managers have far more information than they need; the problem is that most of the information is irrelevant or in a form that is not usable.
>
> 3. **Political:** Managers are necessarily political animals. The goals of any complex organization are partially contradictory and are arrived at by a process that involves bargaining among competing groups. Thus, there is a large element of the nonrational in the decision making of managers.
>
> 4. **Unknown Future:** The manager can't tell you what he needs. The manager is not able to specify the problems that will need to be solved in the future, nor the decisions that will have to be made.

5. **Tried and True:** Managers use what they understand and are familiar with. A manager won't use an automated system unless he understands it. This means that a system built in isolation from the manager and that simply delivers information to him will not be relied on (16).

The above five characteristics of decision makers can be distilled into two broad areas which suggest that decision makers are; (a) not future oriented; and (b) do not trust all forms of information. Numbers 1, 3, and 4 above, relate to a crisis orientation as opposed to being future oriented. The practice of using immediate solutions to problems as opposed to finding optimal solutions, making political decisions due to conflicting pressures from special interest groups, and not specifying future problems reflect crisis-oriented behavior. In addition to being crisis-oriented, educational decison makers seem to be unaccustomed to using information considering that they, typically, feel overwhelmed by too much information, and tend to only use an automated MIS when they feel they understand it.

It is important that the designer of a computerized system be cognizant of the needs of the decision makers. Burrello et.al.(1983) assumed that the computerized systems in their study were poorly designed. Three dimensions were recommended for future development which included; (a) analyzing the tasks of the administrator's work environment

to ascertain how they are structured; (b) matching the levels-of-uses (operational, tactical, and strategic) to the various decision perspectives; and, (c) identifying the particular information characteristics needed by level-of-use in terms of: accuracy, level of detail, time horizon, frequency of use, source, scope of information, type of information, and age of information.

Providers of technical assistance to SE/SEAs may need to coordinate services which can evaluate and update intact systems as opposed to developing new ones since a majority of SEAs have such systems in place. Due to the changing nature of the need for information, any information system will be inadequate shortly after it is implemented. Findings from Mellor (1977) and Clemson (1978) suggest frequent evaluation of information systems to address new information needs.

On the other hand, if the data contained in the MIS are not being used optimally, then technical assistance should focus on training administrators to use the MIS to make data based decisions. Techncial assistance and future research might address the following:

1. Data entry;

2. Data storage and manipulation; and,

3. Output or data use.

The changing nature of information needs and uses are reflected in findings which addressed trends in states' collection of data.

Trends in Data Collection at SEAs

How state level administrators perceive past and future changes were addressed. Research questions centered on trends in the data collection process.

2.1. To what extent did perceived changes in federal data collection occur in the past?

2.2. What areas include the most changes?

2.3. What reasons are attributed to past changes?

2.4. To what extent are changes predicted to occur in federal data collection in the future?

2.5. What areas will have the most changes?

2.6. What reasons will be attributed to future changes?

The majority of respondents indicated that there were changes in data collection and there are likely to be changes in the future as well. More respondents think there will be future changes (87%) than were past changes (77%).

It appears that those states with MIS are similar in their perceptions of uncertainty and change concerning the collection and use of data. Of the 41 who thought there were past changes, 33 of them were respondents who have computerized information systems at their SEA. And, of the 46 respondents who think there will be changes in the future, 31 of them are those with MIS in the state agency.

The most past changes were believed to occur in data verification and data compilation. Reasons for such changes were not easily determined (none received 50% affirmative response), however, three reasons not attributed to such changes were: (a) participation in federal project, (b) state court order, or (c) availability of telecommunication. One of the respondents suggested that the original data system at the SEA was too complex and costly.

Findings revealed that data verification is perceived as becoming less important. It is likely that changes in data verification address the task of checking LEAs' data for accuracy. Obtaining more accurate data was a major concern of state directors in the period immediately following implementation of EHA - B. Findings from a study conducted by Maher (1979) suggested that federal and state compliance legislation had required special education professionals to develop more accountable service delivery systems which focus on producing information necessary for making more accurate decisions.

A plausible explanation for data verification becoming less significant than in the past is that along with the increased use of computerized systems has come increased faith in the accuracy of data. The finding that approximately 70% of the respondents indicating changes

have computerized systems, adds substance to the above explanation. The topic of states' verification of the accuracy of the data they collect, report, and use is worthy of more investigation.

Not only was more accurate information preferred, but has been legally required as states respond to allegations of non-compliance. For example, the state legislature in Louisiana dealt with the faulty referral and assessment practices addressed in the Luke S. and Hans S. v. Nix et al. (1981) class action suit by authorizing the expenditure of over one million dollars to include the development of a special education computerized tracking system which monitors the procedural requirements involved from initial referral of a student through placement in a, and/or exit from a special education program. It appears that SE/SEAs have used the Louisiana experience vicariously and have begun to establish similar computerized tracking systems (Turnkey, 1984).

The changes believed to be most significant future developments are in the four areas; (a) data transmission, (b) data compilation, (c) data analysis, and (d) report generation. Reasons attributed to such changes were:

1. availability of computer hardware;

2. availability of computer software;

3. availability of telecommunication;

4.   lack of available staff; and,

5.   new   federal   reporting   requirements.

Perceived as becoming increasingly important as reasons for

changes with the passage of time, is the availability of

computer technology.

Three explanations may be given for SE/SEAs responding

as they did with regard to trends in data collection. They

are:

1. The influence from the commercial sector on high
level state officials;

2. The current political climate which emphasizes
decentralization   in   education   -- from   federal
involvement to state control; and,

3. A limitation of the study which involves the timing
of the questionnaire and potential misinterpretation
of the instrument question.

Although there was a substantial number of respondents

who indicated that future changes in data collection can be

attributed to new federal reporting requirements (49.1%),

this response was expected to be higher. One explanation

provided for the lack of emphasis on the new federal

reporting requirements involves a timing issue that may be

an inherent limitation in the Data Collection and Use

study. Since the questionnaire was sent to states after the

passage of the new reporting requirements (P.L. 98-199),

the respondents may have interpreted the question

concerning future trends to not include these recent

federal requirements, as they were already in place at the

time they received the instrument. With the infrequent changes which the federal government imposes on states in this area, it is possible that the respondents simply do not anticipate any more extensive federal reporting requirements in the near future (3 years, as indicated in the questionnaire). If the respondents did interpret the questions as intended, then the first two influences, (a) commercial influence; and, (b) political climate of state control versus federal involvement appear to have made an impact upon the way states view their role in the administration of special education programs.

The commercial sector has been able to influence individuals at high levels in state government as illustrated by the "National Governors' Conference on Emerging Technology" and other similar conferences involving Chief State School Officers (Portland, Oregon, 1986). The federal role is, simply, not mentioned in these movements. It appears as though the commercial sector selling computer technology has been able to market the benefits of such technology to state level educational administrators. Further research is needed to investigate if the data requirements imposed from outside the state have given the computer companies a viable market, or if the states would continue to collect data if the federal requirements were removed.

It is apparent that computer technology at state
education agencies is viewed as a way to deal with the
relatively high costs of adding and/or maintaining staff
positions. Braverman (1974) has suggested that whether
conscious or not, there is a tendency for bureaucracies to
incorporate technology to replace expensive skilled labor.
And, more often than not, analogies have been drawn between
educational institutions and industrial factories which
epitomize bureaucratic behavior (Crozier, 1967; Parelius, &
Parelius, 1978). The finding which reflected a greater
emphasis placed on the implications of computer technology
rather than on new federal reporting requirements indicates
that states may not consider the federal mandates as
important for driving their behavior as the federal
officials would like to believe.

In addition to influence from the commercial sector,
the current political climate deemphasizes the federal role
in education. Decentralization and increased state control
are among the priorities of the conservative Reagan
administration (Bell, 1986). Decentralization, typically,
has an influence on the variation in implementation of
federal mandates by states. Berke & Kirst (1972) found that
local educational administrators employ planning
procedures which promote local priorities at the expense of
federal ones by using strategies involving "multi-pocketed

budgeting". Therefore, local program implementation tends to show considerable variation.

