Chapter 1

Introduction

Information is one of the most important tools education decision makers need to help them effectively spend taxpayer money, allocate qualified staff, and determine the effectiveness of education investments. Decision makers must understand the role and influence of monetary and staff resources on the education system, and they must have information to help them decide where to invest limited resources for maximum effect on student learning. In this report, researchers from the Southwest Educational Development Laboratory (SEDL) describe the data collected and housed by state education agencies in Arkansas, Louisiana, New Mexico, and Texas. We provide guidance to researchers and state policy audiences, including policymakers and policy influencers from state legislatures, state departments of education, and governors' offices in Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. We provide information about the questions that can be answered with existing data, and we discuss how these data can be improved to answer a wider range of questions. These data hold great promise for answering specific policy questions and should be utilized to their fullest potential to guide effective decision making. The conclusions and recommendations that result from this study will be of interest to policy audiences, data managers, and researchers from the four study states and nationally.

Federal priorities encourage policymakers to seek evidence-based information that combines sound research methods with reliable data. The quality and usability of relevant data, however, are unclear, especially with regard to existing state databases. In the recent past, states' data needs were driven primarily by federal reporting requirements and state accountability priorities. Currently, policymakers are responding to a broader range of financial and

accountability issues than most state data systems were originally designed to track (Busch & Odden, 1997). Therefore, the need to scrutinize state data systems for both policymaking and research purposes has risen in priority. Past research on data use has noted an increase in the accuracy of data as a byproduct of its use, an incentive for both researchers and policymakers to turn to states for their data needs (Farland, 1997).

As part of its mission, SEDL conducts research to inform education policymakers in its five-state region as part of its regional education laboratory work. In their 2003 policy study, SEDL researchers found that instructional resources are positively related to student performance and that strategies exist to allocate resources based on student learning needs. Specifically, we found that high-performing districts in Arkansas, Louisiana, New Mexico, and Texas allocated more fiscal and staff resources to instructional areas than did low-performing districts. We identified two critical strategies that support effective resource allocation: (a) data-driven decision making and (b) alignment of instructional goals with available resources (Pan, Rudo, Schneider, & Smith-Hansen, 2003). Researchers concluded that to improve resource allocation decisions, more information is needed about the relationship between specific instructional resources and student performance.

We shared these findings with state policymakers at an annual state policy forum and during individual visits with policymakers in Arkansas, Louisiana, and Texas. As a result of these meetings we identified the following three areas of need:

1. Policymakers expressed substantial interest in study findings and a need for more information on how effective resource allocation can support student achievement.

2. Policymakers explained that researchers' use of federal databases (i.e., Common Core of Data) to determine resource allocation patterns in the study states weakened the impact of

results. In Texas, for example, state databases report expenditures for instruction across multiple functions depending on the purpose of the spending, whereas federal data aggregate spending in instruction into one function category in order to create a common standard for all states. Although federal databases provide reliable data that allow comparisons across states, researchers heard from state policymakers a clear need to focus on state-level data. State data, although of varying utility, offer more specific information on spending and staffing patterns within instructional areas than do federal data. State data sources also have increased currency and rely on measures of resources and performance that are typically more familiar to state audiences.

3. Local and state decision makers understand that "one size does not fit all," and they must consider how resource allocation strategies can be modified to fit local needs and environments. Further work is needed to identify accurate measures of local educational environments (e.g., student demographics, school and district characteristics) and to apply these measures to an examination of instructional resource allocation.

The purpose of this study was to assess the capacity of existing state education databases to answer policy questions about instructional resource allocation and student performance. Existing state databases include organized collections of data managed by state entities for reporting, conducting research, and/or supporting policy and practice. Researchers at SEDL and nationally can use these findings to understand the feasibility and potential scope of using existing state data to conduct research on the allocation of instructional resources. Policymakers and practitioners, by better understanding the capacity of state data systems to conduct policy research, will be able to expand research about instructional resource allocation and student performance.

This report is divided into three major sections with detailed reference material in the appendixes. Chapter 2 describes how data on instructional resources and student performance have been utilized to support policy in Arkansas, Louisiana, New Mexico, and Texas. Chapter 3 describes existing state education data in the four study states and discusses how researchers could use these data to answer policy questions related to instructional resources. We also explore what additional questions could be answered if data were improved. Chapter 4 poses recommendations for policymakers regarding how data might be better utilized and improved to support decision making. Findings on state data in New Mexico are represented in this report; however, these findings are limited and conjectural at times because data were not received from that state for analysis. Information about New Mexico data systems are based solely on printed documentation and interviews with state data managers. The methods used to conduct this study are explained in appendix A, and the remaining appendixes provide detailed descriptions of state education data in each of the four study states for the reader's reference and use in planning future research studies.