DOCUMENT RESUME

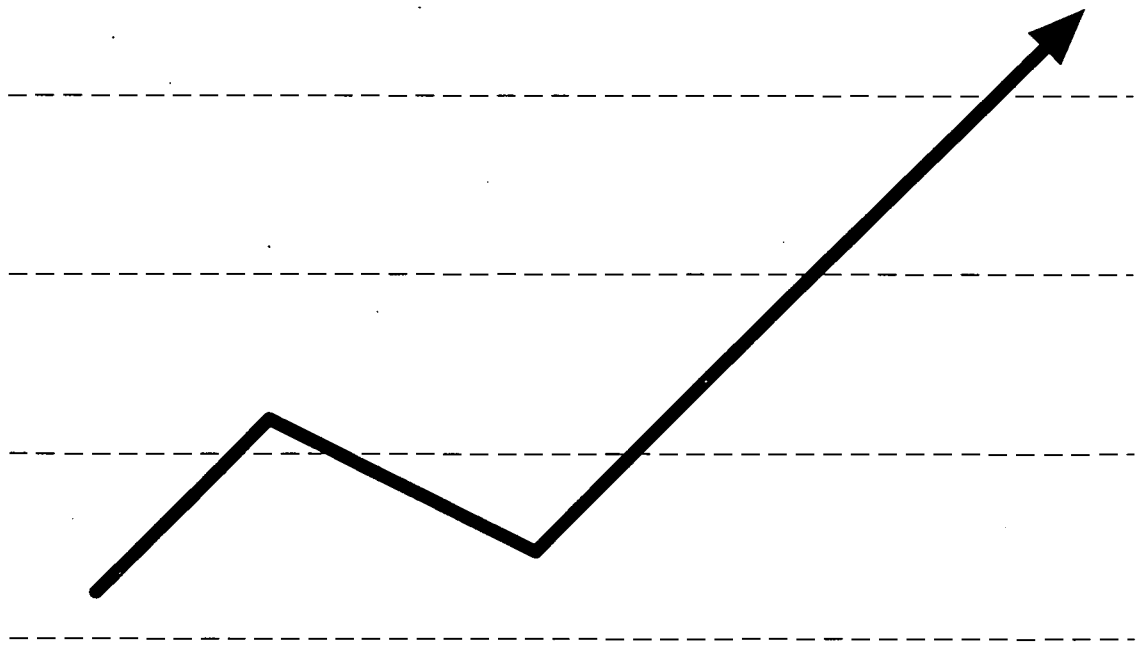
ED 401 310 TM 025 873

TITLE	The Development of Accountability Systems Nationwide and in Texas. Statewide Texas Educational Progress Study Report No. 1.
INSTITUTION	Texas Education Agency, Austin.
REPORT NO	GE6-601-07
PUB DATE	Apr 96
NOTE	47p.
AVAILABLE FROM	Publications Distribution Division, Texas Education Agency, 1701 North Congress Avenue, Austin, TX 78701-1494 ($2).
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Achievement; *Accountability; Educational Assessment; Educational Change; *Evaluation Methods; *Performance Factors; Program Evaluation; Public Schools; *State Programs; Test Construction; *Testing Programs
IDENTIFIERS	*Educational Indicators; *Texas

ABSTRACT

This is the first in a series of reports on the educational progress of Texas public schools. It reviews the concerns that led to the development of the integrated accountability system now used in Texas and examines this system relative to those of other states. A major new research and evaluation effort, the Statewide Texas Educational Progress Study is described. A number of national studies have discussed the need for assessment and establishing indicators to measure progress. In Texas, results from the state's testing program are a central part of the Academic Excellence Indicator System (AEIS). AEIS data are summarized in reports for school, district, region, and state levels in an integrated system that includes statewide testing, local performance reporting, and state accreditation. It is based on eight guiding principles that include student performance and the right of the public to knowledge about the school system. Thirty-four of the 50 states have established formal performance standards in public education; Texas is among the 31% of states that produce reports at school, district, and state levels. An appendix compares the Texas accountability system with those of California, Florida, New York, and Tennessee. (Contains 7 figures and 29 references.) (SLD)

The Development of Accountability Systems Nationwide and in Texas



STATEWIDE TEXAS EDUCATIONAL PROGRESS STUDY

REPORT NO. 1 **APRIL 1996**

Additional copies of this document may be obtained for $2.00 per copy by contacting:

Publications Distribution Division
Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701-1494
(512) 463-9744

Refer to Publication Number GE6-601-07.

Additional information about this report may be obtained by contacting the Texas Education Agency Research and Evaluation Division at (512) 463-9701.

The Development of Accountability Systems Nationwide and in Texas

STATEWIDE TEXAS EDUCATIONAL PROGRESS STUDY

REPORT NO. 1 APRIL 1996

Project Staff

Department of Programs and Instruction
Felipe Alanis
Deputy Commissioner

Office of Policy Planning and Research
Criss Cloudt
Associate Commissioner

Research and Evaluation Division
Nancy Stevens
Director

Maria D. Whitsett
Project Director

Research and Editorial Assistance
Gema Barkanic
David Gill
Marilyn Rumbaut
Sedra Spano

Vicky A. Killgore
Graphics, Layout, and Design

TEA Reviewers

Office of Policy Planning and Research
Susan J. Barnes
Maureen Moore Scheevel

Performance Reporting Division
Cherry Kugle
Director

John Haetinger
Bill Insko
Cathy Long
Betty Weed

Student Assessment Division
Shannon Housson

THE DEVELOPMENT OF ACCOUNTABILITY SYSTEMS NATIONWIDE AND IN TEXAS

Table of Contents

LIST OF FIGURES

The Development of Accountability Systems Nationwide and in Texas

Introduction

This is the first in a series of reports on the educational progress of Texas public schools. It reviews the history of concerns that led to the current emphasis, nationally and in Texas, on campus- and district-level accountability. Research on the use of campus- and district-level accountability systems is presented, and the development of the integrated accountability system now used in Texas is described. The system is examined relative to those in other states, and relative to generally accepted criteria for effectiveness drawn from research and other literature. Finally, a new major research and evaluation effort at the Texas Education Agency, the Statewide Texas Educational Progress Study (STEPS), is described.

This study will involve ongoing analyses of statewide performance based on Academic Excellence Indicator System (AEIS) results. AEIS is the primary state-level vehicle for reporting of campus and district performance in Texas. STEPS will portray Texas educational performance *over time*, focusing on Grades kindergarten, 4, 8, and 10. The study will explore the relationships between combinations of *contexts* such as district and campus size, *resources* such as campus expenditures and teacher qualifications, and *educational processes* such as course offerings and special programs, that statistically are most likely to foster growth for all student groups over time. The project will integrate a wide array of data available at the agency, including building some longitudinal student-level views of data that will be supplemented by specialized data collection from schools. The study will provide a baseline of information about students and educational programs that can be used to (a) examine changes in system performance in relation to policy changes, (b) analyze statewide trends in student demographics and performance, and (c) serve as a reference point for other research efforts by conducting in-depth analyses of the contributions made to student learning at the classroom, school, and district levels of the education system. As standards on the AEIS indicators increase and districts and schools must become more effective places of learning to preserve acceptable accreditation ratings, it will become increasingly important to understand — and therefore be able to better leverage — the dynamics between contexts, resources, and educational processes as these relate to student learning. STEPS will bring a longer-term perspective to state-level analysis of AEIS data for systemwide planning and improvement efforts.

The purpose of this report is twofold. First, the report provides the context for future analysis of student and school performance through an overview of the development of performance indicators and indicator systems nationally and in Texas. Second, the report documents the evolution of the Texas integrated accountability system, critiques its current status, and reviews anticipated modifications to the system.

National Historical Perspective

Historical events such as the Soviets' launching of the Sputnik in 1959 affected the way Americans viewed their own education system. This particular momentous event, achieved first by the Soviets, raised questions about the quality and supposed superiority of education in the United States. In the decade of the 1960's, the National Center for Education Statistics (NCES) published *Equality of Educational Opportunity* (Coleman, 1966). Referred to as the Coleman report, it indicated that the strongest and most enduring influence on student achievement was family background, a factor out of the control of schools. The education community responded to this unwelcome news by focusing research efforts in the 1970's on identifying the characteristics of schools that were effective in improving the achievement of poor and minority students. Contrary to the Coleman report findings, the effective schools movement was guided by the premise that there were indeed ways within the schools' domain to improve the achievement of all students.

Throughout the 1970's, the National Assessment of Educational Progress (NAEP) was employed to gauge trends in student academic performance on a national level. The NAEP "is the only nationally representative and continuing assessment of what America's students know and can do in various subject areas" (Mullis, Dossey, Campbell, Gentile, O'Sullivan, & Latham, 1994, inside cover). The assessments "summarize students' performance . . . and provide a basis for describing students' overall achievement in each of the four curriculum areas" (*ibid.*, p. 2). Concerns raised from the NAEP reports, combined with other report findings that student performance showed declines in mathematics and science throughout the 1970's, continued to spark national concern regarding the system of education in this country. Of particular concern was how the United States, with declining student achievement, would continue to compete successfully with other nations.

A Nation at Risk

In 1981, then Secretary of Education Terrell H. Bell established the National Commission on Excellence in Education. The purpose of this commission was to look critically at the quality of education in the United States and provide a report with practical recommendations for educational improvement. The resulting report, *A Nation at Risk: The Imperative for Education Reform,* released in 1983, addressed national concerns regarding falling standards in the nation's public schools, and asserted that our nation was at risk of being overtaken by overseas competitors in commerce, industry, science, and technology. The report recommended improving the education system by (a) strengthening high school graduation requirements such that all students take 4 years of English, 3 years of mathematics, 3 years of science, 3 years of social studies, and 1/2 year of computer science; (b) encouraging schools, colleges, and universities to adopt tougher standards that are measurable; (c) devoting significantly more time to learning through a longer school day and/or longer school year; (d) improving the preparation of teachers and making teaching a more rewarding and respected profession; and (e) having citizens hold educators and elected officials responsible for providing the leadership and fiscal support to achieve reforms.

A Nation Prepared

Between 1986 and 1992 additional reports focusing on the quality of education and the preparation of our nation's teachers were released. In 1986, the Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profes-

sion published *A Nation Prepared: Teachers for the 21st Century*. This report voiced concerns over both the academic caliber of those entering the teaching profession and the preparation they were receiving. The report offered a framework to establish a system that would allow school districts to offer teachers the pay, autonomy, and career opportunities that would attract individuals to teaching and keep them in the profession. A series of elements needed to institute the framework were laid out.

Figure 1. The National Education Goals

- By the year 2000, all children in America will start school ready to learn.
- By the year 2000, the high school graduation rate will increase to at least 90 percent.
- By the year 2000, American students will leave Grades 4, 8, and 12 having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.
- By the year 2000, U.S. students will be first in the world in mathematics and science achievement.
- By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
- By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

Two goals added later:

- By the year 2000, the nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
- By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

The Education Summit

During his presidency, George Bush met with the nation's governors for an education summit. Held in Charlottesville, Virginia in 1989, the summit was initiated in part due to concerns raised by the reports *A Nation at Risk* and *A Nation Prepared.* Former President Bush and the nation's governors focused on two main goals: (1) to establish a system of accountability and stimulate state and local initiatives to change not only the schools, but the entire learning enterprise; and (2) to create an environment ripe for widespread reform and innovation. The summit set the groundwork for the six original national education goals, adopted in 1990. Two additional goals were added later. (See Figure 1.) Two years after the summit, Mr. Bush announced America 2000: An Education Strategy. A long-term strategy to help bring the nation closer to achieving the ambitious national education goals, America 2000 stressed the four broad reform efforts shown below.

1. Improving Current Schools and Making Them Accountable for Results

It was proposed that this would be accomplished through the use of a large-scale 15-point accountability package (see Figure 2) that parents, teachers, schools, and communities would be encouraged to use to measure and compare results, and to insist on change when results were not satisfactory.

2. Inventing New Schools to Meet the Demands of the 21st Century

These new schools would be inspired by some initiatives already underway, including Washington State's Schools for the 21st Century, Theodore Sizer's Coalition of Essential Schools, Henry Levin's Accelerated Schools, and others. They would "break the mold" and would rely on rigorous accountability measures, including meeting the world class standards outlined in the 15-point accountability package.

3. Encouraging Lifelong Learning

All adults would be encouraged to go back to school or to improve their skills on the job. All people would be encouraged to become better parents, neighbors, citizens, and friends.