If federal influence were widespread and effective, then state and local responses would tend to be uniform. In their investigations involving federal categorical programs, however, Orland and Goettel (1982) found that local districts within and among states vary greatly in program implementation. The notion of state role in intergovernment relations was provided as an explanation for differences in program implementation. It may be that SE/SEAs are more autonomous than expected, since changes in data collection and use were attributed more to sources other than federal mandates. Thus, in times where the federal role in education is not politically popular, less importance would be attached to federally mandated requirements. The question which needs to be addressed concerns the utility of the data, not only for federal level decision making, but also for making decisions at the state and local levels. This will be a selling point for gathering federally required data and assuring its accuracy. In addition to investigating how states use federally required data, future research could focus on the federal Department of Education's use of required data.

Data under EHA - B (P.L. 94-142) were requested because Congress wanted to know the numbers of children

served under the Education for the Handicapped Act. Using the information provided by states in 1975 as a base, Congress could look for areas in need of changes. The purpose of the Annual Reports to Congress, required by EHA - B, has been to use these data to obtain information that may imply areas in need of change on a national level. For instance, a recent policy has been developed which provides the context for channeling funds into transition programs (programs for handicapped youth who will be, and/or are exiting the educational system) based on the growth of teenage and young adult handicapped students within the past eight years. This use of the federally required data, however, does not have to be limited to making changes in national policy. Results of this study indicate that to some extent states do consult these data for making policy changes at the state level.

Data Use

The uses of data when making administrative and planning decisions was the final area explored by this study. If data collected by state education agencies are not optimally used, then technical assistance should focus on training state special educational administrators to make use of the data to make decisions at all levels of management and planning. Higher level uses of the federally required data was addressed by the Data Collection and Use

study. The five experts who participated in the Delphi phase of the study developed suggested uses of data that can be considered a standard with which to compare the practices of state level administrators.

Research questions allowed inquiries concerning both (a) the extent to which activities are conducted at the three levels-of-uses (operational, tactical, and strategic); as well as, (b) the perceived usefulness of federally required data for those purposes.

> 3.1. How can federally required special education data be used at the state level for purposes other than reporting back to federal agencies?
>
> 3.2. To what extent do SE/SEAs conduct management activities at the three levels-of-uses defined as operational, tactical, and strategic?
>
> 3.3. To what extent do SE/SEAs find federally required data useful for conducting such activities?

The levels-of-uses hierarchy was found to be functional when classifying various administrative and planning tasks of state level special education administrators. There was consensus among the experts used in the Delphi phase of the study regarding the categorization of their suggested activities into the levels-of-uses framework (refer to Appendix B). The activities which comprised the operational category emphasized the capture and recording of data, transaction processing, record keeping, and reporting. On the other hand, activities at the tactical and strategic levels

emphasized monitoring and facilitating adjustment in local operations as well as deciding on objectives of the SE/SEA, changes in such objectives, and on the policies that govern the acquisition, use, and disposition of resources. The experts made distinctions more easily between the operational and higher levels-of-uses, than between the two higher tactical and strategic levels. According to Anthony (1965), who developed the hierarchy, this fuzzy distinction between the higher levels is natural. As stated by Anthony:

> The reader may get the impression that we view strategic planning and management control as discrete entities. This is not so. The planning and control process is in fact a continuum, and we imply a discrete dichotomy only because we believe that this is the best way to explain the distinction (30-31).

The tactical level implies information used for management control. This management control is a process conducted within guidelines established by strategic planning.

The decisions, Anthony contends, made in the management control process are of a different character from those made in the strategic planning process. He uses the following metaphor to illustrate this notion:

> The captain of a ship is involved in management control. His job is to take the ship to its destination as effectively and efficiently as possible. The architect who designs a new ship, the person who evolves a new concept of shipping, or the person who works out new shipping routes, is involved in strategic planning (Anthony, 1965, 31).

An important reason for casting one level into the other is the necessity of the interactions among them. Policies are developed within the strategic planning process, consulting certain types of information; these policies impact upon practices. By obtaining and using data related to the practices, however, some unforseen relationships may emerge that cast doubt on the wisdom of the policies, and thus result in changes in strategy. Or, at best, data reflecting practice may provide assurance that policies do not need to be changed.

Administrators in special education units at SEAs appear to conduct fewer activities at the tactical and strategic levels than at the operational level. The use of data in practice revealed a pattern similar to the distinctions made by the experts. A greater distinction was made between operational and the higher tactical and strategic levels; and not as great a distinction between the tactical and strategic levels. It appears that one factor inhibiting the conduct of higher level activities is crisis-oriented behavior of educational administrators. Although most managers would admit that future-oriented behavior may serve to prevent crises, the crisis orientation is a cycle which has been in practice for so long that it is a difficult one to break. A question for future research can be asked concerning what

organizational, political, and societal constraints impact upon how individuals function with regard to behaving in a future-oriented mode.

Findings were marked by variation in states of their use of federally required data. The point must be made that if only one state conducts tactical and strategic planning activities and finds the federally required data useful to do so, then in practice, these data can serve a function in higher level decision making in all states. In fact, more than one state did indicate that they conduct higher level planning activities, and found some aspects of the federally required data useful. Providers of technical assistance can apply the experts' suggested uses of data in their efforts to address higher level decision making at the state level.

In addition to fewer activites conducted at the higher management and planning levels, federally required data appear to be consulted less often for higher level activities. Results indicate that the respondents considered federally required data more useful when conducting activities at the operational level than when conducting activities at the tactical and strategic levels. Further, most of the activities at the operational level for which federally required data were highly valued relate to dollars such as:

1. Prepare required reports for federal agencies.

2. Prepare required reports for state agencies.

3. Apply for funds from federal and state agencies.

4. Distribute funds to local districts. (refer to Table 4.9 in Chapter Four)

Child data was perceived to be the most useful data when conducting activities at any level. This is not surprising because federal dollar allocations to states are based on the amount of handicapped children reported. Although the federal contribution to local special education programs is relatively small, an average of 9%, (Council for Exceptional Children, 1984) compared to state and local funding, it is usually the federal dollar which supports the special education unit in the state agency.

There seems to be a phenomenon at work regarding states' attention to child data which is a direct result of the way data were required to be reported by P.L. 94-142. According to Schipper (1985), states tend to identify with their child count; they rank themselves according to large, medium, or small numbers of handicapped children. Since it is the federal money which funds the state level agency, that determines their administrative level. Because the funding is tied to child count data, one can assume that those numbers are suspect and subject to monitoring. Thus, the child count information will tend to be handled and perhaps, manipulated more than the other required data.

According to Stigler (1962) and Peltzman (1971), the federal role of regulation, typically, encourages more resource misallocation than it cures. Thus, using child count data to secure federal funding may lead to problems of not evaluating practices which reflect qualitative issues.

It appears that a very basic, but powerful notion emerged from the findings which suggests that when money is tied to data the data are looked at, manipulated, and used. If this notion represents reality, then the individuals who originally request information for evaluative purposes such as members of Congress could use their power to change a policy which ties dollars to quantity as opposed to linking funds to information which reflects program quality. Obtaining data of a more qualitative nature would permit higher level questions to be asked regarding changes in policy. The federal Department of Education's interpretation of the new EHA amendment (P.L. 98-199) suggests that issues of quality are now being addressed because states are required to comply with all data requests as a condition of eligibility to receive continued funding.

Setting data were perceived to be the least useful of the three required data elements (child, personnel, and

setting). This finding is surprising since information concerning least restrictive setting was considered crucial by the Delphi experts for monitoring local programs, a tactical activity, to avoid lawsuits contesting placement practices such as the Lora v. Board of Education of the City of New York suit. The Office of Special Education Programs, U.S. Department of Education, revised monitoring procedures focus on least restrictive environment (LRE). The renewed interest in LRE stems from input from the Office of Civil Rights. SEAs must monitor LEAs who are ultimately responsible for establishing LRE standards, policies, and procedures which are clearly measurable ("Renewed Attention to LRE, 1986"). Thus, it is likely that more use will be put to setting data in the near future.