4. Creating Communities in Which This Learning Can Take Place

Communities would be encouraged to adopt the national education goals and support sound American values such as strength of family, parental responsibility, and commitment to neighbors and community members.

Figure 2. America 2000 15-point Accountability Package

- World class standards
- American achievement tests
- Encourage test use by colleges, universities, and employers
- Presidential citations for educational excellence
- Presidential achievement scholarships
- Report cards
- Changes in the National Assessment of Educational Progress
- New choice incentives, and choice applied to Chapter 1
- Educational flexibility legislation to support the school as site of reform
- Merit Schools Program to reward schools that move toward the goals
- Governors' academies for school leaders
- Governors' academies for teachers
- Differential pay for teachers
- Alternative certification for teachers and principals
- Honor outstanding teachers in the five core course subjects

The SCANS Reports

Following the education summit, the establishment of the national education goals, and the presentation of America 2000, several related reports came forth. In the summer of 1991, the Education Secretary's

Figure 3. SCANS Workplace Know-How

The SCANS recommended the following foundation and competencies needed for solid job performance.

Foundation:

Basic Skills — reading, writing, mathematics, speaking, and listening

Thinking Skills — thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn, and reasoning

Personal Qualities — individual responsibility, self-esteem, sociability, self-management, and integrity

Competencies:

Resources — allocating time, money, materials, space, and staff

Interpersonal Skills — working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds

Information — acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information

Systems — understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems

Technology — selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies

Commission on Achieving Necessary Skills (SCANS) first report, *What Work Requires of Schools*, was released. This report stressed the need to mold education to the changing needs of business and other employers. The report identified competencies, skills, and personal qualities necessary for successful job performance in the current world market (see Figure 3 on previous page).

The second SCANS report, *Learning a Living: A Blueprint for High Performance*, was released the following year. This report further defined the skills, attitudes, and knowledge necessary to succeed in the workplace. It also considered how best to assess whether or not students have the "know how" they will need to be successful.

Monitoring Educational Performance With Indicator Systems

The Advent of Indicators

All the reports described above discuss the need for assessment and establishing indicators to measure progress. Around the time of the first SCANS report, a special study panel on education indicators for the National Center for Education Statistics published the report, *Education Counts: An Indicator System to Monitor the Nation's Educational Health.* The report presented information on how indicator systems should be developed and provided specific information on six issue areas including acquisition of knowledge, skills, and disposition; readiness for school; quality of educational institutions; societal support for learning; and education and economic productivity.

Following the *Education Counts* report, the National Council on Education Standards and Testing published *Raising Standards for American Education* in January 1992. The council was created to follow and complement the work of the president and the nation's governors at the 1989 education summit. The National Education Goals Panel, organized to report on the progress of the states on the national education goals, was assisted by the council. In its first year, the panel concluded that in order to measure progress on two of the goals, those concerning student competency in challenging subject matter and having U. S. students be first in the world in mathematics and science achievement, national education standards needed to be created to define what students should know and be able to do in English, mathematics, science, history, and geography. President Bush called for the creation of world class standards for students and high quality tests on which to assess their achievement.

It is against this backdrop that research and development on indicators of educational quality or effectiveness began and intensified. Because it had become obvious that the public cared about the quality of its schools and would use any available information to monitor school performance, the calls for accountability throughout the 1980's could be interpreted as implicit calls for more and better information about the educational status of schools and the children they serve. The following section of this report describes some core components in the body of knowledge about indicator systems and their uses that resulted from such efforts.

Defining Key Terms

Oakes (1986, p. 1) defines an ***educational indicator*** as "a statistic about the educational system that reveals something about its performance or health." At the next level, according to Bryk (1992), an effective ***indicator system*** must foster a broader, more informed, sustained discourse about means and ends of education by increasing understanding of problems and by catalyzing new ideas. ***Performance monitoring*** is more than an accumulation of indicators because it can accomplish the improvement goal that the maintenance of indicators alone cannot. It has three critical components: regular collection of information; evaluation of that information; and, most important, the translation of the findings into institutional actions or sanctions. It is the grouping of a statistic with an institutional consequence — the instrumental use of data — that functionally distinguishes a monitoring system from simple indicators.

The fundamental assumption of performance monitoring is that organizations in the public sector will become more efficient if they are forced to function in an environment similar to that of the market place — if parents have better information about how their children's schools compare to other schools they will pressure weak schools to improve, and if educators have legitimate standards of comparison, they will be more motivated to improve the schools. The goal of performance monitoring, then, is to promote action within and across all sectors of the system that is directed to the tangible outcomes established by the indicators.

Features Associated with Overall Quality of an Indicator System

There are a number of characteristics of indicators and indicator systems that make them more or less useful in understanding the performance of a whole system and its subparts, and in triggering improvement efforts. When considered collectively, work by Oakes (1986), David (1988), the Southern Regional Education Board (SREB, 1992), the Texas Education Agency (1994), and the U. S. Office of Educational Research and Improvement (1989), can be distilled into a relatively brief list of core features associated with high quality indicator systems. These features can broadly be labeled as follows.

- Articulation of system purposes
- System feasibility
- Validity
- Articulation of responsibilities
- Utility

Each of these broad areas or features encompasses discrete criteria that vary in how stringently or technically they are to be interpreted. An expansion of these criteria within the features is presented next.

Articulation of System Purposes

Several sources suggested that not only is school accountability an important purpose of an indicator system but so too is school improvement (see for example Bryk, 1992; SREB, 1992). In a quality indicator system, then, one should expect to see all purposes or intended uses of the system clearly and formally spelled out, particularly for those whose performance is being gauged. Simultaneously, there should be sensitivity to unintended effects of system implementation, such as unnecessary narrowing of the curriculum or excessive testing (David, 1988).

System Feasibility

Many discrete criteria are encompassed by system feasibility. Among them are the following.

- the "buy in" or consensus that exists to support the indicator system's continued existence (SREB, 1992)
- the economics of the system, including
  - (a) the use of simplistic, readily quantifiable indicators that measure enduring features of schooling (Oakes, 1986; TEA, 1995),
  - (b) the use of standardized definitions and data collection procedures (Oakes, 1986; OERI, 1989; TEA, 1995),
  - (c) the resources needed to operate the system, particularly collecting and maintaining large volumes of data over time (CPRE, 1987),
  - (d) timeliness of data collection and reporting (CPRE, 1987), and
  - (e) the overall unity or integration of the system to prevent losses associated with poor coordination or poor planning (e.g., avoiding excessive student testing with lost instructional time, per CPRE, 1987; David, 1988)
- the legality of the system (whether it is in compliance with current law)

Validity

In this context the term "validity" refers to the overall soundness of the system. Specific criteria within this area concern the following.

- face validity and fairness in comparisons, including acknowledgment and (where possible) accommodation of diversity within the system (SREB, 1992; OERI, 1989)
- validity in measurement — particularly measurement of student learning — including reliability and system stability (Oakes, 1986; TEA, 1995)

- appropriate use of the data and/or valid application of the findings, such that data interpretation (including the application of standards to data) leads to reasonable conclusions and reasonable courses of action (CPRE, 1987; SREB, 1992)

Articulation of Responsibilities

Articulation of responsibilities includes clear identification in policy of local-, as well as of state-level, responsibilities. For example, increased accountability of schools for results may or may not be accompanied in policy with increased local flexibility to design programs that are responsive to student needs. Whether or not development and use of locally appropriate accountability systems is encouraged should be clearly stated, as well.

Utility

Utility incorporates a wide range of specific criteria, including each of the following.

- the establishment of built-in points of reference for interpreting results on the indicators (Oakes, 1986; SREB, 1992; TEA, 1995)
- generation of reports that are understandable or "customer-friendly" (SREB, 1992)
- creating conditions that facilitate indicators' use in planning and decision making so that the data have a direct, rather than indirect, influence on policy (David, 1988; this is linked to the issue of timeliness of data collection and reporting, per CPRE, 1987)
- provision for locally-specific information as well as for information that is common across units, whether those units are schools, districts, or some other level of the system (SREB, 1992)
- the establishment *a priori* of at least some of the ways that those at the local level should use or respond to the information, i.e., will local schools have to disseminate the information to parents? Do campus improvement plans have to address results on the indicators? Should schools or districts increase their program evaluation efforts to better understand what programs and/or processes contributed to their results on the indicators? (SREB, 1992)
- the establishment *a priori* of what formal consequences, if any, are to be applied to the results on the indicators, such as how accreditation status and campus ratings are determined from the data (Bryk, 1992; Oakes, 1986; SREB, 1992; TEA, 1995)
- acknowledgment of informal consequences of having received the information (David, 1988) and the opportunities for change that arise from having received certain ratings
- capacity for responsiveness on the part of the indicator system itself, i.e., not only tolerance for change but allowance for regular change and refinement based on the data as well as a longer-term perspective on systemic improvement (David, 1988; SREB, 1992)

Attending to as many of these criteria as possible up front, in the development of an indicator system that is to be used for performance monitoring, may well be associated with not only the quality but also the longevity of the system.

Challenges to Meeting the Quality Criteria

In theory, indicators can identify weak spots in the education system. They consequently can suggest a need for changing policy and point out areas where more detailed information is necessary. In practice, however, indicators and indicator systems present problems and offer potential risks as well as benefits.

First, the development of useful, accurate indicators in education involves addressing technical, political, and educational issues. The technical issues abound in development of simple indicators to gauge areas where theory and empirical knowledge are either relatively weak or highly complex, such as the quality of teaching, the quality of the curriculum, and students' acquisition of higher-order thinking skills. Technical challenges include the need for (a) standardized definitions, (b) measures that adequately reflect the goals of education, and (c) methods that insure fair comparisons of widely varying factors. Further, the tendency to apply sophisticated and/or complex statistical procedures that yield the most precise measurement must be balanced against the need for results to be understood and trusted by educators and the general public. Political and educational challenges also

include agreeing on goals or standards for each indicator, a process that can be both time-consuming and complicated.

Second, policy makers need to ensure that indicators are associated with appropriate incentives and disincentives as both the educational system and the broader public become more aware of the data. Without question, publishing comparative information about educational quality can bring to bear on schools tremendous internal and external pressure to improve. Whatever the indicators measure is probably what teachers, administrators, and parents will attend to most closely. Thus the use of indicators could cause school staff and parents to narrow their efforts to only isolated aspects of teaching and learning. For example, the use of performance on a minimum skills tests as an indicator could provide an incentive (intended or unintended) for schools to emphasize the teaching of basic skills to the relative neglect of higher-order skills. Conversely, indicators may not influence local policy making sufficiently to justify the resources expended on them and the costs in lost opportunities and/or narrowed curriculum that they may exact (David, 1988, p. 500). Another concern is that use of indicators can produce pressure on schools to somehow make results look better than they actually are or, in extreme or isolated instances, to even circumvent or pervert the reporting system. Therefore a premium is placed upon the accuracy and validity of the data.

Third, direct comparisons of states, districts, or schools with substantially different demographic characteristics — especially as related to their student populations — can call into question the validity of any indicator system. Here, too, technical and political concerns appear to conflict. Methods rapidly increase in complexity and sophistication, and are more difficult to explain and understand, when indicator systems try to take into account school-level and district-level variations that are out of the schools' control, yet are significant to the educative process. In contrast, the more straightforward the explanations, the less distrust educators and politicians might have for indicator systems.

Fourth, using indicator systems for performance monitoring will point out differences in outcomes, but it may be difficult to determine what caused those differences. According to the National Academy of Public Administration (1994, p. 4, cited in Pollitt, 1995, p. 143), "outcome indicators will, in general, *not* tell the extent to which the program has caused the observed outcomes." This sort of observation can leave educators and policy makers alike uncertain about what to do differently to improve results. Furthermore, confusion and differences in perspective about the appropriate uses of information gained through monitoring likely has created unnecessary friction between policy makers and school leaders, all of which mitigates against consensus building and long-term political support for the system.

Development of the Integrated Accountability System in Texas

In Texas, as in the nation, many changes with regard to campus- and district-level accountability have occurred since the publication of *A Nation at Risk* in the early 1980s. Beginning in the 1979-80 school year with their adoption, the state's student testing programs have been at the heart of the accountability movement. Today results from the testing program are a central part of the state's Academic Excellence Indicator System (AEIS). The AEIS is the Texas vehicle for reporting extensive information on school and district staff, finances, programs, and student demographics, as well as statewide test results and other performance indicators. The AEIS data are summarized in campus-, district-, region- and state-level reports as well as in report cards intended for parents of Texas public school children. Critical to the integrated accountability system, standards applied to the AEIS data form the basis for determining district accreditation status and campus accountability ratings.

Statewide Testing

Statewide testing of all students in selected grades was implemented in Texas in 1979-80. Core issues such as the purpose of the tests, the amount of testing that is done, and the comprehensiveness of the tests in relation to the curriculum have been at the center of changes as the state testing programs have evolved since 1979-80. The Texas Assessment of Academic Skills (TAAS) testing program has been in place since the 1990-91 school year. This program emphasizes the assessment of academic skills and focuses on students' higher-order thinking skills and problem solving skills, which distinguishes it from past statewide assessment programs. The past programs (Texas Assessment of Basic Skills [TABS], used from 1979-80 through 1984-85, and the Texas Educational Assessment of Minimum Skills [TEAMS] used from 1984-85 through 1989-90) both measured minimum basic competencies in reading, writing, and mathematics.

Initially the TABS results were to be used for diagnosing individual students' areas of mastery and non-mastery of essential curriculum elements, so that instruction could be adjusted to meet their academic needs. Examining students' mastery of objectives in aggregate also could be used to help identify programmatic areas of instruction that were weak or strong, or that needed greater emphasis in coming years. The testing program's purposes changed over time from being primarily diagnostic to being used for accountability. Accountability first was applied to the individual students: they were required to pass the exit-level examination to graduate. At other grade levels, students were being formally identified as at risk if they failed any portion of the tests, and districts were (and continue to be) required to provide appropriate interventions to students at all levels who fail any portion of the examinations. By 1993, however, aggregate test data were being used to hold entire campuses and school districts accountable for student learning.

In addition to moving from basic to higher-order skills assessment, new tests are being phased into the program. Science and social studies tests were added to the original program of tests in reading, writing, and mathematics. New tests also include end-of-course examinations for students in secondary grades who have completed Algebra I, Biology I, English II, and United States history (TEC §39.023 (c), (i)). Under new legislation, the State Board of Education (SBOE) is now required to administer the Algebra I and Biology I examinations beginning in 1995-96 to students in Grades

7 - 12 who have completed these courses (the Biology I end-of-course examination was first benchmarked in 1994-95; the first regular administration of Algebra I was in 1995-96). The English II and United States history examinations must be developed and administered by 1998-99 under the new provisions in statute. Also in the future, students who have passed both Algebra I and English II, and either Biology I or United States history (when these examinations are developed and added into the testing program), may be exempted from taking the TAAS exit-level tests (TEC §39.025, 19 TAC §101.2).

Figure 4 summarizes changes in TAAS test administration from 1990-91 through 1994-95 as state legislation changed the grades tested. Also, administration of the tests was moved from fall to spring to improve timing of results for local evaluation of individual student performance and state evaluation of campus and district performance.

Even when used only for individual diagnostic purposes, testing program critics raised important issues with the testing program. First, concern was expressed for how well the tests' items corresponded to the state-adopted essential elements of instruction. Under any circumstance, the alignment of items on a test to the domain it is purported to measure is at the heart of validity in measurement. A second concern was that individual test items were not made public even after the tests were administered. Some practitioners felt it was hard to know exactly how to change instruction — or if change really was warranted — without seeing the items that students had been given. Recent legislation now requires that used test items and answer keys be available for public scrutiny after each administration of the test (TEC §39.023 (d)).

Local Performance Reporting and State Accreditation

The Academic Excellence Indicator System had its origins in 1984 with House Bill 72 (68th Texas Legislature, 6th Called Session), an omnibus legislative reform package responding to many of the concerns voiced in *A Nation at Risk*. HB 72 began the move toward an accountability system based primarily on whether or not Texas public school children were *learning*, rather than on whether districts were following rules, regulations, and sound educational practices. Beginning in 1984-85, districts were required to publish and make available to the public an annual performance report that evaluated the quality of education in the district (TEC §21.258, 1986). The report, which included performance data such as test scores and dropout and attendance rates, combined data provided by TEA with information available locally. The data provided by TEA included aggregations of campus and district data

Figure 4. TAAS Testing Schedule from 1990-91 to 1995-96

Grade	1990-91 School Year: Fall 1990	1991-92 School Year: Fall 1991	1992-93 School Year: Fall 1992	1992-93 School Year: Spring 1993	1993-94 School Year: Spring 1994	1994-95 School Year: Spring 1995	1995-96 School Year: Spring 1996
3	R, R(S), W, M, M(S)	R, R(S), W, M, M(S)	R, R(S), W, M, M(S)		R, M	R, M	R, R(S), M, M(S)
4				R, W, M	R, W, M, Sc, So	R, W, M	R, R(S), W, M, M(S)
5	R, W, M	R, W, M			R, M	R, M	R, M
6					R, M	R, M	R, M
7	R, W, M	R, W, M	R, W, M		R, M	R, M	R, M
8				R, W, M	R, W, M, Sc, So	R, W, M, Sc, So	R, W, M, Sc, So
9	R, W, M	R, W, M					
10				R, W, M	R, W, M, Sc, So	R, W, M	R, W, M
11	R, W, M	R, W, M	R, W, M	(R, W, M)*	(R, W, M)*	(R, W, M)*	(R, W, M)*

R = Reading; W = Writing; M = Mathematics; Sc = Science; So = Social Studies;
R(S) = Spanish Reading; M(S) = Spanish Mathematics
* Exit Level Retesters

submitted in detail by districts, as well as state comparison data.

The annual performance report was not part of the state accreditation system. Districts were still accredited based on information gathered during site visits conducted every 3 years. Accreditation standards included local goals and objectives, compliance with statutory requirements, performance on indicators of student learning, effectiveness of programs for special populations, and teacher and administrator training (TEC §21.753-21.754, 1986).

A 1989 amendment to the laws covering district accreditation required the State Board of Education to adopt a set of campus performance indicators (TEC §21.7531, 1989). The choice of indicators was to reflect recommendations of an advisory committee and comments of the Legislative Education Board (TEC §21.753, 1989). Also under the new law, districts would receive accreditation visits less often, but would be accredited annually based on the performance indicators (TEC §21.754, 1989).

An amendment to the annual performance report law in 1990 expanded that report to include a comparison of the performance of each campus with that of campuses with similar demographics, and comparison of each district to the state and to expected performance gain given district demographics (TEC §21.258, 1990).

In 1990-91, the first AEIS campus, district, and state reports were produced. These were a vehicle for disseminating results on the campus and district performance indicators adopted by the SBOE, and they incorporated the expanded campus comparison data that districts needed to produce their annual performance reports. Every district's board of trustees is required to disseminate information concerning performance on AEIS indicators as a part of their annual performance reporting requirement. These include (a) publishing an annual report describing the district's educational performance on the AEIS indicators, (b) holding a public hearing for public discussion of the report, and (c) otherwise widely disseminating the report within the district.

Integrated Accountability System

In 1991-92 the first performance-based accountability system was implemented at TEA. This system focused solely on student TAAS performance. The desk audit of district- or campus-level TAAS results could serve as a trigger for accreditation team visits to a school or district. The successor of the desk audit system, a performance indicators system based on TAAS performance and other indicators, was first used to determine district accreditation status in 1993. This continued to be distinct from the development of indicators and standards for the AEIS, which was taking a somewhat more comprehensive view of schools and districts.

With the adoption of Chapter 35 of the *Texas Education Code* in 1993, significant changes were made in law concerning district accreditation, that involved the Academic Excellence Indicator System and other components of the integrated accountability system. This statute required that the accountability system be performance-based, and among other provisions, it required the state to (a) provide reliable measurement of student performance, (b) relate student academic outcomes to state standards, and (c) devise a method for informing the public of the schools' results. Statute further required the SBOE and commissioner of education to use criterion-referenced testing to measure student achievement in Grades 3 through 8 and at exit level. It also required the use of AEIS data to accredit districts and rate campuses, and to compare information annually as a means of evaluating change in academic achievement. The performance indicators to be used for these purposes were designated in the statute. Finally, school report cards were developed as the vehicle for informing parents about school performance.

Between 1992-93 and 1993-94, the Texas Education Agency worked closely with educators, policymakers, and others to develop the blueprint for the integrated accountability system. Focus groups provided feedback on issues that arose following release of the 1993 ratings that were not based on the full complement of AEIS data. Many of these issues dealt with application of a single accountability system to a state as diverse as Texas, resulting in campuses and districts being rated in a

uniform manner, even though in some cases only small numbers of students or no students in grades covered by the statewide testing program were on the campus. Other issues centered on administration of the accountability system, per se, such as timing of release of the ratings. By 1994, Texas school districts' accreditation status was based on AEIS data using published decision-making rules for the first time. Data from the AEIS now are also used to generate campus accountability ratings, status of eligibility for rewards, performance reports to districts and campuses, and school report cards for distribution to parents.

General Principles of the Texas System

The AEIS system philosophy is based on eight guiding principles (TEA, 1995, pp. 1-2), which are described below. Each of these principles was considered carefully during the system's development, and each is revisited as the system is modified.

1. **Student Performance** — Above all else, the system's intent is to improve student performance. An accountability system with this in mind permits the quality of student learning to drive all other features.

2. **Recognition of Diversity** — To be as fair as possible, the system must recognize or take into account the great diversity among students and schools in the state to the extent possible.

3. **System Stability** — While no system can be immutable over time, system reliability is based upon there being reasonable time frames for measurement, data collection, planning, staff development, and reporting of results.

4. **Appropriate Consequences** — As noted earlier in this report, the distinction between a simple set of indicators and a performance monitoring system has to do with the attachment of consequences to predetermined values, or standards, on the set of indicators. The Texas system strives to set reasonable standards for adequacy. Those demonstrating high levels of performance and significant improvements in performance, in relation to the state's standards, are identified and publicly recognized. Those performing unacceptably in relation to the standards also are identified and given targeted assistance so that improvement can occur.

5. **Statutory Compliance** — The system must be legal. That is, it must fulfill all requirements set forth in statute.

6. **Local Program Flexibility** — The system places a premium upon results in terms of student learning. In return, districts and schools are to be accorded maximum flexibility in program design to meet students' needs in learning.

7. **Local Responsibility** — The state's system makes it incumbent upon school districts to develop and implement complementary, locally appropriate accountability systems.

8. **The Public's Right to Know** — True to the historical developments that led to the creation and application of educational indicator systems for accountability, the Texas system supports the public's right to know about levels of aggregate student performance in each school district and on each campus.

Performance Indicators

The SBOE and TEA expanded upon the ideas reflected in the research regarding performance indicators in considering the array of educational indicators to include in the Academic Excellence Indicator System. The agency set forth the following minimum requirements for a statistic to be included as an indicator in AEIS.

1. **It must generally be viewed as a measure of student/institutional excellence and equity.**

2. **It must be quantifiable.** For example, it must be reported in numbers that can be shown as a percentage or a count, such as the following:
   - How many are enrolled?
   - What percent of students passed the test?
   - What is the ratio of students to teachers?

3. **It must have a standardized definition.** For example, if student completion of advanced

courses is an indicator, then *every* district must use the same definition for advanced courses.

4. **It must be reliable.** That is, it must be measured in the same way in every district, and the same way from year to year. It is common to have slight definitional changes, but the indicator must be stable over time.

5. **It must be valid.** The indicator under consideration must be the type of measure that shows real change and that is not easily subject to distortion. For example, districts work hard to lower the dropout rate, a measure that is not easily altered in an artificial manner. For this reason, annual dropout rates are a fairly valid indicator. However, if lowered expulsion rates become an indicator and an important goal, schools might choose to no longer expel students, even in situations where it is the only solution to a difficult situation. This would artificially lower the expulsion rate and make the school performance look better, even though the school climate, which expulsion rates indirectly gauge, is getting worse.

6. **It must be reported to the agency in a standardized format.** Because data collected for every student in every school in the state create, by definition, a large data base, indicators must be collected through the Public Education Information Management System (PEIMS, the state's major vehicle for data collection) or through a contractor (such as a testing company) and be provided to the agency in a format compatible with large-scale data processing.