More in-depth analysis of information needs of decision makers in special education is recommended for a future research agenda. The need for future research in the area of information needs for decision-making was addressed by other researchers as well (Mellor, 1977; Burrello et.al., 1983; Cooley 1983). Mellor (1977) suggested that administrators be assisted with their use of computer-based systems for making higher level planning decisions. According to Mellor, however, before this can be accomplished, future research will need to address the structuring of data into potentially useful information for

such decisions. Similarly, Burrello et.al.'s (1983) findings led them to suggest that special education administrators need to move beyond lower level uses of data. Recommended for future investigation was testing the feasibility of employing the levels-of-uses hierarchy to categorize special education decisions.

During the American Educational Research Association (AERA) presidential address in 1983, William W. Cooley called on researchers to become involved with policy makers in setting fundamental goals for education by monitoring day-to-day progress in the schools and agencies responsible for administering educational programs. The University of Pittsburgh professor and researcher said:

> Educational research has tended to be more methods-oriented; we have not yet developed a discipline. There were people who did statistics, or psychology, or economics related to educational problems, but often it was not good statistics, psychology, or economics -- and it wasn't relevant to the problems of those who operated the schools (Duckett, 1986).

Cooley called for a "decision-oriented" research agenda where data are gathered and analyzed as an ongoing process which enables the policy makers and school district managers to meet their current needs for information. In the process of working up data about students, schools, and programs in ways that contribute to the dialogue about educational policy, this type of research can help managers set priorities for improving the system. With the use of

computer technology, huge amounts of various types of data can be collected, which can be just as overwhelming to decision makers as not having raw data at all.

Providers of technical assistance to state level administrators will need to orient decision makers to be able to discriminate among data, thereby using information efficiently and intelligently. Findings which emerged from the Data Collection and Use study suggest that administrators already treat various data differently. There were variations among the three data elements (child, personnel, and setting count data) regarding their usefulness ratings.

If one state can demonstrate higher level tactical and strategic uses of federally required data, then these data have a place in higher level decision making. For example, if there is any one state who use personnel data to compile trends across several years to examine for match with personnel related state policies (a strategic activity), then all states could. Or, if one state uses the federally required setting data to target monitoring priorities such as making compliance site visits to local districts regarding LRE practices, then all states could use their setting data for this task involving tactical control. Further exploration is needed to ascertain what state or local contextual factors inhibit or enhance the use of data to better understand the variability phenomenon.

The challenge for technical assistance providers is to see how these data could be used in higher level decision making in all states. The finding that states only moderately regarded the federally required data useful for conducting higher level activities indicates that there is a need to provide training in the higher levels-of-uses of the federally required data at the state level. If there are certain predictor variables indicating which types of states or people make use of required data, then this information can be useful to providers of technical assistance. The section which follows discusses findings which explored relationships between data use and demographic variables.

Relationships Between Usefulness Ratings And Demographic Variables

A sub-area under data use research questions addressed the relationships between perceived usefulness of federally required data and demographic characteristics involving personal and organizational variables. The questions were:

3.4. Do responses concerning the usefulness of data differ according to the position of the person?

3.5. Do responses concerning the usefulness of data differ according to the length of time in position of the person who works with the data?

3.6. Do responses concerning the usefulness of data differ according to the existence of computerized MIS at the SEA?

Patterns emerged concerning position, and experience--
in terms of number of years in position. The position with
the highest authority and accountability, special education
director, tended to place a higher value on using federally
required data to conduct management activities at the
tactical and strategic levels, whereas those in lower
positions considered the data more useful when conducting
an activity at the operational level.

This finding is in agreement with conclusions from
Patton's (1978) research. He found that the impact of
information from evaluation studies most often reported was
one where the findings reduced uncertainty in making
program and policy decisions by an individual in a position
of power. Certainly, the state director would be more
concerned with accumulation or maintenance of power by
making data-based decisions than someone in a position with
less authority.

In the same vein, those respondents with more years
experience in their position regarded the data more useful
than those with less years experience when conducting a
tactical activity, but those with less experience valued
the required data more when conducting a task at the
operational level.

The above finding is in conflict with those of Weiss &
Bucuvalas (1980). According to Weiss & Bucuvalas, time in

position is negatively associated with judgments of usefulness; that people who have spent a longer time in the same position are less likely to expect to use the information from research. This conflict in findings may be explained by the conceptual difference between using information from discipline-oriented research as opposed to using data generated from practice. In practice the person who has been at the state level for some time most likely remembers problems generated by not reporting and using consistent numbers of children served in programs for the handicapped.

A pattern emerged regarding the existence of computerized information systems as related to usefulness ratings of required data. SE/SEAs which did not have a MIS indicated that federally required data were more useful than those who reportedly had a MIS. An explanation for the above finding is addressed in the following discussion.

The question was not asked, "Do you store federally required data in your MIS?" Perhaps, the SE/SEAs who had easy access to special education data did not find federally data useful because they had more accurate, relevant state required data stored in the limited space of a MIS, rather than the federally required data. In fact, a respondent from one state who consistently rated the federal data low in usefulness made the comment:

> We are concerned about the quality of these
> data, particularly given the revised forms.
> Given good data we would respond differently...On
> the federal forms the categories don't match with
> what is currently happening in the field.

Another state representative made similar comment:

> Our state requires more detailed data regarding
> personnel for state funding. These data would be
> collected regardless of federal requirements.

This tendency to value federally required data less if
there was a computerized MIS at the state agency may have
implications for technical assiatance providers. Given that
the trend is for more MIS, with potentially better
opportunity to treat data, those data might not be entered
in the system or treated without some technical assistance
in data use.

With the increased information requirements imposed by
P.L. 98-199, providers of technical assistance may need to
target their efforts to certain individuals. Individuals in
positions of limited power may need to be trained in using
data for higher level purposes, because it is these SE/SEA
staff who, typically, prepare the data for the person who
will use it for making policy decisions. Further, findings
from the data use section suggest that persons fairly new
to the job will be less likely to value federally required
data for higher level uses. With the high turnover rate of
SE/SEA staff and special education directors assessed at
15%, training might also be targeted to the less

experienced decision maker (Schipper, 1985). These individuals need to look beyond the simple, operational uses of data, and understand the long-term benefits associated with using the data to make informed decisions.

Concluding Remarks

The creators of the Education of the Handicapped Act Amendments (P.L. 98-199) believed that obtaining data is crucial in order to wisely monitor and evaluate the status of special education and make changes in policies. In fact, they thought it so important that they prohibited the restriction of data collection or reporting by states, and directed the Secretary of Education to fully involve state and local agencies in developing the systems necessary to meet the information requirements of the Act (H.R. Rep.No. 410, 98th Cong., 1st Sess. 22-23, (1983); S.Rep. 191, 98th Cong., 1st Sess. 11-14, (1983)).

Data collection systems used at SE/SEAs have been portrayed as a result of this study. A typical data collection process at the state level contains the following characteristics:

1. Local agencies report directly to state officials, without the use of an intermediate educational agency. Only states whose intermediate agencies have legal authority participate in data collection.

2. The special education unit at the SEA is the primary receiver of the federally required data.

3. Data elements are treated differently in both collection and use of them. Child count data, which has federal funding directly associated with it, are handled and attended to more than personnel and setting data.

4. Computerized management information systems are in place at SEAs and are expected to become even more popular in the future. There are various arrangements of MIS with regard to access to special education data, the most popular arrangement being a general system at the SEA and a separate system in the special education unit.

5. Less emphasis is being placed on data verification. But more emphasis is being directed toward data compilation.

6. Changes in data transmission, analysis, and report generation are attributed more to increased availability of computer technology and telecommunication, and lack of staff, than to changes in federal reporting requirements.

In order to comply with the increased reporting requirements, assistance efforts geared toward data collection can address the evaluation of management information systems in place. It is likely that the MIS will need to be scrutinized with regard to which data are entered into the system, and how the system addresses data transmission, compilation, analysis, and report generation.

More often than not data use at SE/SEAs is limited to lower level, operational activities. With regard to data use by state level special education administrators, results of this study indicate:

1. Activities at the higher management and planning levels are not, typically, conducted. When they are conducted, the federally required data are not highly valued.