On the advice of the Academic Excellence Indicator Advisory Committee, the SBOE initially adopted 10 performance indicators for Texas public schools at their November 1990 meeting (SBOE, 1990). Figure 5 on page 16 shows the progression from the original 10 indicators to the current set. Changes in indicators over time generally reflect (a) changes in data availability that affected definitions and/or computations, such as in attendance rates and TAAS performance; (b) input from practitioners, other stakeholders, and changed requirements in law; and (c) other refinements, improvements, or in those cases where improvements were not forthcoming, deletions of indicators. For example, cumulative attendance data did not become available for use in AEIS until 1993-94. Similarly in 1993-94, changes were made in definitions and/or methods used to examine student participation in advanced courses and dropout rates. Graduation rates and counts of graduates with advanced seals were dropped from the system in 1993-94 because graduation rates are the complementary measure to dropout rates, which were already in the AEIS. When the *Texas Education Code* was rewritten in 1995, a new indicator was added and two other indicator definitions were clarified or updated through the new code. Statute also allows the SBOE to adopt other indicators for reporting but maintains the requirement that a specified set of indicators be used to rate districts and evaluate schools.

Treatment of Indicators in AEIS Reports

Since 1994, the system has distinguished between base indicators, additional indicators, and report-only indicators. Base indicators are those components of AEIS that *directly* determine district accreditation status and campus performance ratings. Three base indicators were used for determining campus and district ratings for the 1994 and the 1995 accountability systems: (a) TAAS performance in reading, writing, and mathematics; (b) annual dropout rate for Grades 7-12; and, (c) attendance rate.

In contrast, additional indicators do not directly determine accreditation status because they reflect performance beyond that minimally required to receive a high school diploma, such as graduation under the recommended high school program. Although not used to directly determine ratings, standards for exemplary and recognized performance on additional indicators are set and districts and campuses receive acknowledgment for meeting these performance standards. Participation and performance on college admissions tests were the only additional indicators in the AEIS in 1993-94 and 1994-95.

When a new base or additional indicator is to be added into the system, the indicator is phased in over a 3-year period. In the first year data are collected and reported to establish benchmarks. For the next 2 years the data are reported back to

Figure 5. AEIS Performance Indicators from 1990-91 to 1995-96

1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
% Passing TAAS (Fall; grades 3, 5, 7, 9, 11; Mathematics, Reading, Writing)	% Passing TAAS (Fall; grades 3, 5, 7, 9, 11; Mathematics, Reading, Writing)	% Passing TAAS (Fall; grades 3, 5, 7, 9, 11; Mathematics, Reading, Writing)	% Passing TAAS (Spring; grades 4, 8, 10, prior year, Mathematics, Reading, Writing; grades 3-8, 10, current year, Mathematics, Reading, Writing at applicable grades)	% Passing TAAS (Spring; grades 3-8, 10; current/prior year; Mathematics, Reading, Writing at applicable grades)	% Passing TAAS (Spring; grades 3-8, 10; current/prior year; Mathematics, Reading, Writing at applicable grades)
Attendance	Attendance (from 2nd 6 weeks) (current/prior year)	Attendance (from 2nd 6 weeks) (prior year)	Attendance (from entire school year) (current year)	Attendance (from entire school year) (current/prior year)	Attendance (from entire school year) (current/prior year)
		Retention Rate			
Annual dropout rate	Annual dropout rate (current/prior year)	Annual dropout rate (current/prior year)	Annual dropout rate (current year, 2 methods; prior year, method 1)	Annual dropout rate (current/prior year, method 2)	Annual dropout rate (current/prior year, method 2)
Average college admissions test performance [SAT (current/prior year), ACT (current year)]	Average college admissions test performance (current/prior year)	Average college admissions test performance (current/prior year)	Average college admissions test performance (current/prior year)	Average college admissions test performance (current/prior year)	Average college admissions test performance (current/prior year)
% At or above criterion on college admissions tests [SAT (current/prior year), ACT (current year)]	% At or above criterion on college admissions tests (current/prior year)	% At or above criterion on college admissions tests (current/prior year)	% At or above criterion on college admissions tests (current/prior year)	% At or above criterion on college admissions tests (current/prior year)	% At or above criterion on college admissions tests (current/prior year)
% Tested on college admissions tests [SAT (current/prior year), ACT (current year)]	% Tested on college admissions tests (current/prior year)	% Tested on college admissions tests (current/prior year)	% Tested on college admissions tests (current/prior year)	% Tested on college admissions tests (current/prior year)	% Tested on college admissions tests (current/prior year)
% Passing TASP		College prepared (based on TAAS/TASP equivalency)	TAAS/TASP equivalency (benchmark year)	TAAS/TASP equivalency (report-only stage of phase-in)	TAAS/TASP equivalency (report-only stage of phase-in)
					Recommended HS program (benchmark stage of phase-in)
% Enrolled in advanced courses	% Enrolled in advanced courses (current/prior year)	% Enrolled in advanced courses (current/prior year)	% Completed advanced courses (current year)	% Completed advanced courses (current/prior year)	% Completed advanced courses (current/prior year)
				% Passing TAAS Science, Social Studies (grade 8; benchmark stage of phase-in)	% Passing TAAS Science, Social Studies (grade 8; report-only stage of phase-in)
% Passing Spanish TAAS (Fall; grade 3)	% Passing Spanish TAAS (Fall; grade 3) (current/prior year)	% Passing Spanish TAAS (Fall; grade 3) (current/prior year)			% Passing Spanish TAAS in Reading, Mathematics * (grades 3, 4; benchmark stage of phase-in)
				% Exempt from TAAS	% Exempt from TAAS
Expected graduation rate	Actual graduation rate	Actual graduation rate (current/prior year)			
Expected % grads with advanced seal	Actual % grads with advanced seal	Actual % grads with advanced seal			
				% Taking end-of-course exams (HS) Biology I	% Taking end-of-course exams (HS) Biology I Algebra I

Base

Additional

Report Only

* Final decisions regarding this indicator's type (base, additional, or report only) had not been made when this report was printed.

districts and schools to provide opportunities for familiarization with the indicator, for refinements that might need to occur, and for advance local planning. During this report period accountability standards are set. After the third year, the base indicator becomes operative in contributing to the determination of accountability and acknowledgments. TAAS/TASP equivalency (percent of graduates who attain TAAS scores equivalent to a passing score on the Texas Academic Skills Program test, which is administered to college freshmen) is currently being phased in and benchmark data for the recommended high school program will be reported in 1995-96.

Report-only indicators are other campus and district performance measures that are not statutorily required for use in accrediting districts and rating campuses. These include indicators specified in law and other indicators adopted by the SBOE. Report-only indicators in statute are TAAS exemptions (students in special education programs and students of limited English proficiency who are exempt from the statewide testing program) and participation rates for end-of-course examinations. Biology I end-of-course examination participation rates were reported in 1994-95; Algebra I will be reported in 1995-96. The first report-only indicator adopted by the SBOE was the percentage of students completing advanced academic courses, which has been reported since 1993-94, replacing percentage of students *taking* advanced academic courses.

Standard AEIS Reports

District and campus AEIS reports present profile data items as well as performance on indicators. Profile items are student, staff, and financial information that provide background for the performance results. The AEIS reports provide district and campus, campus comparison group, region, and state performance results for use in the district-produced annual performance report. They also provide prior year performance for comparison purposes.

New indicators, those just being phased in, generally are included in the AEIS report for 2 years before being used to determine district accreditation status and campus ratings. The AEIS report also includes the district accreditation status and campus rating. Beginning in the 1992-93 school year, new displays of data were added to the reports to facilitate their use in local school improvement efforts. Bar charts of student performance on TAAS, dropout rate, and results of college admissions tests (SAT and ACT) were added. Superintendents received district level graphs and each principal received graphs for his or her campus.

The Texas Education Agency also provided each school with a report card for the first time in 1993-94, that it, in turn, must provide to each student's family. The school report card is a family-oriented report of a subset of the AEIS information. Initially statute specified a subset of the indicators to be included in the campus report card sent to parents of schoolchildren; with readoption of the *Texas Education Code* in 1995 the commissioner of education was given responsibility for selecting a subset of indicators to be included on the agency-prepared school report card.

Standards and Accountability
Rating Categories

A rating scale with four levels for districts and four levels for campuses was developed in the summer of 1993. This rating system was integrated with the AEIS in 1993-94. The labels used for 1996 are "exemplary" and "recognized" for either districts or campuses, "academically acceptable" for districts or "acceptable" for campuses, and "academically unacceptable" for districts or "low-performing" for campuses. Standards for performance on the indicators were set for all levels within the ratings. The standards are scheduled for increases through the year 2000, so that districts and schools can anticipate the performance needed to earn ratings at each level and prepare to meet the high standards represented by the system while they are being phased in.

The first year the AEIS was used to accredit districts and rate campuses, districts and campuses had to meet a maximum of three performance standards to be rated "acceptable." These standards were based on TAAS performance of the total student body. As the system is fully implemented, student diversity is addressed through

meeting standards for each student group (African American, Hispanic, White, and economically disadvantaged students) as well as total students. Initially, campuses and districts had to meet predetermined performance standards for all students and for each student group to qualify for exemplary or recognized status only; the standards for student groups did not apply to the acceptable or lower ratings. The second year, performance standards were applied to the results for the student groups at all levels of the system, so that district accreditation status and campus performance ratings would be more reflective of effectiveness with particular groups of students on campus, rather than just campus or district performance in aggregate.

Interpreting Performance on AEIS Indicators

Absolute performance and relative gains. When fully implemented, the state accountability system will be two dimensional, measuring absolute performance against standards on each of the indicators as well as relative gains in performance. Statute mandates that performance be compared to required improvement and comparable improvement. Required improvement is defined as the progress necessary for the campus or district to meet state standards within the system as defined by the commissioner of education. This is operationalized as sufficient improvement from the prior year to meet the standards for the next highest rating level within 5 years. Required improvement is a component of the accountability system but is not computed for all measures and not required at all rating levels. The operational definition of comparable improvement is still in the development stage, but its purpose is to provide a measure of campus improvement in relation to campuses with similar student demographics as well as comparison to state improvement.

Campus and district comparison groups. Through 1995, five demographic characteristics were used to compute a weighted composite index by which schools could be grouped for peer comparison on the indicators. Within each of four campus types (elementary, middle, high, and combined), comparison groups were determined by (1) percent of economically disadvantaged students, (2) percent of minority students, (3) district wealth, (4) percent of students with limited English proficiency, and (5) student mobility. Each school had a unique comparison group of 100 schools. Indicator data have been reported for the comparison group on each campus AEIS report. Comparison groups are not currently used to determine campus performance ratings.

Through 1993, each district also was assigned to a group based on its enrollment, wealth, and percentage of economically disadvantaged students. The district grouping practice was deleted from statute and its use in the AEIS discontinued because the variation in district characteristics resulted in comparison groups that were too dissimilar to be useful.

New grouping strategies are being examined in the context of determining how best to implement measures of comparable improvement as part of the rating system. In 1996, comparison groups may be determined by a methodology refined for the purposes of computing comparable performance.

The Texas Learning Index (TLI). A new feature of the state assessment program is the Texas Learning Index, or TLI. The TLI is a recently developed statistic that allows for comparison of student achievement both across years within grade levels, and across grade levels within a subject area on TAAS tests. The TLI was computed for the first time in the 1993-94 school year to report results in reading and mathematics at Grades 3-8 and at the exit level. The TLI ranges from 0-110 and is preceded by a digit representing the grade level. The minimum expectations score of 70 represents the same amount of achievement at each grade tested and at each administration. Thus, the TLI score can be used to assess learning progress within a subject area, across grades. For example, if a student earned a TLI of 3-71 in Grade 3 and also earned a TLI of 4-71 in Grade 4, the student gained, on the average, the same as all other Texas students taking the test did between Grades 3 and 4, and is in about the same position relative to all Texas fourth graders who took the test as the student was relative to all Texas third graders who took the test. For more information about how the TLI may be used, see Figure 6. Possible uses of the TLI in AEIS, including its incorporation into relative gain or comparable improvement standards, are being explored.

Prior performance and aggregate performance. The AEIS reports include each school's performance on the indicators for the most current school year for which data are available and for the year preceding the most current year, so that local districts and schools can gauge where the greatest annual changes occurred. Additionally, regional and statewide results are furnished, so that local districts and schools can examine how they performed relative to these larger units, whose data typically are more stable because of the greater numbers involved.

Accommodating Special Circumstances

In 1995, Texas had over 1,000 school districts ranging in size from fewer than 5 to over 200,000 students. Over 6,000 campuses with 80 different grade configurations range in size from 1 to almost 4,000 students. Accommodating the diversity of Texas public schools increases the complexity of the accountability system, but also increases the fairness of the ratings ultimately assigned.