2. Individuals in positions of power and those with more years experience are most likely to value federally required data for higher level purposes.

3. Administrators at SE/SEAs with computerized MIS value federal data less than those in states with no MIS.

The new data requirements emanating from P.L. 98-199 were developed by the House and Senate committees which are charged with the oversight of the Education for the Handicapped Acts. The committees have been criticized for inadvertently dictating a method of data collection to obtain information which is continuing to force state level administrators to treat the data they collect at the operational level. Additional criticism leveled at the Act came from the U.S. Department of Education (ED). The ED protested many of the new data requirements because of their belief that it would be a burden on the locales and the states to collect the information. Further, the ED officials questioned the capability of the SEAs to collect meaningful data which would fulfill the information requirements of Congress. Because the states have latitude in defining terms, setting up data systems, and because their organizational structures differ, the data that a given state collects may not be accurate. Then, further problems arise when the federal agency aggregates those data from all the states.

A major concern arises as a result of these findings. If strategic activities were conducted only to a limited extent, and might not be encouraged to occur in the future, on what basis are decisions regarding policy changes made? After all, change is inevitable; the one major invariant is the tendency toward movement, growth, and development. Change can either be allowed to occur on its own, as illustrated by a laissez-faire doctrine, or may be assisted by radical intervention from outside sources. These are the the two ends of the continuum of the methods of change (Bennis, Benne, Chin, & Corey, 1976). In the case of the education of this nation's handicapped children, the latter method incorporating intervention from outside sources, seems to be the facilitator of change, but with methods that are questionable for facilitating intelligent use of information on which to base change.

In addition to working with decision makers at the state level, it may be desirable to inform high-level government officials regarding the collection and use of data. It may be useful to to a member of Congress, congressional committee, or state legislature who mandates data collection, to know what the processes, attitudes, behaviors, and uses are in other arenas.

Based upon the Data Collection and Use study, the following hypotheses have been formulated for future research.

1.   Higher level management activities are not conducted to the extent of lower level ones.

2.   Federally required data are not valued for higher level uses.

3.   Data elements are treated differently. When funding is tied to data, the data are attended to more.

4.   Changes in states' procedures for collecting federally required data are not primarily a function of federal initiatives, but rather due to state contextual variables and influence from the commercial technology sector.

5.   Relationships exist between the variables of position, experience, and existence of a computerized MIS and the perceived value of federally required data.

Recommendations

There are three areas in which recommendations are provided: (a) advice for practitioners (state directors of special education and their staff); (b) recommendations for providers of technical assistance; and, (c) areas for future research.

Recommendations for Practitioners

Recommendations for administrators include; (a) the assurance that federally required data can be put to use at the state level for making decisions; (b) the need for accessibility of the federally required data in

computerized information systems; and, (c) the potential of certain types of intermediate educational agencies participation in data collection and use.

The Data Collection and Use study seems to have answered the question, " Are the federally required data, child, personnel, and setting counts, useful in and of themselves for decision making at the state level?" The suggested uses which were generated by the experts in the Delphi phase of the study indicate that, indeed, these data are useful when making higher level tactical and strategic decisions. As pointed out earlier, if only one state conducts tactical control and strategic planning activities and finds the federally required data useful to do so, then in practice, these data can serve a function in higher level decision making.

More than one state representative did indicate that they conduct higher level planning activities, and reportedly valued the federally required data when doing so. If the higher level activities are not being conducted, it is essential that state level administrators be informed of the various, often creative, uses of these required data with respect to higher level uses. The product which resulted from consultation with experts, a list of suggested ways to use the data, can be used as a foundation to develop additional higher level management activities

that are applicable to individual states. Before this can be accomplished, however, the data must be easily accessed and manipulated by those individuals charged with decision making.

Since there are new, more extensive data requirements as a result of P.L. 98-199, it is recommended that these new data be entered into computerized systems at SEAs. Special education units would have more control over their collection and use of the data if the SE unit had its own computerized system, similar to the Dual arrangement management information system discussed previously.

Results from the Data Collection and Use study indicated that there are a group of states in which the federally required data flowed through intermediate educational agencies. In such states where there are powerful intermediate agencies which are as autonomous as local districts, SE/SEAs may need to assist those agencies with; (a) incorporating the new data requirements into their existing system; and, (b) using the data at that level for making higher level decisions concerning special education programs. Providers of technical assistance can work closely with states who make use of federally required data in sophistocated ways to use those SE/SEAs as models for other states.

Recommendations for Providers of Technical Assistance

Recommendations for technical assistance providers
address several areas:

1. The need to diagnose, at the state level, the
status of management information systems in order to
provide assistance of a technological or a training
nature; and,

2. The need to target training and technical
assistance to certain individuals in state level
administration.

3. Continued investigation into uses of data,
specifically the driving and restraining forces
related to data use.

Providers of technical assistance to SE/SEAs will need
to assess whether SE/SEAs have poorly designed information
systems, or if the data in the system are not being used
intelligently and/or creatively. If MIS at state education
agencies are poorly designed, then assistance to state
level decision makers will need to focus on the differences
among the levels-of-uses of information as applied to
special education administration to design new systems or
update old ones. This type of assistance is technologically
oriented and should be provided by individuals trained in
designing computer and information systems as well as being
familiar with aspects of special education administration.
Technological assistance to SE/SEAs may need to evaluate
and update intact systems as opposed to developing new ones
since a majority of SEAs have computerized systems in
place.

On the other hand, if the data contained in the MIS are not being used for higher level decision-making, then technical assistance should focus on training administrators to turn data into meaningful information to make data based decisions. State level administrators need to be able to discriminate among data, thereby using information efficiently and intelligently.

The suggested uses of data by the experts can be used as a foundation on which to build ways the new required data can be used when making state-wide higher level decisions. The finding that states only moderately regarded the federally required data useful for conducting higher level activities indicates there is a need to provide training to state level administrators in the higher levels-of-uses of the federally required data.

Providers of technical assistance may need to target their efforts to certain individuals. Certain predictor variables investigated in the Data Collection and Use study which indicated which people in states make use of required data may be useful to providers of training. Specifically, individuals in positions of limited power may need to be trained in using data for higher level purposes if these SE/SEA staff prepare the data for the person who will use it for making policy decisions. Further, findings from the data use section suggest that persons fairly new to the job

will be less likely to value federally required data for higher level uses. With the high turnover rate of SE/SEA staff and special eduction directors, training might also be targeted to the less experienced decision maker by using the more experienced state director in this training process.

Recommendations for Future Research

Recommendations for future research have been discussed throughout the various sections of Chapter Five. The purpose of this section is to reiterate those in terms of facilitating change. The first recommendation is broad in nature and reflects the proposal made by Cooley (1983) that a research agenda involving decision-making in educational administration be a focus of future study. There is a need to refine our knowledge concerning how decisions are made at different levels of management and planning. In order to understand the decision making process, it is necessary to study which types of information people consult when making such decisions versus which information is needed to make an optimal decision. When the current decision making process is better understood, then more sophistocated uses of information to make decisions can be introduced and addressed.

In order to refine present knowledge pertaining to decision- making, existing models can be used to conduct

investigations. As a result of the Data Collection and Use study, the levels-of-uses hierarchy has been found to be functional when discussing special education management tasks. Therefore, it is recommended that future research continue to address the utility of this hierarchy by obtaining both qualitative and quantitative data based upon its application to practice.

The last area recommended for future investigation addresses the gap between ideal uses of data to make decisions, and how data are or are not regarded for making policy decisions. The results of this study have documented the well known phenomenon that data or information are not used for higher level uses in practice. This phenomenon raises questions for research regarding the personal, organizational, and societal influences which impact upon data and information use in practice at local, state, and the federal levels.

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A P P E N D I X   A

Analysis of Experts' Suggested Uses of

Federally Required Special Education Data:

Level-of-Uses By Data Element By Expert

And Suggested Indicators

Key to Experts:

PF = Peter Fanning
MG = Martin Gerry
JH = James Harper
GM = Garry McDaniels
WS = William Schipper

LEVEL-OF-USE: OPERATIONAL   DATA ELEMENT: CHILD

JH

To distribute state funds. For example, state might use a weighted excess cost formula with certain weights for different handicapping conditions.

Prepare reports for request from state agencies, LEAs, advocate groups, parents, IHEs.

PF

Allocate or distribute personnel. For example in Colorado, some handicap categories are used for the formula to distribute personnel to districts.

GM

Apply for Federal money.

To reimburse local districts; allocate state money.

Maintain knowledge base to describe what system looks like for purpose of supplying information upon request.

MG

These data are used alot for financing-- drives finance system in some states that use the pupil identification model.

Use as knowledge base for transaction of information to LEAs and SOPs; state serve as broker of information.

LEVEL-OF-USE: OPERATIONAL   DATA ELEMENT: PERSONNEL

GM

Maintain knowledge base to describe what system looks like for purpose of supplying information upon request.

MG

These data are used alot for financing-- drives finance system in some states that use the personnel unit reimbursement model.

Use as knowledge base for transaction of information to LEAs and SOPs; state serve as broker of information.

LEVEL-OF-USE: OPERATIONAL   DATA ELEMENT: SETTING

PF

To reimburse local districts. For example, if a state uses a reimbursement formula that pays for services. These data are more helpful to the Federal government than to us. We report it to them because we have to. There is process data we collect at the state level that is of a more qualitative nature that is more useful.

To report to the state Legislature and prepare other required reports (i.e., Office of Civil Rights, 501 and 502 Reports).

GM

These data are used alot for financing-- drives finance system in some states that use the services or setting reimbursement model.

Maintain knowledge base to describe what system looks like for purpose of supplying information upon request.

LEVEL-OF-USE: TACTICAL   DATA ELEMENT: CHILD

WS

Make comparisons with other states to see if incidence of handicap is comparable, especially where judgments are made (ED, LD).

Compare incidence of handicaps across districts within state.

PF

Use these data to target research questions within disability areas toward local districts; for example, to verify deaf-blind counts.

Use as corroborative data; for self-checking purposes-- to check if state count parellels Federal trends.

Make comparisons with other states, especially bordering states, or those that are similar to yours.

To report to state Legislature to seek additional resources, or to maintain present operation, depending on what the data say.

JH

Compare handicap incidence across LEAs to target further questions to districts that fall at ends of curve. For example, you may need to look at referral and assessment procedures for problems there.

Use all three data requirements (child, personnel, and setting) in combination to ask monitoring questions about LEA decision making. For example, if a district has a high number of children in restrictive environments, you can ask why.

GM

Use in a corroborative sense; make sure that data not offend sense of reality.

Compare districts within state to look for outlyers. Put outlyers in group that "needs to be understood".

Compare state with other states using the Annual Report to Congress.

Combine the three data elements-- could identify potential problems for monitoring priorities. For example, a district with a large speech impaired population may have alot of speech personnel. Sometimes, the personnel available dictate the number of children to be served. This may present a problem to be looked at.

MG

Compare with pattern in other states.

Compare within the state-- look for variation among districts. Use other data (i.e., race) in combination with Federal counts to look for under and/or overrepresentation in certain handicap categories (MR, LD, SED) for purposes of monitoring. For example, if California had used the data it had on racial make-up of children in special education classes, they might have avoided the Larry P. v. Riles case.

Data should be used as a management tool to assist with setting standards and making sure those standards are not susceptible to interpretation-- that the standards are precise enough. Data serve as check against standard.

Data can be used for a state's self evaluation. Identify potential problem areas. For example, if the age 3-5 category has low SED incidence, but the incidence is average or high in later years-- maybe they are not being identified at that early an age unless they are aggressive. Another age group with potential problems are the 18-21-- or the "disappearing children". The state is legally responsible for serving this group, and the state may not know where they are. Allows the state to set monitoring priorities.

Combine data elements-- setting and child counts for SEA to use as a tool to review LEA applications.

Combine Federal data with data on state finance.

Develop local district profiles and disseminate to LEAs.

LEVEL-OF-USE: TACTICAL   DATA ELEMENT: CHILD

INDICATORS

(WS) Translate numbers to percentages. Depict in visual display. As one looks at the data, questions can be raised.

(PF) Transpose Federal data to state reports such as Colorado's Status Reports.

(JH) Pre on-site monitoring documents should be developed using those data.

(JH) Technical Assistance plan.

(GM) Develop rankings of districts looking at percentage of children by handicap by enrollment in settings.

(GM) Ask state, "Have you monitored any LRE issues this year." If yes, why-- complaint or data generated?

(GM) A marker of data use would be a shift of burden of evidence-- any letters of inquiry from the SEA to the LEA asking about data that were reported would indicate that the SEA is, at least, looking at those data.

(GM) Ask SEAs if they have problems with the quality of data-- or which of the three data elements do they have the most problems with?

(MG) Document containing self-evaluation guide or guidelines, or program evaluation strategies, monitoring guide, (or other related terms).

(MG) Report which includes tables that look across districts-- disseminated to Chief State School Officer or to State Mental Health Unit (in the case of SED identification).

(MG) Informal reports that show some processing of information. Might include district ranking on a particular-- i.e., comparative reports.

LEVEL-OF-USE: TACTICAL   DATA ELEMENT: PERSONNEL

WS

Compare numbers with other states.

Compare numbers within state.   Look at ratios of non-instructional and supervisory to instructional personnel.

Compare ratios to other programs, such as Bilingual, Vocational Education, Chapter I to compare, to either; (a) defend special education as cost effective; or (b) create justification for high costs.

Troubleshoot linkages between IHEs, SEAs, and LEAs. For example, if there is a personnel problem regionally, because no IHE in area, then SEA can help deliver training.

Identify number of non-certified personnel compared to certified personnel by region.

PF

Use these data as part of source document as need for personnel preparation within state to justify to Legislature.

Compare with other states-- data taken from Annual Reports from OSERS, and NASDSE.

Federal data serve to substantiate data that state already collects.

Disseminate to IHEs for grant writing.

Break down data into quality issues. For example, child count against personnel data, find out what we train and what we don't train. If know weaknesses, can develop strategies to deal with them.

JH

Compare with other states to see if your state has problem. Then you can develop strategy to deal with problem. For example, compare teacher-student ratios with other states to place yourself nationally to use for evaluation of special education Bylaws.

Disseminate to IHEs to document need for staff development and training.

GM

Disseminate to IHEs for training proposals.

Spot shortages in personnel.

MG

Data should be used as a management tool to assist with setting standards and making sure those standards are not susceptible to interpretation-- that the standards are precise enough. Data serve as check against standard.

Identify personnel shortages.

LEVEL-OF-USE: TACTICAL   DATA ELEMENT: PERSONNEL

INDICATORS

(PF)   Reports

(PF)   LEA inservice projects

(PF)   Needs assessments

(JH)   Use of Annual Report to Congress

(JH)   Rank order states

(GM)   Report of priorities by state to review IHE training
proposals

(GM)   Directives resulting from analyses of data

LEVEL OF USE: TACTICAL   DATA ELEMENT: SETTING

WS

Develop profiles within the state to depict high and low
districts on degree of integration in the regular setting.
Raise flags for questions to set monitoring priorities.

Compare state information with other similarly situated
states.

JH

Compare with other states to look at differences and to
seek to understand those differences, or to validate own
numbers as typical.

Compare how services (settings) differ across LEAs.

Make data public. Disseminate to LEAs, and outside groups,
such as IHEs, Advocates, Parents, Teacher Unions, other
divisions within SEAs (Vocational Rehab., Department of
Health).

GM

Compare with other states and similar states. Look at larger national percentages.

Tell other SEA staff how your state compares nationally.

MG

Data should be used as a management tool to assist with setting standards and making sure those standards are not susceptible to interpretation-- that the standards are precise enough. Data serve as check against standard.

LEVEL-OF-USE: TACTICAL   DATA ELEMENT: SETTING

INDICATORS

(WS) Conversion of instructional setting numbers into percentages, averages, etc.

(WS) District and state profiles

(WS) Request assistance from RRCs in using data. For example, involve RRCs in setting up and getting data into profiles-- then help using those data.