In the process of setting standards for the purpose of awarding accountability ratings to campuses and districts, a number of special circumstances were identified that required special treatment. These special cases included (a) alternative campuses, (b) campuses or districts that had very small numbers of students, (c) campuses that were configured in such a manner that no grade levels were tested with TAAS, (d) a growing number of campuses with alternative calendars because of year-round schools, and (e) districts with high student mobility.

Alternative campuses have been established to provide specialized programs for dropouts, students at risk of school failure or dropping out, pregnant and parenting students, and students who have been removed from the regular campus for disciplinary reasons. These campuses may serve one district or multiple districts through cooperative arrangements. Because the nature of the population attending alternative campuses by definition works against the ratings such campuses can earn in the accountability system, these schools are given two options. They may opt to be assessed either under the standard criteria for accountability ratings, or under different criteria developed specifically for

Figure 6. How the Texas Learning Index (TLI) Can and Cannot Be Used

The TLI may be used to:

- Determine whether or not a student met minimum expectations
- Compare student performance over time within a subject area
- Compare group performance over time within a subject area
- Compare group performance across grades within a subject area
- Determine whether a student is in line to meet the exit-level passing standard if current progress continues
- Provide a source of information for use in evaluating instruction or programs requiring average-score or year-to-year comparisons

The TLI may *not* be used to:

- Interpret a percentage of items answered correctly
- Infer "months" of growth in academic performance, i.e., be treated as a grade equivalent score
- Interpret a classroom-type grade
- Compare performance across different subject areas
- Guarantee a student will meet the exit-level standard
- Serve as the sole criterion for placing or evaluating students who score at the extreme ends of the distribution

alternative education schools. Under the optional system, the alternative campuses participate in selecting the indicators on which they will be rated. The campuses must choose at least one academic achievement indicator that is appropriate to the student population in attendance, as well as additional indicators upon which they can be rated.

There are two types of small numbers situations that present a special challenge to the accountability system. One is small numbers of total students on the campus or district. The second is small numbers of students within one of the student groups. If a district or campus has fewer than 30 total students, special analysis procedures are applied to individually rate the district or campus based on an examination of overall performance history. For larger campuses and districts, each student group must represent a minimum number of students before performance standards on the base indicators apply to that group for the ratings. For all indicators, data based on very small numbers of students are masked in the AEIS reports.

Those schools where no grade levels are tested with TAAS (for example, an early childhood campus housing prekindergarten, kindergarten, and Grade 1 only) are paired with the campuses receiving these students when they move to the next grade level. That is, the TAAS data of the receiving campus are applied to the sending campus to fill in for the otherwise missing values. Campuses where the grades served are kindergarten and below are not rated, nor are campuses serving only students in special education programs.

In 1994-95, there were 134 campuses serving students in year-round education programs in 34 Texas school districts. Flexibility was built into the TAAS testing schedules for year-round campuses, as well as into the reporting of accountability ratings for these schools. To compensate for differing days of instruction, alternate TAAS administration dates were established for campuses on year-round calendars, allowing them to test at the end of the school years as do campuses on traditional schedules. Flexibility in the testing calendar necessitates flexibility in the determination of accountability ratings. Ratings for most districts and campuses are released on August 1 before the beginning of the next school year. Since test results from the alternate TAAS administrations are not yet available, year-round campuses, and districts with more than 10 percent of their students on year-round campuses, receive ratings of "delayed" on August 1. Their final ratings, using the labels specified in law, are released on September 1.

Districts have limited opportunity to influence the learning of students who move into the district late in the school year. For this reason, TAAS passing rates used in the AEIS are computed only for that subset of students who are in the district by October of the school year. This avoids placing districts with high in-mobility at an unfair disadvantage, by holding all districts and campuses accountable for only those students who were enrolled for most of the school year in each district.

Rewards for Performance: The Texas Successful Schools Award System

From 1989-90 through 1994-95, Texas provided monetary awards to campuses with students demonstrating substantial gain in academic performance. The school incentive award system was introduced as the Governor's Educational Excellence Awards Committee in the 1989-90 school year (TEC §§34.001 - 34.009, 1989). Two years later the program was moved to the Texas Education Agency as the Texas Successful Schools Award System, or TSSAS (TEC §§34.001 - 34.009, 1991). The notion of rewarding schools for student academic improvement was retained from the previous program; however, TSSAS was created to recognize and reward schools that exhibited the greatest progress in achieving state educational goals. The total amount awarded ranged from a high of $20 million in 1992-93 to a low of $5 million in 1993-94 and 1994-95. Awards were given for high performance to schools receiving exemplary and recognized accountability ratings, and for performance gains to schools receiving acceptable accountability ratings and meeting additional significant gain criteria. The criteria covered absolute gains, standardized gains in relation to a comparison of similar schools, and minimum performance. In November 1995, over 1,600 schools in the state received cash awards for their 1994-95 performance.

Non-monitory acknowledgments also were given to schools showing exemplary and recognized performance on additional indicators until 1994-95. The awards system is an integral part of the accountability system. As such, decisions related to small numbers, special analysis, and campus pairing were applied to the TSSAS award determinations.

With readoption of the *Texas Education Code* in 1995, the TSSAS program was preserved in law (TEC §39.091 - §39.096) but no state funds were appropriated to it. However, funds were appropriated to a new principal performance incentive system (TEC §21.357). Until September 1, 1996, the commissioner of education will work with seven exemplary principals from across the state to develop the system by which these cash incentives will be awarded. This program represents a critical contrast to the TSSAS system, in that awards of up to $5,000 may be given to the *individuals* for their school's results, as opposed to being given to the schools.

Status of the Integrated Accountability System

Several perspectives can be used to examine the quality, impact, or utility of the Texas integrated accountability system. Criteria for quality identified in the literature provide absolute standards for comparison. A recent survey of all 50 state departments of education (Glascock et al., 1995) provides a basis for relative comparison of Texas with the nation and with selected states similar in size and demographics. A 1994 external evaluation of the Texas accountability system focused on specific issues that have been debated since the inception of the system. Each of these vantage points helps illuminate the overall status of the Texas integrated accountability system based on the AEIS.

Comparison to Accountability Systems in Other States

Common Classes of Data

States vary in their selection and use of educational indicators. Glascock et al. (1995) identified the following four classes of data commonly included in indicator systems, listed below in their order of frequency.

1. **test results,** including achievement tests, competency tests, SAT, ACT, NAEP, and other related examinations

2. **school demographic data,** including such information as student/teacher ethnicity, student enrollment, and school identification data

3. **financial information,** including per-pupil expenditures, average teacher salary, and district wealth

4. **social/behavioral indicators,** such as dropout rates, suspensions, and expulsions

The integrated accountability system used in Texas is based upon AEIS indicators; AEIS reports include information relating to each of the above four classes of data.

Level of Reporting

Thirty-four of the 50 states have established formal performance standards in public education (Hudson & Mayo, 1996). Of the 39 states that produce formal accountability reports, 44 percent produce a school level report, 77 percent produce a district level report, and 74 percent produce a state report (Glascock et al., 1995). Only 31 percent of states produce reports at all three levels; Texas is among them. In addition to reporting indicator data, Texas uses information from the AEIS to accredit school districts.

Summary of Other Key Characteristics

California, Florida, New York, and Tennessee were selected for a more in-depth comparison with the Texas performance indicator system. Like Texas, all four have been among the leaders in development of indicator systems in American public education. Also, except for Tennessee, each of the four has a large population and is diverse ethnically and in language bases. A chart summarizing the key characteristics of each state's system is provided in Figure 7 on the next page.

The Texas system is characterized in Figure 7 as (a) emphasizing results rather than processes, (b) increasing graduation requirements, and (c) establishing or increasing teacher standards. Of the four comparison states, only the Tennessee system reflects all three characteristics; the California system does not reflect any of the three characteristics. All five states produce school-level

Figure 7. Summary of Indicator System Characteristics in California, Florida, New York, Tennessee, and Texas

Characteristics	California	Florida	New York	Tennessee	Texas
Emphasis on results rather than processes		X		X	X
Increasing graduation requirements			X	X	X
Establishing or increasing teacher standards			X	X	X
Level of Reporting: School District State	X	X	X X X	X X X	X X X
Classes of Indicators					
Test results (various standardized achievement tests, as well as SAT/ACT, NAEP, etc.)	X	X	X	X	X
Test data by student groups (gender, ethnicity, English language fluency, specially funded programs)	X			X	X
Course work data	X				X
Demographics (enrollment, race, mobility, number of faculty, school identifiers)	X	X	X	X	X
Financial information (per-pupil expenditures, district wealth, average teacher salary, sources of revenue)	X	X	X		X
Social indicators (dropouts, suspensions and expulsions, school climate, parental involvement)	X	X	X		X
Post-graduation activities (graduation rates, college readiness, college-bound)	X	X	X		X

Note: Table adapted from Glascock et al. (1995). *A National Survey of All Fifty State Departments of Education Comparing Educational Indicators Reports and Data Verification Techniques.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

reports; Texas, New York and Tennessee also produce district and state reports.

All five of the states' indicator systems include test results and demographics. Only the Texas and California systems also include all of the following five classes of indicators: test data by student groups, course work data, financial information, and post-graduation activities.

It should be noted that the Texas system has survived intact longer than the systems in three of the four contrasting states. Additional details about the indicator systems in California, Florida, New York, and Tennessee are provided in Appendix A.

Comparison to Criteria in Literature

The Texas integrated accountability system exemplifies many of the criteria associated with a quality indicator system in published literature, and system modifications strive to incorporate additional quality features over time. At the same time, many issues central to the indicator system continue to be debated as it is evaluated each year. Following is a

critique of the AEIS and Texas integrated accountability system in relation to each of the broad quality criteria of (a) articulation of system purposes, (b) system feasibility, (c) validity, (d) articulation of responsibilities, and (e) utility.

Articulation of System Purposes

The guiding principles of the AEIS, together with the published *Accountability Manuals* (TEA, 1994, 1995, 1996), articulate the purpose of the system to hold schools accountable for results, while promoting overall systemic improvement. Further, statute (TEC §§39.051, 39.072 - 39.073) specifies that the AEIS indicators will serve as the basis for district accreditation status and campus accountability ratings.

System Feasibility

System feasibility is dependent upon such varied factors as stakeholder consensus; standard, reliable, valid data reported in a timely manner; and performance indicators that are quantifiable yet measure enduring features of education. The indicator system also must be in compliance with the law to be feasible. Each of these can be examined in turn.

As noted earlier, between 1992-93 and 1993-94, the Texas Education Agency worked closely with educators, policymakers, and other stakeholders to develop the blueprint of the integrated accountability system. The success of this consensus-building approach led to reliance on focus groups to annually evaluate the system and any changes to it that have been planned. The practitioners in these groups assist in refining the system and identify issues associated with the system and its application, such as how small numbers and other special circumstances are to be handled. In addition, a survey — distributed in both English and Spanish — helped to obtain large-scale stakeholder input from parents following release of the first school report cards.

All indicators in the AEIS are, by definition, quantitative in nature. For the most part, these reflect enduring features of schooling, such as student, campus and district characteristics; student performance on tests; student attendance; and dropout rates.

Probably one of the main strengths of the Texas system is that the resources and infrastructure needed for collecting and maintaining virtually all of the data used in the AEIS were already in place before implementation of the indicator system. That is, PEIMS data were being collected using standard definitions and procedures as early as 1987; and the state's student assessment programs, though subject to changes, were initiated in the early 1980's. The PEIMS data provide, through a single data submission process, the information needed at the state level for distribution of state education funding, administration of state and federal programs, and implementation of the integrated accountability system. Because the integrated accountability system was itself built upon an existing testing program, a single testing program serves multiple purposes, helping keep testing to a minimum. The TAAS is used for determination of students in need of accelerated instruction; determination of student eligibility for high school graduation; and, partial determination of school accountability ratings and district accreditation status. The result is that the additional resources needed to implement AEIS and the integrated accountability system in the 1990's were kept to a minimum, compared to what many other states face when seeking to implement new indicator systems for performance monitoring purposes.

Performance indicators are computed at the state level for all districts and campuses using a common methodology. The same performance standards for each accountability rating level apply to all student groups (TEA *Accountability Manuals,* 1994, 1995, 1996). All test score data are collected in compliance with rigorous standardized procedures; the state testing program provides manuals and training each year in the administration and security procedures pertaining to TAAS. Finally, data tables are distributed to districts and schools in advance of the agency's announcement of accountability ratings. The data tables, along with the standard definitions, provide districts and campuses with the tools needed to compute their own ratings before receiving notification from the agency. To date, few districts or campuses have released their ratings before receiving notification from the state.