(JH) Report with tables showing number or percent of handicap category in each environment.

LEVEL-OF-USE: STRATEGIC   DATA ELEMENT: CHILD

WS

Get trend, year by year, profile to get a visual sense of direction.

PF

Project and forecast needs using trend data-- to show where moving to within state. For example, identify which categorical areas are growth areas. Can set long term

goals based upon these trends. For example, if your state has a high LD rate over time and compared with other states, then a goal may be to reduce the LD count by a certain percentage within a certain time period.

Use child by setting data to formulate shared resource allocation across state agencies for developing interagency collaboration policies.

Use child by setting data to plan for transitioning youth out of education (i.e., estimates of group residences, work situations, etc.).

JH

Develop "soft" projections to look for increases or decreases in incidence of handicaps.

Disseminate projections for future planning purposes and public relations.

Use data to consider making changes in policies, such as changing weightings in state funding formula.

Data sharing with locals for the purpose of program improvement.

GM

Combine with data from other sources, such as Census, medical data, racial data from Office of Civil Rights, to prepare for future planning. Make sure that data not offend sense of reality and that those data reflect policy-- raise questions about how much state deviates from general model. For example, a state might ask itself, "To what extent do data reflect reimbursement policies?".

Share data with other agencies, services for planning purposes.

Calculate cost of alternative services.

MG

Combine Federal data with data from other sources, such as Office of Civil Rights. If get count of handicap by race by sex, can look at data to ask policy questions, i.e., "Who are we supposed to serve; and who are we serving?".

Combine Federal data with data from other sources, such as Employment data to plan for policy development in the area of reducing the high unemployment rate of handicapped youth.

LEVEL-OF-USE: STRATEGIC   DATA ELEMENT: CHILD

INDICATORS

(WS) Year-by-year profile depicted in graph form.

(PF) State Status Reports

(PF) Research reports

(PF) Combine data with state's End of Year Reports

(JH) Reports prepared using the Federal data combining data elements, i.e., incidence of handicap by environment setting by personnel. Transpose Federal data for in-state uses displaying charts, tables, graphs, etc.

(JH) Plans and/or meetings with LEAs to build capacity for self-analysis and evaluation.

(JH) Announcements of state seed money for LEA capacity building and other proactive efforts.

(GM) Document containing future projections of certain handicap incidences.

(GM) Ask specific data based questions, such as if SE/SEA knows how many children in prison settings have educational assessments.

LEVEL-OF-USE: STRATEGIC   DATA ELEMENT: PERSONNEL

WS

Use these data to target and plan future personnel training efforts. Formulate goals, i.e., reduce number of non-certified personnel in state.

Break down data for research purposes. Look for qualitative issues, such as projecting teacher shortages in certain areas.

JH

Project personnel needs on a 5-6 year basis.

MG

Plan activities at the state level in the areas of (a) training; (b) recruitment; and (c) licensing.

LEVEL-OF-USE: <u>STRATEGIC</u>   DATA ELEMENT: <u>PERSONNEL</u>

INDICATORS

(WS) Documents containing projections

(MG) Generate action document, such as inservice training plan, joint agreements between SEA and IHEs, etc.

LEVEL-OF-USE: <u>STRATEGIC</u>   DATA ELEMENT: <u>SETTING</u>

WS

Raise evaluation and research questions using trend data collected over a period of years. Using rank order trend data, you can make predictions/hypotheses about services and programs. For example, a district with a high LD count will have low numbers of children in Chapter I programs. Thus, a research agenda could be planned around this hypothesis to see if it is an accurate explanation.

Integrate Federal data with data from other sources, such as Office of Civil Rights, and Census data to use for future planning.

JH

Use data to verify or develop a standard with which to compare practice. For example, the setting environments where handicapped children are placed have alot to do with how you think about handicapped people. If you have a focus on content mastery (equal access to competency testing), then that policy should drive children out of restrictive environments. Determine a match between policy and practice.

GM

Disseminate to LEAs so they can compare their image or policy to the data. These should reflect back on state policies-- see how state policies are working.

MG

Identify future training issues. For example, if alot of children are in regular class settings, then training implications are different from self-contained model.

LEVEL-OF-USE: <u>STRATEGIC</u>   DATA ELEMENT: <u>SETTING</u>

INDICATOR

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(GM) Communication to LEAs with attached reports.

A P P E N D I X   B

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Cover Letter and Questionnaire

Sent to State Directors of Special Education

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NASDSE 2021 K St., N.W., Suite 315, Washington, D.C. 20006   202/296-1800

MEMORANDUM

September 11, 1985

TO: STATE DIRECTORS

FROM: Bill Schipper

RE: Request to Complete Attached Survey Instrument on Collection and
        Use of Federally Required Data

        Please return to NASDSE by September 30.

NASDSE is responding to several requests from State Directors of Special
Education for information and assistance in collecting, reporting and using
effectively data required by P.L. 94-142 and P.L. 98-199.

The first step in this new project is to survey SEA personnel on collection,
reporting and uses over the past 8 years of data required under P.L. 94-142.

The results of this survey will result in a report to be disseminated to all
SEAs and will include ideas and examples of creative uses of data for future
purposes. The report may also be used by NASDSE with hill staffers and
Congressmen and OSEP officials and will become part of a dissertation study
being conducted by Pat Abrams, former NASDSE intern.

The enclosed instrument has been developed after extensive input from state
directors and others administrators involved in special education
administration and has been field tested with two state directors. We
estimate it will take 30 minutes to complete the instrument.

The instrument should be completed by that person in your unit who is
responsible for collecting and reporting the federal data.

Since the survey questions are designed to address only the pre-P.L. 98-199
data collection and reporting requirements we have attached copies of the
forms you completed prior to the 84-85 school year, regarding child,
personnel, and setting (LRE) counts.

Many of the survey items require value judgments regarding data that were
Federally required. Please know that the results of these questions will be
presented in aggregate form and that individual states will not be identified
in the report.

We would welcome any comments that you may have concerning any aspect of data
collection, reporting, and other uses not covered in the instrument.

Your cooperation is appreciated.

THE COLLECTION
AND USE OF
FEDERALLY REQUIRED DATA
BY SPECIAL EDUCATION STATE DIRECTORS

A SURVEY CONDUCTED BY
THE NATIONAL ASSOCIATION OF STATE DIRECTORS
OF SPECIAL EDUCATION

SAMPLE FORMS FOR REPORTING DATA TO MEET THE REQUIREMENTS OF

FEDERAL REGULATIONS:

PART B OF THE EDUCATION OF THE HANDICAPPED ACT. (EHA-B),
AS AMENDED AND THE STATE OPERATED PROGRAM
FOR HANDICAPPED CHILDREN OF CHAPTER 1 OF ECIA

The attached forms are not to be completed — they are for
reference only.

SAMPLE

PART II.   REPORT OF HANDICAPPED CHILDREN RECEIVING
SPECIAL EDUCATION AND RELATED SERVICES
(Part B, Education of The Handicapped Act)

(Report due no later than February 1)

SECTION A				
1. NAME OF STATE	2. COUNT DATE			
	MONTH	DAY	YEAR	

SECTION B
NUMBER OF CHILDREN RECEIVING SPECIAL EDUCATION AND RELATED SERVICES

HANDICAPPING CONDITION	AGED 3 THROUGH 5 (1)	AGED 6 THROUGH 17 (2)	AGED 18 THROUGH 21 (3)
1. MENTALLY RETARDED			
2. HARD OF HEARING			
3. DEAF			
4. SPEECH IMPAIRED			
5. VISUALLY HANDICAPPED			
6. SERIOUSLY EMOTIONALLY DISTURBED			
7. ORTHOPEDICALLY IMPAIRED			
8. OTHER HEALTH IMPAIRED			
9. SPECIFIC LEARNING DISABILITIES			
10. DEAF-BLIND			
11. MULTIHANDICAPPED			
12. TOTAL (Sum of Lines 1 through 11)			

SECTION C - Certification
I CERTIFY that these data represent an accurate and unduplicated count of handicapped children receiving
special education and related services on December 1, according to an Individualized Education Program.

AUTHORIZING OFFICIAL

1. NAME AND TITLE	2. SIGNATURE	3. DATE OF SIGNATURE

No further monies or other benefits may be paid out under this program unless this report is completed
and filed as required by 20 U.S.C. 1411(a)(3).

Form 160, 12/81

SAMPLE

State _____

PART III
TABLE 3

PERSONNEL (in Full-Time Equivalency of Assignment) EMPLOYED
ON DECEMBER 1 OF THE 1983-84 SCHOOL YEAR

Section A

Personnel Category	FTE of Personnel Employed
(1) Special Education Teachers	
(2) Psychologists	
(3) Other Diagnostic Staff	
(4) Occupational Therapists	
(5) Physical Therapists	
(6) Speech Pathologists	
(7) Audiologists	
(8) Teacher Aides	
(9) Vocational Education Teachers	
(10) Work-Study Coordinators	
(11) Physical Education Teachers	
(12) Recreation Therapists	
(13) School Social Workers	
(14) Supervisors	
(15) Other Non-Instructional Staff*	
(16) TOTAL (rows 1-15)	

Section B

Handicapping Condition	FTE of Special Education Teachers Employed
(1) Mentally Retarded	
(2) Hard of Hearing	
(3) Deaf	
(4) Speech Impaired	
(5) Visually Handicapped	
Seriously Emotionally Disturbed	
Orthopedically Impaired	
(8) Other Health Impaired	
(9) Specific Learning Disabilities	
Deaf-Blind	
Multihandicapped	
Non-categorical	
TOTAL (col. 1-13)	

*Includes staff involved in health services (nurses, psychiatrists, etc.), food service, maintenance, pupil transportation, etc.

ED Form 600, 12/83

State _____

PART III
TABLE 4

ADDITIONAL PERSONNEL (in Full-Time Equivalency) NEEDED IN THE 1983-84 SCHOOL YEAR

Section A

Personnel Category	FTE of Personnel Needed
(1) Special Education Teachers	
(2) Psychologists	
(3) Other Diagnostic Staff	
(4) Occupational Therapists	
(5) Physical Therapists	
(6) Speech Pathologists	
(7) Audiologists	
(8) Teacher Aides	
(9) Vocational Education Teachers	
(10) Work-Study Coordinators	
(11) Physical Education Teachers	
(12) Recreation Therapists	
(13) School Social Workers	
(14) Supervisors	
(15) Other Non-Instructional Staff*	
(16) TOTAL (rows 1-15)	

Section B

Handicapping Condition	FTE of Special Education Teacher Needed
(1) Mentally Retarded	
(2) Hard of Hearing	
(3) Deaf	
(4) Speech Impaired	
(5) Visually Handicapped	
Seriously Emotionally Disturbed	
Orthopedically Impaired	
(8) Other Health Impaired	
(9) Specific Learning Disabilities	
Deaf-Blind	
Multihandicapped	
Non-categorical	
TOTAL (col. 1-13)	

SECTION ONE: STATE DEMOGRAPHICS

1. State: .....

2. Name of Person Completing Survey: ....

   Business Address: ....

   Phone: ....

3. Position: ....

4. Experience: Number of years experience in position.

   ☐ 0 - 2   ☐ 3 - 5   ☐ 6 - 9   ☐ 10 - 15   ☐ 16 or more

5. Responsibilities: Briefly describe the responsibilities of your job in relation to data collection and use.

6. Name of Special Education Highest Administrator: (if different from person completing survey)

   ....

   Position Title of Special Education Highest Administrator:

   ....

7. State Special Education Funding Formula:
   Indicate the category from the list below which best describes your state's special education reimbursement arrangement.

   ☐ Excess Cost   ☐ Per Pupil   ☐ Personnel
   ☐ Unit   ☐ FTE   ☐ Other (describe on back)

8. Special Education Administrative Services:
   Indicate the category from the list below which best describes the type of special education administrative units other than LEAs and SOPs that exist in your state.

   ☐ State controlled Intermediate Education Units   ☐ Regional State Department of Education Offices
   ☐ Locally controlled Intermediate Education Units   ☐ Locally controlled Regional Centers
   ☐ Locally controlled Cooperatives or Joint Agreements ☐ Other (describe on back)

9. Number of Local Administrative Units:

   Number of Operating School Districts in State: ....

SECTION TWO: DATA COLLECTION

Data Collection Process

The following set of questions address the ways in which the federally required data are collected by the state education agency from local districts in your state.

Receiver of Data:
Indicate which unit within the SEA receives the data from LEAs/SOPs by writing the division name next to the data element:

DATA ELEMENT	SEA DIVISION
1. Child Count	:.............................
2. Personnel Count	:.............................
3. Setting Count	:.............................

Flow of Data:
Through which organizational structures do the data flow? Place an "X" in the box which corresponds to the path that is followed by each data element listed below.

DATA ELEMENT	DATA PATH				Description of Data Path Categories:
	(a)	(b)	(c)	(d)	(a) Local education agencies report directly to state
	LEA	LEA	LEA	Other	education agency.
	SEA	St. Reg. Of.	Intermed.		
		SEA	SEA		(b) Local education agencies report to State Regional
4. Child Count	☐	☐	☐	☐	Offices which report to state education agency.
5. Personnel Count	☐	☐	☐	☐	
6. Setting Count	☐	☐	☐	☐	(c) Local education agencies report to intermediary
• If OTHER please describe on back					such as IEU, or Cooperative which report to state education agency.

Transmission of Data:
In what form are the data when received by the SEA? Place an "X" in the box which corresponds to the medium used for each of the three data elements.

DATA ELEMENT	MEDIA				Description of Media Categories:
	(d)	(e)	(f)	(g)	(d) Paper – standard paper forms or reports
	Paper	Electronic	Comb.S	Other	
7. Child Count	☐	☐	☐	☐	(e) Electronic – computer tapes, disks; electronic
8. Personnel Count	☐	☐	☐	☐	mail, telecommunication
9. Setting Count	☐	☐	☐	☐	
• If OTHER please describe on back					(f) Comb. S – (combination of paper and electronic) Provide an estimated percentage (%) of data received by electronic means.

Computerized Management Information System:

10. Does your State Education Agency (SEA) have a computerized management information system (MIS)?
    ☐ No   ☐ Yes

11. If YES to the above question #10, place an "X" in the box which best describes the situation in your SEA:
    ☐ General system – special education data not easily accessed.
    ☐ Integrated system – general system with access to special education data.
    ☐ Dual system – general system and separate system for special education data.
    ☐ Special Education system – no general system, only special education MIS.
    ☐ Other – describe on back

Changes in the Data Collection Process

The following set of questions address past and future changes in the data collection process in your state.

12. Do you recall any major changes in the data collection process for your state regarding child, personnel, and setting counts in the past 8 years (1977/78 - 1984/85)?

() No   ()Don't Know   () Yes   If NO or DON'T KNOW, go to question # 13.

a. If you indicated YES to the above question, please select from the categories below those which describe the changes that have occurred:

() Data Transmission   () Data Compilation   () Report Generation
() Data Verification   () Data Analysis   () Data Use
                                                          () Other (describe on back)

b. Select from the list below three (3) categories which best describe the most significant reasons for the changes indicated.

() participation in Federal project   () availability of staff   () availability of telecommunication
() new Federal requirements   () state court order   () availability of computer hardware
() new state requirements   () new SEA role   () availability of computer software
                                                                        () other (describe on back)

13. Do you forsee any major changes in the data collection process for your state in the next 3 years (1988/89)?

() No   ()Don't Know   () Yes   If NO or DON'T KNOW go to Section Three of survey.

a. If YES, please select from the categories below those which best describe the changes that may occur in the future:

() Data Transmission   () Data Compilation   () Report Generation
() Data Verification   () Data Analysis   () Data Use
                                                          () Other (describe on back)

b. Select from the list below three (3) categories which best describe the most significant reasons why such changes might occur.