In many respects, again reflecting the pre-existing data collection infrastructure, indicator data for

AEIS are collected and reported with sufficient timeliness to be useful in decision making. However, the debate over currency of data, and timing of release of ratings and AEIS reports, resurfaces each year. District administrators generally desire having district accreditation and campus accountability ratings before the start of each school year, to enhance their capacity for planning program improvements. To accommodate an August 1 date for annual release of ratings, the AEIS campus and district reports, and school report cards, are all released later in the year.

The release of three separate reports, and the relatively late release of the school report card, are issues that are revisited each year. However, at this juncture campuses are limited to using AEIS reports for validation of campus improvement plans rather than as planning tools because of the reports' relatively late issue date, which is driven by the statewide testing program schedule, which in turn is generally set as late in the year as possible to provide maximum instructional time to students and teachers before the tests' administration. Use of prior year dropout data for the ratings also is revisited each year. To date, the increased burden for districts in moving up the dropout data collection cycle and reduced time for dropout recovery have outweighed the desire for more current dropout statistics in the accountability system. Although prior year attendance data are used in the ratings, campuses and districts have the option of appealing to use current year attendance data in computing their ratings by submitting attendance information that is not yet available at the state level. Over all of these issues, the compromises are, of necessity, struck between timeliness of what is reported, and accuracy and utility of results.

There is a high degree of system integrity built into the AEIS through careful planning and coordination efforts. The agency-prepared *Accountability Manuals* define the current year indicators and provide blueprints for the accountability system for the next five years, again permitting those internal and external to TEA to plan on a longer-term basis.

Last but perhaps most important is the statutory basis of the AEIS. The system is required in state statute, and its elements are in compliance with state laws. Those indicators that were adopted in statute before data were available for implementation are now being phased in as the required data become available. As noted earlier, in 1993 statutes related to local accountability, state accreditation of school districts, the Academic Excellence Indicator System, and the assessment program were brought together in the *Texas Education Code*. As a result, the components of the accountability system are integrated in law and the statewide student assessment program is an integral part of that system. Indicator systems in other states sometimes have ceased to exist when statutory changes to the assessment programs were made that could not be accommodated by or incorporated into the systems.

Validity

The AEIS and integrated accountability systems have a high degree of face validity, and acceptance of the system has been enhanced by this. First and most important, much of the system is mandated by law, giving it credibility through formal political sanction. Second, AEIS indicators (whether used in determining accreditation status and campus ratings or not) all fall into major classes of variables that have long been of interest in educational research and evaluation, and have often been found in the past to play important roles in understanding educational program effectiveness. Third, stakeholder involvement in refining the system has substantially promoted the sense of fairness associated with it, as has the ability of districts to replicate the rating process locally. Fourth, the two facts that (a) refinements have been made over time even when not required in statute, and (b) special provisions have been made for schools or districts with special circumstances — such as small numbers of students, student mobility, and status as a year-round or alternative campus — demonstrate the desire to make the system as fair or neutral as possible.

Related to this are the accountability system's acknowledgment and accommodation of diversity within the state's public education system. First, performance data are reported in AEIS by various student groups, including ethnic minority groups and those who are economically disadvantaged; and accountability standards include specific

examination of the performance of these student groups. Standards for student groups were phased in by applying them only for recognized and exemplary ratings and recognition through TSSAS the first year. Second, campus comparison groups are constructed on the basis of various demographic characteristics, so that each school can see how it fared in the system in relation to "like" schools. An index is computed to group campuses, based on a composite of demographic characteristics. As campus comparison groups are incorporated into a measure of comparable improvement as part of the rating system, it will be necessary to develop a new index that identifies campuses with greatest similarity on each of the variables included, rather than on a composite value. In a state as large and diverse as Texas, having this information can assist those at the local level to interpret and use their results.

Another crucial component to validity of the accountability system is the reliance upon valid student assessment procedures. Because TAAS data are at the heart of the accountability system, it is crucial that the TAAS testing program meets the most stringent professional standards for validity and reliability in measurement, as adopted by organizations concerned with educational research and measurement. To further strengthen external validity of the testing program, tests in additional subject areas are being phased in so that TAAS will be more comprehensive in its coverage of the curriculum.

The appeals process represents another quality check that the system incorporates, further enhancing replicability of results. Districts and campuses can appeal to have ratings changed due to errors in the data used or calculations made, or extenuating circumstances at the local level that resulted in a rating that does not accurately reflect the district or campus performance. Until this year all appeals were made after the highly publicized August 1 release of the ratings. This year appeals can be submitted as soon as the preliminary data tables are provided to districts, allowing resolution of early appeals before the release of the ratings. An Accountability Review Panel comprised of representatives of TEA, school districts, and business/ community interests, will be used for the first time this year to evaluate the claims in the appeals and prepare recommendations for the commissioner of education. The process for submitting appeals also has been more clearly delineated (*Accountability Manual*, TEA, 1996).

Finally, an array of system safeguards has been established since the inception of the system that is applied both before and after accountability ratings have been released each year. These safeguards scrutinize questionable data, such as low percentages of students on a campus taking the TAAS test, to resolve irregularities or concerns about accuracy. Districts' self-reported dropout data also are being examined as part of an agency analysis of school completion rates. This study will help illuminate quality of data management at the local level and in turn the level of confidence that may be placed in such data when interpreting them at broader levels.

Articulation of Responsibilities

State- and local-level responsibilities related to the Texas integrated accountability system are codified in statute (TEC §§39.051, 39.072 - 39.073). *Accountability Manuals* (TEA, 1994, 1995, 1996) provide more operational detail on how these responsibilities are executed. Locally, districts are required to publish and disseminate an annual performance report that includes indicator and descriptive information provided by TEA in the district and campus AEIS reports (TEC §39.053). Schools are required to address performance on AEIS indicators in annual campus improvement plans (TEC §11.253), and school performance on the indicators must be included in the campus principals' evaluations (TEC §21.354). In adopting the new *Texas Education Code* in 1995, it was the 74th Texas Legislature's intent to maintain or strengthen accountability while simultaneously providing school districts with greater autonomy and flexibility to develop locally appropriate programs to meet their learners' needs.

Local responsibility is one of the guiding principles of the integrated accountability system, as specified in the *Accountability Manuals* (TEA, 1994, 1995, 1996). In addition to complying with statutory requirements, districts are encouraged to implement local accountability systems that incorporate additional local indicators to address local priorities and local long-term planning needs. The AEIS and

integrated accountability system do not, nor were they intended to, fulfill all local-level needs for information about school performance or school improvement.

Utility

A first consideration in determining the utility of an indicator system is whether or not points of reference are built in for ease of interpretation. A number of points of reference for understanding performance on the AEIS indicators are built into the system. These include the printing of prior year data in the AEIS reports, so that yearly progress at the local school and district levels can be measured, and examining data for various student groups to better gauge performance with all learners on campus and in the district. The accountability standards for absolute performance and for required improvement also are built-in reference points. A method for determining comparable improvement is being developed now. Benchmark data for this measure will be published in 1996 AEIS reports, providing an additional point of reference for interpreting TAAS data.

The system also incorporates several tactics to generate reports that are easily understandable and are "customer friendly." For example, the AEIS reports have a nontechnical design to promote readability among those who do not necessarily have technical backgrounds. Also, explanatory materials accompany the reports, so that readers may refer to these as needed for clarification. Graphics were added to the AEIS reports in 1993-94 to further enhance their ease of interpretation. The first school report cards presented indicator information in graphic format. Concern about the cost to campuses to reproduce the school report card for all students' families led the Texas Education Agency to limit the length of the document in 1994-95. As a result, performance data were condensed into tabular format. Finally, although not an agency product, schools can purchase diskettes from private vendors that display both data and graphics on either DOS-based or Macintosh personal computers, again enhancing utility of the data at the local level.

The capacity to communicate performance results to audiences without technical backgrounds must be built into a system from the time when indicators are first developed and standards set. During development of the AEIS, consideration was — and continues to be — given to the trade-offs between the accuracy gained by using elegant or sophisticated statistical methods, and the increased difficulty for (a) the general public in understanding the results and (b) schools and districts in replicating the results. Such trade-offs are reconsidered each time system refinements are made and each time new components are added to the system.

Another functional way to examine systemic utility is to determine if rules for administering consequences or sanctions associated with performance are known in advance by all relevant parties. In the case of the Texas accountability system, much of this information is contained in statute. Awareness is further promoted through the agency's publication and distribution of accountability manuals each year since 1994. Every campus and school district in the state receives copies of the manuals, as do the regional education service centers. Agency staff also regularly make presentations at conferences, and at meetings of agency and education service center staff with district administrators, so that the agency staff can respond to particular questions as well as emphasize the main features of the accountability system. Finally, because both increases in standards and new indicators are phased in gradually, local schools can begin addressing their own performance well before sanctions are applied to the data. Knowledge of indicator data becomes its own motivator in this scenario, rather than imposing either an extrinsic or punitive approach to improvement.

Another way in which utility of the AEIS and integrated accountability system is extended is that it clearly serves the public's right to know about school performance. This is among the guiding principles of system development. The system is required in statute to make school report cards available to parents, and local performance reporting requirements include the provision that AEIS reports be made "widely available" to the general public (TEC §39.053). The AEIS data and accountability standards also are made available over the Internet. Finally, AEIS reports in general are considered public information, available upon request.

Because external circumstances and the context of public education are dynamic, indicator systems cannot preserve utility over time without some degree of system responsiveness. The AEIS and integrated accountability system accomplish this by planning for change, so that utility is maximized while disruption or lack of system continuity is minimized. System refinements have been based upon several factors, including changes in data availability, changed requirements in statute, and new developments in methodology. Balancing the need for responsiveness with concern over comparability from year to year is a continuing system challenge.

One last way to consider utility is in terms of whether the system maintains a longer-term perspective on improvement. AEIS and the integrated accountability system data are reported annually and so far have reflected only current and prior year indicator data. Interest in the use of longitudinal data in the indicator system has led to research on the possible use of a school completion rate, as a potential replacement for the annual dropout rate, as well as exploration of uses of the TLI. The STEPS project also will help bring a longer-term perspective to state-level use of AEIS data that may guide subsequent planning and improvement efforts.

Future Directions in Policy-Related Research

Texas now has the nation's most comprehensive public school accountability system (*Texas Public Schools Accountability: A Report Card on Implementation*, 1994). Starting in 1996, TEA will begin an ongoing analysis of statewide performance based on the AEIS. The Statewide Texas Educational Progress Study (STEPS) will portray Texas educational performance over time, focusing on Grades kindergarten, 4, 8, and 10. The project will integrate a wide array of data available at the agency, with the intent of building some longitudinal student-level views, to be supplemented by data collection from schools. The study will provide a baseline of data about students and educational programs that can be used to (a) examine changes in system performance in relation to policy changes, (b) analyze statewide trends in student demographics and performance, and (c) serve as a reference point for other studies. As standards on the indicators increase, it will become increasingly important to understand the combinations of contexts, resources, and educational processes that are most likely to foster growth for all student groups over time.

This study specifically will address issues surrounding the academic history and current academic status of students in kindergarten, 4th, 8th, and 10th grades. This information will be assessed by looking at a multi-year history of patterns of participation in special programs, TAAS performance, promotion/retention status, identification as at risk using state/local criteria, and other aspects of educational programs and organizations. The study will strive to address the question of which patterns or trends distinguish successful students and schools from those who are less successful using multiple statistical methodologies, in an effort to identify critical information for both policy makers and practitioners who are concerned with improving school effectiveness. Specifically, use of multivariate analyses including hierarchical linear models should enhance understanding of the relationships between 1) contextual factors, such as district size and wealth; 2) system inputs, such as resources and student groups; 3) educational processes, such as academic calendars and student attendance; and 4) a variety of results currently reported in the AEIS and used for accountability purposes, such as student performance on TAAS or dropout rates.

References

Bryk, A. S., & Hermanson, K. L. (1992). Educational indicator systems: Observations on their structure, interpretations, and use. *Review of Research in Education,* 19, 451-484.

Carnegie Forum on Education and the Economy. (1986). *A Nation Prepared: Teachers for the 21st Century.* New York: Carnegie Forum on Education and the Economy, Report of the Task Force on Teaching as a Profession.

Center for Policy Research in Education. (1987). *Improving Education with Locally Developed Indicators.* New Brunswick, NJ: Rutgers University, Center for Policy Research in Education.