() participation in Federal project   () availability of staff   () availability of telecommunication
() new Federal requirements   () state court order   () availability of computer hardware
() new state requirements   () new SEA role   () availability of computer software
                                                                        () Other (describe on back)

SECTION THREE: THE USE OF FEDERALLY REQUIRED DATA

Section Three contains lists of possible uses of federally required data. This section is designed to tap two types of responses from you for each of the federally required data elements (child count, personnel count, and setting count). For the first response area you are asked to provide a "Yes" or "No" as to whether the SEA conducts the activity that is listed.

In the second response area you are asked to indicate the degree to which the data element is useful for conducting the corresponding activity. The response options are:

1 = useless
2 = not very useful
3 = somewhat useful
4 = very useful

Example Response

ACTIVITY	SEA CONDUCTS ACTIVITY	USEFULNESS OF FED DATA
	No Yes	1 2 3 4
1. Prepare required reports for Federal agencies.	☐ ☒	☐ ☐ ☐ ☒

In the example provided, the SEA does conduct the activity, and considers the child count data to be very useful.

To conserve space several common acronyms have been used in the survey questions as listed below:

SEA = State Education Agency
LEA = Local Education Agency
SOP = State Operated Program
IHE = Institution of Higher Education
LRE = Least Restrictive Environment

USES OF CHILD COUNT DATA (CON'T.)

ACTIVITY	CONDUCTS ACTIVITY		USEFULNESS OF FED DATA			
	No	Yes	1	2	3	4
15. Raise research and evaluation questions to understand local districts that appear different from most others in the state.	()	()	()	()	()	()
16. Distribute state funds to local districts.	()	()	()	()	()	()
17. Consult other child data counts to corroborate multi counts.	()	()	()	()	()	()
18. Consult and integrate data from other sources such as Office of Civil Rights, Census, Corrections, Employment to raise state policy related questions.	()	()	()	()	()	()
19. Seek additional resources for programs in need.	()	()	()	()	()	()
20. Consider making changes in state policy such as changing weightings in the state funding formula.	()	()	()	()	()	()

●●
●●

OTHER ACTIVITIES USING CHILD COUNT DATA

There may be other uses to which you put the Federally required child count data. If so, please list these below.

USES OF PERSONNEL COUNT DATA

Now we'd like to know about your uses of federally required personnel count data. For the activities listed below, please indicate if the SEA conducts them from year-to-year by placing an "I" in the No or Yes column. If "Yes", in the next column indicate the degree to which the personnel count data are useful for conducting the activity. If you indicate "No" (the SEA does not conduct the activity), then go to the next activity listed. Refer to the example on page 4.

ACTIVITY	SEA CONDUCTS ACTIVITY		USEFULNESS OF FED DATA			
	No	Yes	1	2	3	4
1. Apply for Federal and state funds.	()	()	()	()	()	()
2. Raise research and evaluation questions such as troubleshoot linkages among IHEs, SEA, and LEAs.	()	()	()	()	()	()
3. Compile data across several years to develop projections and forecast long-term needs (+ 5 years) in the areas of pre- and in-service training.	()	()	()	()	()	()
4. Prepare required reports for Federal agencies.	()	()	()	()	()	()
5. Prepare information upon request such as to LEAs, SDPs, IHEs, advocate groups, Chief State School Officer, etc.	()	()	()	()	()	()
6. Identify personnel shortages.	()	()	()	()	()	()
7. Compile data across several years to develop projections and forecast long-term needs (+ 5 years) in the area of recruitment.	()	()	()	()	()	()
8. Compile data across several years to develop projections and forecast long-term needs (+ 5 years) in the area of certification.	()	()	()	()	()	()
9. Conduct desk audit to target monitoring priorities such as making a compliance site visit to local district with large numbers of non-certified personnel.	()	()	()	()	()	()
10. Distribute state funds to local districts.	()	()	()	()	()	()
11. Compare state with other states such as develop rankings of states using Annual Report to Congress.	()	()	()	()	()	()
12. Prepare required reports for state agencies.	()	()	()	()	()	()
13. Prepare required reports for IHEs.	()	()	()	()	()	()
14. Compile trend data across several years to examine for match with personnel related state policies.	()	()	()	()	()	()
15. Identify training shortages and/or problems.	()	()	()	()	()	()

USES PERSONNEL COUNT DATA (con't)

ACTIVITY	SEA CONDUCTS ACTIVITY		USEFULNESS OF FED DATA			
	No	Yes	1	2	3	4
16. Seek additional funds for programs in need.	()	()	()	()	()	()
17. Compare local districts to each other such as construct LEA profiles or rankings showing certified and noncertified personnel.	()	()	()	()	()	()
18. Identify recruitment problems.	()	()	()	()	()	()
19. Share trend data with other agencies to facilitate long-term planning (+ 5 years), such as certification division in SEA; IHEs; LEAs.	()	()	()	()	()	()
20. Consult other personnel counts to corroborate multi counts.	()	()	()	()	()	()
21. Compare personnel ratios with other programs such as Chapter I, Bilingual, and Vocational Education.	()	()	()	()	()	()
22. Consider making changes in personnel related state policies.	()	()	()	()	()	()
23. Target technical assistance activities.	()	()	()	()	()	()
24. Provide comparative state-wide reports to LEAs.	()	()	()	()	()	()

•••
•••

OTHER USES OF PERSONNEL COUNT DATA

There may be other uses to which you put Federally required personnel count data. If so, please list these activities below.

USES OF SETTING COUNT DATA

Finally, we'd like to know about your use of federally required setting count data. For the activities listed below, please indicate if the SEA conducts them from year-to-year by placing an "I" in the No or Yes column. If "Yes", in the next column indicate the degree to which the setting count data are useful for conducting the activity. If you indicate "No" (the SEA does not perform the activity), then go to the next activity listed. Refer to the example on page 4.

ACTIVITY	SEA CONDUCTS ACTIVITY		USEFULNESS OF FED DATA			
	No	Yes	1	2	3	4
1. Distribute state funds to local districts.	☐	☐	☐	☐	☐	☐
2. Consider making changes in setting related state policies.	☐	☐	☐	☐	☐	☐
3. Target monitoring priorities such as making compliance site visits to local districts regarding LRE practices.	☐	☐	☐	☐	☐	☐
4. Prepare required reports for Federal agencies.	☐	☐	☐	☐	☐	☐
5. Target technical assistance activities.	☐	☐	☐	☐	☐	☐
6. Consult and integrate data from other sources such as Office of Civil Rights, Census, Corrections, to raise policy related questions.	☐	☐	☐	☐	☐	☐
7. Prepare required reports for state agencies.	☐	☐	☐	☐	☐	☐
8. Prepare required reports for groups other than Federal and state agencies such as advocate groups, parents, IHEs.	☐	☐	☐	☐	☐	☐
9. Consult other setting count data to corroborate multi counts.	☐	☐	☐	☐	☐	☐
10. Compile data across several years to show trends and to develop projections and forecasts (+ 5 years).	☐	☐	☐	☐	☐	☐
11. Prepare information upon request such as for LEAs, advocate groups, Chief State School Officer, parent groups.	☐	☐	☐	☐	☐	☐
12. Compare state with other states (e.g., develop state rankings using Annual Report to Congress or other documents).	☐	☐	☐	☐	☐	☐
13. Raise state policy related questions concerning LRE.	☐	☐	☐	☐	☐	☐
14. Seek additional resources for programs in need.	☐	☐	☐	☐	☐	☐
15. Compare how settings differ across local districts such as develop rankings of local districts.	☐	☐	☐	☐	☐	☐

ACTIVITY

	CONDUCTS ACTIVITY		USEFULNESS OF FED DATA			
	No	Yes	1	2	3	4
16. Raise research and evaluation questions to understand districts which appear different concerning under/over representation of students in least restrictive settings.	()	()	()	()	()	()
17. Compile trend data across several years to examine for match with setting related state policies.	()	()	()	()	()	()

●●
●●

OTHER USES OF SETTING COUNT DATA

There may be other uses to which you put Federally required setting count data. If so, please list those activities below.

Thank you for your time.

Please return to:

BILL SCHIPPER
NATIONAL ASSOCIATION OF STATE DIRECTORS
OF SPECIAL EDUCATION
2021 K STREET, N.W.   SUITE 315
WASHINGTON, D.C.   20006

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