Coleman, J. S. (1966). *Equality of Educational Opportunity.* Washington, D.C.: Office of Education, U.S. Department of Health, Education and Welfare.

David, J. L. (1988). Aid or threat to improvement? *Phi Delta Kappan,* 69(7), 499-502.

Glascock, C. G., Franklin, B. J., Hutsell, W. W., & Byram, G. H. (1995, April). *A National Survey of All Fifty State Departments of Education Comparing Educational Indicators Reports and Data Verification Techniques.* Paper presented at American Education Research Association Annual Conference, San Francisco, CA.

Hudson, R., & Mayo, J. D. (1996, February). *State assessments throughout the United States: Who's doing what?* Presentation at the 10th Annual Texas Assessment Conference, Austin, TX.

Legislative Budget Board. (1994). *Texas Public School Accountability: A Report Card on Implementation of the System.* Austin, TX: Author.

Massell, D., Fuhrman, S., Kirst, M., Odden, A., Wohlstetter, R., & Yee, G. (1994). *Ten Years of State Education Reform, 1983-1993: Overview with Four Case Studies.* Washington, D.C.: Center for Policy Research in Education, Office of Educational Research and Improvement.

Murnane, R. J., & Pauly, E. W. (1988, March). Educational and economic indicators. *Phi Delta Kappan,* 69(7), 509-513.

National Center for Education Statistics. (1991). *Education Counts: An Indicator System to Monitor the Nation's Educational Health.* Washington, DC: National Center for Education Statistics, Special Study Panel on Education Indicators.

National Center for Education Statistics. (1991). *Trends in Academic Progress.* Washington, DC: Author.

National Council on Education Standards and Testing. (1992). *Raising Standards for American Education.* (A report to Congress, the Secretary of Education, the National Education Goals Panel, and the American People.) Washington, DC: Author.

Oakes, J. (1986). *Educational Indicators: A Guide for Policymakers.* New Brunswick, NJ: Rutgers University, Center for Policy Research in Education.

Pollitt, C. (1995). Justification by works or by faith? Evaluating the new public management. *Evaluation,* 1(2), 133-154.

Richards, C. E. (1988, March). Educational monitoring systems. *Phi Delta Kappan,* 69(7), 495-498.

Sanders, W. L. & Horn, S. P. (1995). Educational assessment reassessed: The usefulness of standardized and alternative measures of student achievement as indicators for the assessment of educational outcomes. *Educational Policy Analysis Archives,* 3(6), 1-18.

Selden, R. W. (1988, March). Missing data: A progress report from the states. *Phi Delta Kappan,* 69(7), 492-494.

Smith, M. S. (1988, March). Educational indicators. *Phi Delta Kappan,* 69(7), 487-491.

Southern Regional Education Board. (1992). *School Accountability Reports: Lessons Learned in SREB States.* Atlanta, GA: Author.

Southwest Educational Development Laboratory. (1989, November). Developing Useful Educational Indicator Systems. *Insights on Educational Policy and Practice.* Austin, TX: Author.

Tennessee State Board of Education. (1992). *Master Plan for Tennessee Schools 1993.* Nashville, TN: Author.

Texas Education Agency. (1994). *Accountability Manual.* Austin, TX: Author.

Texas Education Agency. (1995). *Accountability Manual* (Pub. No. GES 602 03). Austin, TX: Author.

Texas Education Agency. (1996). *Accountability Manual* (Pub. No. GE6 602 02). Austin, TX: Author.

U.S. Department of Education. (1991). *America 2000: An Education Strategy.* Washington, DC: Author.

U.S. Department of Education. (1983). *A Nation at Risk: The Imperative for Educational Reform.* Washington, DC: U.S. Department of Education, The National Commission on Excellence in Education.

U.S. Department of Labor. (1991). *What Work Requires of Schools: A SCANS Report for America 2000.* Washington, DC: U.S. Department of Labor, The Secretary's Commission on Achieving Necessary Skills.

U.S. Department of Labor. (1992). *Learning a Living: A SCANS Report for America 2000.* Washington, DC: U.S. Department of Labor, The Secretary's Commission on Achieving Necessary Skills.

Appendix A: Description of Indicator Systems in Four Selected States

Appendix A.
Description of Indicator Systems in Four Selected States

To represent the current status of developing indicator systems, four states are discussed: California, Florida, New York, and Tennessee. Except for Tennessee, each of the four has a large population and is diverse ethnically and in language bases. All four are among the leaders in development of indicator systems. For each state, a brief summary of the historical context for the indicator system, a description of the system, and information about the system's results and/or impact over time are provided.

California

Historical Context of the Indicator System

During the 1980's, California recognized four challenges:

1. establishing world-class standards to prepare students for highly skilled, technically-oriented jobs;
2. altering the flow of students from middle class families to private schools;
3. meeting the needs of increasing numbers of diverse, poor, and limited-English speaking youth; and,
4. maintaining a coherent infrastructure for a rapidly expanding student population within a shrinking financial base (Massell et al., 1994).

Changing demographics, a decline in the economy, and a broader base of political involvement led to greater support for local decision making and renewed interest in increased use of categorical funding. Approaches to reform in California to date have included (a) upgrading curriculum, (b) increasing professional standards for teachers and administrators, (c) extending "seat time," and (d) increasing academic graduation requirements. Philosophical changes have included (a) shifting from a focus on curriculum standards to more emphasis on integrating higher-order thinking skills into subject area instruction; and (b) allowing adaptation of curriculum standards for local implementation, depending on local needs and capacity (Massell et al., 1994).

Major changes also have taken place within the last 5 to 10 years in both the state's student testing programs and its reporting system for indicator data. For example, the California Assessment Program (CAP) tests initially covered reading and mathematics. The number of tests subsequently was expanded to include history/social science, science, and writing (Massell et al., 1994). As CAP tests were revised over time to be more closely aligned with curriculum objectives, they heightened the curriculum frameworks' role as a policy lever (Odden & Marsh, 1987). "Publication of test scores school by school, and district by district, in local newspapers and through real estate agents' multiple listings, made the tests 'high stakes' " (Massell et al., 1994, p. 74).

In 1991, the CAP was replaced with the California Learning Assessment System (CLAS). This program replaced the CAP's paper-and-pencil standardized testing with performance-based assessment at the student level. By 1994, however, California's governor vetoed funding for the CLAS. State legislation simultaneously provided districts with incentives for using published achievement tests, approved at the state level,

to track student performance in Grades 2-10. However, no requirement to use specific instruments was instated. According to staff there (Fattig, personal communication, 10/23/95), the state department of education will not go forth with a statewide assessment program again until new standards have been defined and approved.

Description of the Indicator System

At present, there is no structured accountability system maintained at the state level in California and no statewide student assessment program (Fattig, personal communication, 10/23/95).

Through 1994, classes of data reported in the California indicator system related to dropout rates, numbers of students college-bound, student course work, and test scores. Students' test score data were reported at the school level, grouped by:

- gender,
- parental education level,
- English language proficiency,
- mobility,
- ethnic background,
- reading for pleasure,
- time spent watching TV, and
- participation in specially funded programs (Glascock et al., 1995).

Since 1994, districts are being required by state law to prepare School Accountability Report Cards (SARC) that are updated annually to provide site-specific information to the local community. There are no sanctions attached to results contained in the SARC. Its format varies by district. The state model of SARC is not mandatory (the state department of education has no oversight authority), but at least once every 3 years local boards must compare their efforts to the contemporary version of the state model. Each SARC must include, but is not limited to, an assessment of the following school conditions.

- student achievement in and progress toward meeting reading, writing, arithmetic, and other academic goals
- progress toward reducing dropout rates
- estimated expenditures per student and types of services funded
- progress toward reducing class sizes and teaching loads
- any assignment of teachers outside their subject areas of competence
- quality and currency of textbooks and other instructional materials
- the availability of qualified personnel to provide counseling and other student support services
- availability of qualified substitute teachers
- safety, cleanliness, and adequacy of school facilities
- adequacy of teacher evaluations and opportunities for professional improvement
- classroom discipline and climate for learning
- teacher and staff training, and curriculum improvement programs
- quality of school instruction and leadership
- the degree to which students are prepared to enter the work force (applicable to high schools only)
- the total number of instructional minutes offered in the school year, separately stated for each grade level, as compared to the total number of instructional minutes per school year required by law, separately stated for each grade level
- the total number of minimum days in the school year, as specified in the state education code

If the school is in a district operating more than one school, each of the following items must also be included in the SARC:

- beginning, midrange, and highest annual teacher's salary;
- average school-site principal's annual salary;
- district superintendent's annual salary;
- the percentage of budget for teachers' salaries; and,
- the percentage of budget for administrative salaries.

Evidence of Results/Impact

Longitudinal data from the mid-1980s to 1994 indicated that some significant gains were made in student achievement and dropout rates, although changes in demographics, finances, and political context apparently combined to limit the effects of educational reform on student achievement. For example, the absolute number of students increased from 4,065,406 to 5, 107,145 during the decade between 1982 and 1991. Of the new students in the system, 25% came from households at or below poverty level. Simultaneously, the number of students identified as having limited English proficiency (LEP) doubled, and the percentage of students who were ethnic minorities increased to 56%. Despite improvement across a number of former state-level indicators by all ethnic groups, a substantial between-group performance gap remained in 1994, with African American and Hispanic students' test scores remaining lower than those of White and Asian students. Overall, student achievement generally was still below the national average. Some specific observations about such outcomes follow (Massell et al., 1994).

1. Overall SAT scores declined during the period 1984-1992. However, greater numbers of students taking the test, including increased participation by diverse test takers, probably contributed to what appeared on its face as a downward trend. During this time, increasing proportions of California seniors scored above 500 on mathematics and above 450 on the verbal portion of the SAT.

2. There was a gradual increase in the numbers of high school graduates who had completed the University of California's minimum course requirements, although the gap between White and minority students had not decreased.

3. While the absolute number of students scoring three or better on Advanced Placement tests improved markedly (a 188% change in how many met this criterion), California students as a whole remained below the national average on nearly all tests taken.

4. The dropout rate, computed via census data, declined from 25 percent to 18 percent during the period 1986-1991.

Florida

Historical Context of the Indicator System

Florida's approach to educational reform is predicated on four beliefs, that (a) results rather than processes are emphasized in educational standards and outcomes, (b) standards should be written at the highest level of expectation, (c) standards are written in the knowledge and belief that all students can learn, and (d) all schools must address all seven over-arching state goals in their school improvement plans. Following are the seven Florida goals.

1. Assure student readiness for school through school/community collaboration.

2. Increase the graduation rate and assure that graduates are prepared for entrance into the workforce and/or postsecondary programs.

3. Assure that students manifest the knowledge and skills that will enable them to compete in the world economy successfully.

4. Provide educational frameworks that are conducive to teaching and learning, including sequential instruction in basic academic skills, and effective levels of resources for staffing and equipment or materials.

5. Protect students from risks to their health and well being.

6. Assure high standards for teachers and staff in each school.

7. Assure that all resident adults are literate.

Description of the Indicator System

In general, in the late 1980s to early 1990s the state moved away from specific process requirements to a focus on improved results, by defining the broad goals listed above and allowing districts to administer programs through school site improvement councils. The department of education then monitored outcomes on the indicators in relation to state standards, and when needed provided technical assistance to schools (Massell et al., 1994). Until 1994, the classes of indicators in the Florida system related to financial data, dropout rates, students' college readiness, graduation rates, test scores, mobility, special education programs, and student and teacher demographics (Glascock et al., 1995). Changes made in 1995 included revisiting the seven major goals, such that the Florida Commission on Education Reform and Accountability currently is identifying specific indicators and standards in the area of student performance (Goal 3; Furbee, personal communication, 10/25/95). Preliminary results on these newly defined indicators will be studied to guide the establishment of related sanctions. The commission will turn its attention next to the development of indicators and standards for each of the remaining six goals.

In the meantime, schools are required to submit a School Improvement Plan (SIP). If, after 3 years, a school has not met the goals set forth in its own SIP, the state department of education declares it "critically low in school performance." This status has two significant conditions attached to it (Furbee, personal communication, 10/25/95). First, the school becomes eligible for intense technical assistance and support. Department of education staff are made available on site, and the state must help the school obtain whatever supplemental resources (equipment, materials, staff) are deemed necessary to raise its performance. Second, development of the subsequent SIP becomes a collaborative effort among the school, its local board, and the Florida department of education.

Evidence of Results/Impact

There is little current, definitive information about comparative student achievement over the last 5 years. The state abolished most of its testing program in 1991, leaving some confusion about assessment of school performance in subsequent years. Florida did initiate a number of performance indicators during 1994 that were related to various norm-referenced achievement tests; but the indicators have not remained stable long enough for serious examination of longitudinal, systemic progress.

Compounding the technical problems of the indicator system are the intense challenges being faced by Florida school districts. For example, Dade County schools have, for some time, been experiencing a very high in-migration of non-English speaking students from Haiti, Nicaragua, and Cuba. Although the district is

engaged in an aggressive facilities expansion program, many schools are operating at 150 percent of projected student capacity; under such circumstances, the district is struggling to assimilate the growth and diversity. Adequacy of educational programs is the first concern under these conditions (J. Annunziata, personal communication, July 12, 1995). Between these basic concerns, the murkiness ensuing the massive changes in student testing, and the changes in the indicators, little clear evidence confirming systemic improvement existed at the time this report was written.

New York

Historical Context of the Indicator System

New York has had a formal state-level testing program since 1865. Unlike many states, the New York State Education Department develops its own tests, with the exception of the reading tests. All state tests (a) are based on state-recommended or prescribed courses of study, (b) are intended to establish and maintain achievement standards, and (c) provide a measure of accountability for the state's elementary and secondary schools.

Testing is conducted at various grade levels for a number of purposes in New York. The Pupil Evaluation Program (PEP), begun in 1979, is administered to all students in Grades 3 and 6 in the areas of reading and mathematics, and a writing test is administered to all students in Grade 5. Since every student must take PEP tests, the resulting reading and mathematics scores are used widely as indicators of school effectiveness. However, the PEP tests also are used to identify students who are not making what is considered to be "normal" progress in the state's foundation skills. Pupils who score below the state reference point must be given appropriate remediation. Students who score below the state reference points on the Grade 6 PEP tests are involved in an additional level of screening and intervention. These students must take Preliminary Competency Tests in Grades 8 or 9 in the areas of reading and writing (other students are not included in this testing program). The Preliminary Competency Tests are similar in scope and format to the Regents Competency Tests (see below), but are not written at the same level of difficulty as them.

In general, the Regents Competency Tests are taken by students who are not planning to attend college. First administered in 1979, they were designed to establish minimum standards in reading, writing and mathematics for receipt of a local high school diploma (replacing an earlier set of tests that were perceived as setting too low a graduation requirement). In 1984, test components were added in the areas of science, global studies, and United States history and government.

Regular Regents Examinations are intended for college-bound students and are taken by about 60 percent of the state's high school population. These examinations are offered in the areas of English, social studies, mathematics, sciences, and foreign languages. In addition to providing a basis for college admissions decisions, Regents Examinations are used as the basis for a Regents diploma, which is considered a more prestigious credential than a local high school diploma.

Finally, the Regents Action Plan, adopted in 1984, provided for creation of Program Evaluation Tests to be administered in elementary science, elementary social studies, and middle school social studies. The elementary and middle school social studies tests are administered to all students at the end of Grades 6 and 8; the elementary science test is administered to all students at the end of Grade 4. Program Evaluation Tests are used exclusively to evaluate the effectiveness of these instructional programs and are not associated with student-level consequences or sanctions.

School and district-level PEP test results appear on the annual Comprehensive Assessment Reports, first published in 1985, providing a public record of school effectiveness with the intention of stimulating public

dialogue to foster school improvement. State tests also are used to drive additional state aid to those students who need additional assistance.

The Comprehensive Assessment Reports (CAR) appear in multiple forms. Reading and mathematics test scores are reported for schools and districts, both by county and statewide, disaggregated by gender and grade level. Summary information for all indicators and related findings is presented in the Governor's Report, an annual statewide review of the educational system's performance, that was first prepared in 1989.

Description of the Indicator System

Classes of data reported in the New York indicator system relate to: (a) enrollment, disaggregated by ethnicity; (b) attendance rate; (c) census poverty index; (d) percent of students eligible for free/reduced-price lunch; (e) percent of students with limited English proficiency (LEP); (f) dropout and suspension rates; (g) graduation rate; (h) percent of students continuing to college; (i) student:teacher ratio; (j) teacher characteristics, including ethnicity, turnover rate, median salary, certification, experience, and degree level; (k) fiscal data, including per-pupil expenditures, district wealth, and breakdown of expenditures; (l) percent of students scoring above SRP on PEP tests, as well as mean scores on program evaluation tests; and, (m) percent of students taking and passing Regents Examinations. Although not originally designated as an element of the indicator system, the statewide report of the CAR reviews student participation in advanced placement courses. This information is analogous to variables in the Texas AEIS reports that are defined as "report only indicators," that are not attached to sanctions in the accountability system. The Comprehensive Assessment Reports and the Governor's Report are the two main vehicles for feeding back performance information to the schools and to the public. No other sanctions such as district accreditation status are attached to the results contained in the reports.

Evidence of Results/Impact

Performance improved on three of the five tests of the PEP from 1988-89 to 1993-94, soon after the first Comprehensive Assessment Report was released. In 1993-94, over 90 percent of tested students were achieving satisfactory progress in mathematics and writing; over 80 percent were achieving satisfactory progress in reading.

During the period from 1990-91 to 1994-95 — following release of the first Governor's Report — statewide performance improved on all Regents examinations except physics. The percentage of students passing Mathematics I increased from 45.0 to 52.5 percent. The percentage passing Mathematics II increased from 37.9 to 42.9 percent. Outside New York City, substantially larger percentages of students passed the comprehensive English, biology, and global studies examinations. Outside the largest urban areas, the percentage of graduates earning Regents diplomas (i.e., those taking and passing all Regents examinations) increased from 40 percent to 46 percent. Also, fewer than half of high school students passed the Regents comprehensive English examination, which assesses students' knowledge of the fundamentals of reading and writing, prerequisites to success in college.

After 5 years of steady improvement, the state annual dropout rate reached a record low of 3.9 percent in 1993-94.

In 1993-94, 11th and 12th grade students were more than twice as likely to take AP examinations than in 1983-84, with three times as many African American candidates and four times as many Hispanic and Asian candidates. These data may reflect the indirect influence of the reporting system (i.e., just by being reported, greater attention is paid to the information).

Tennessee

Historical Context of the Indicator System

The *Master Plan for Tennessee Schools: 1993* set forth goals in eight key areas: early childhood education, primary and middle-grades education, high school education, technology, professional development and teacher education, accountability, school leadership and school-based decision making, and funding. The accountability goal emphasized outcomes rather than the processes by which they are achieved, leaving schools and teachers free to pursue whatever methods proved practical in producing academic progress.

The Tennessee system has taken major steps in its recent, innovative approach to educational accountability. State legislation passed in 1992 incorporated into its wording specific requirements for district and school performance related to student achievement, based on the Tennessee Value Added Assessment System (TVAAS). That legislation called specifically for statistical estimates of district effects, school effects, and teacher effects on student achievement. While school and district effects could be published, individual teacher effects were not to be a public record. Acceptable rates of gain for each school and district are calculated, based on prior student performance and comparable national achievement levels. Schools that do not achieve goals are subject to sanctions.

Tennessee's law also required development of fresh, non-redundant subject matter tests each year for purposes of assessing student achievement under the Tennessee Comprehensive Assessment Program (TCAP). A student must be present for at least 150 class days before that student's performance is attributed to a teacher. Students are required to pass the TCAP at a specified standard and to complete an exit examination that measures student readiness for college or the work place before graduation. Specifically, TCAP tests are administered at Grades 2 through 8 in mathematics, science, reading, language, and social studies.

Description of the Indicator System

The TVAAS is strongly oriented to student achievement as the central measure of school and teacher effectiveness. To counter concerns about variables that are not under the control of schools or teachers, the TVAAS employs a methodology that uses the student as his/her own control. In other words, each child can be thought of as a " 'blocking factor' that enables the estimation of school system, school, and teacher effects on the academic gain with the need for few, if any, of the exogenous variables" (Sanders & Horn, 1995, p. 14). TCAP test results are reported by district and school in the areas of mathematics, science, reading, language, and social studies. Individual teacher effects are reported to the teacher, appropriate administrators, and school board members.

Evidence of Results/Impact

Student gains have remained consistent in Tennessee since adopting the TVAAS. As noted by TVAAS officials (Sanders, personal communication, July 11, 1995), teachers are unable to "teach to the test," since fresh non-redundant tests are used each year. The norm-referenced part of TCAP, the CTBS/4, is a nationally normed test; the norm-referenced module was created to provide the statistical characteristics of reliability, adequate floors and ceilings, and articulation across test levels. All of this helps prevent the artificial score inflation observed in some states that often is attributed to repeated administration of the same test. The TVAAS does seem to permit Tennessee to measure and demonstrate continued school and student progress over time towards achievement goals, which officials in that state believe should be the main focus of the system.

COMPLIANCE STATEMENT

TITLE VI, CIVIL RIGHTS ACT OF 1964; THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS, TYLER DIVISION

Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

(1) acceptance policies on student transfers from other school districts;

(2) operation of school bus routes or runs on a nonsegregated basis;

(3) nondiscrimination in extracurricular activities and the use of school facilities;

(4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff members who work with children;

(5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;

(6) nondiscriminatory practices relating to the use of a student's first language; and

(7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have occurred or are occurring.

Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, U.S. Department of Education.

If there is a direct violation of the Court Order in Civil Action No. 5281 that cannot be cleared through negotiation, the sanctions required by the Court Order are applied.

TITLE VII, CIVIL RIGHTS ACT OF 1964 AS AMENDED BY THE EQUAL EMPLOYMENT OPPORTUNITY ACT OF 1972; EXECUTIVE ORDERS 11246 AND 11375; EQUAL PAY ACT OF 1964; TITLE IX, EDUCATION AMENDMENTS; REHABILITATION ACT OF 1973 AS AMENDED; 1974 AMENDMENTS TO THE WAGE-HOUR LAW EXPANDING THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967; VIETNAM ERA VETERANS READJUSTMENT ASSISTANCE ACT OF 1972 AS AMENDED; IMMIGRATION REFORM AND CONTROL ACT OF 1986; AMERICANS WITH DISABILITIES ACT OF 1990; AND THE CIVIL RIGHTS ACT OF 1991.

The Texas Education Agency shall comply fully with the nondiscrimination provisions of all federal and state laws, rules, and regulations by assuring that no person shall be excluded from consideration for recruitment, selection, appointment, training, promotion, retention, or any other personnel action, or be denied any benefits or participation in any educational programs or activities which it operates on the grounds of race, religion, color, national origin, sex, disability, age, or veteran status (except where age, sex, or disability constitutes a bona fide occupational qualification necessary to proper and efficient administration). The Texas Education Agency is an Equal Employment Opportunity/Affirmative Action employer.

Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701-1494

Document Number GE6-601-07
April 1996

TM025873

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

NOTE: Two copies are provided.
TEA Publication No. = GE6 601-07

Title: Development of Accountability Systems Nationwide and in Texas (Statewide Texas Educational Progress Study Report No.1)	
Author(s): Use corporate entry	
Corporate Source: Texas Education Agency—Austin*	Publication Date: 4-96

II. REPRODUCTION RELEASE:

*This is the State Department of Education for Texas. Please use this corporate entry without personal author.

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce the identified document, please CHECK ONE of the following options and sign the release below.

☑ ← Sample sticker to be affixed to document

Check here
Permitting microfiche (4"x 6" film), paper copy, electronic, and optical media reproduction

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Sample
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Level 1

Sample sticker to be affixed to document → ☐

or here
Permitting reproduction in other than paper copy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY
Sample
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Level 2

Sign Here, Please

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at Level 1.

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Signature: Linda Kemp	Position: Librarian
Printed Name: Linda Kemp	Organization: Texas Education Agency
Address: 1701 N. Congress Avenue Austin, TX 78701	Telephone Number: (512) 463-9050
	Date: 5-3-96

ument sent to ERIC Processing and Reference Facility unless so noted.

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC , *or*, if you wish ERIC to cite the availability of this document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents which cannot be made available through EDRS).

Publisher/Distributor:	
Address:	
Price Per Copy:	Quantity Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name and address of current copyright/reproduction rights holder:

Name:

Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

If you are making an unsolicited contribution to ERIC, you may return this form (and the document being contributed) to:

ERIC Facility
1301 Piccard Drive, Suite 300
Rockville, Maryland 20850-4305
Telephone: (301) 258-5500

(Rev. 9/91)