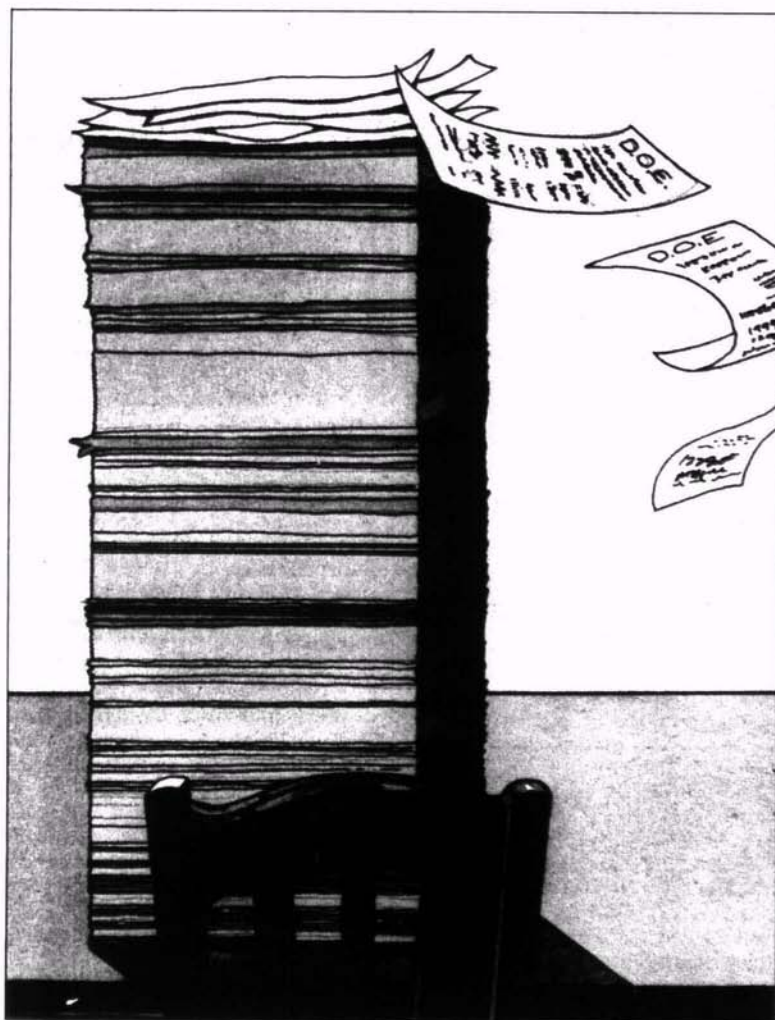


Indicators of Educational Quality

To better inform policy decisions and to keep the public abreast of educational progress, a nationwide effort is underway to define standards for quality education.



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In November 1984, the Council of Chief State Officers adopted a policy approving the development of education indicators. The policy represents a striking departure from past practice, because it calls for a uniform system of measures of educational quality, including student achievement tests, to be collected by every state.

Several events have occurred since then. First, the Council, through its committee on research and information coordination, established a working group of state evaluation staff members who developed a framework and criteria for selecting indicators (Baker, 1985). The group constructed a draft list of indicators that can be used for comparisons across states and as a basis for further elaboration within states. They have shared this information with a variety of inter-

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est groups¹ in preparation for submitting their refashioned document for final deliberation by the chiefs at their annual meeting in November.

The Council has also created an assessment and evaluation center in Washington, D.C., to coordinate efforts to establish a uniform monitoring system. An executive director is being hired, and several hundred thousand dollars have been raised from government and private sources for center operations.

Beyond these measures, the Council continues to exert pressure to improve federal data gathering and reporting and to take steps within the chiefs' jurisdictions to refine state-level data gathering. Among other things, the chiefs or their staff members are represented on two National Academy of Sciences panels, one to evaluate the functioning of the National Center for Education Statistics and the second to explore issues dealing with indicators of the quality of mathe-

matics and science education (Raizen and Jones, 1985). In addition, several chiefs are working with officials from the National Center for Education Statistics to determine if existing state testing and data gathering operations might be more effectively used for national and state-by-state reporting, and on ways to build better approaches for international comparisons of educational quality.

What Are Educational Indicators?

An education indicator provides information about the health of the educational system. A statistic becomes an indicator when it is useful in a policy context. For example, it is not particularly useful to know that there are 2.5 million teachers and 45 million students in the U.S. These numbers describe the size of the system rather than its health. It would be more useful to form a pupil/staff ratio—in this instance, roughly 19:1. This statistic would qualify as an indicator when two conditions are met:

1. *The statistic should measure something that relates to the health of the educational system.* To make things simple, we can divide indicators into two categories: inputs and outcomes. Thus, like an index of smoking (input) that relates to human longevity (outcome), the pupil/staff indicator (input) should be demonstrably related to an agreed-upon schooling outcome such as academic achievement. The selection of outcomes is critical, for they are used to test an input statistic to see if it qualifies as an indicator. In a mature set of indicators, each should bear an understandable relationship to the health of the system and to each other so that together they can be viewed as a model of the system. Finally, as in the development of any model, one goal should be parsimony; that is, the fewer the indicators the better—so long as the health of the system is adequately assessed.

2. *To have meaningful policy implications, an indicator must be placed in a particular context.* There are four ways to do this.

●An indicator can be contrasted with a "standard" or "criterion level." Thus, if we know that educational achievement is enhanced if the pupil/staff ratio goes below 16:1, then a ratio of 19:1 could indicate that the health of the system could be improved by lowering the pupil/staff ratio.

●An indicator can be contrasted with itself over time. It then takes on meaning through a combination of its relationship to the health of the system and its own direction of change. A decrease in the pupil/staff ratio from 19:1 to 18:1 may indicate an increase in the health of the system.

●An indicator assessed in two different places (systems) at the same time can be contrasted with itself. For

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example, districts, states, or countries might be contrasted on their pupil/staff ratios.

●An indicator can be contrasted with other indicators in a cost-benefit analysis. This mode of comparison assumes a strong causal model of the educational process to drive the selection of indicators.

How Would We Use a Set of National Education Indicators If We Had One?

Since the birth of the Office of Education in 1867, national collection and dissemination of educational statistics has been a federal priority. Each year the Department of Education produces a three-foot stack of reports that contain thousands of statistics. But the present state of educational indicators is a shambles.

Consider outcomes for a moment. The only nationally representative measure of educational achievement (NAEP) has been on an erratic schedule for the past ten years, contains admittedly weak measures of higher-order skills, and yields results that cannot be broken down below a regional level. Figures concerning the retention power of our elementary and secondary schools are even worse. The U.S. Census Bureau reports that 17 percent of 18- to 21-year-olds are not enrolled in school and failed to finish high school, and the Department of Education estimates the national dropout rate to be 27 percent. These inconsistencies render both sets of data practically useless for informing policy matters. At the subnational level, the quality of statistics on dropouts is even worse.

Input indicators are little better. Instructional time is an important factor in student learning, but the information we have about school attendance is a crude first step in obtaining data about it. Unfortunately, the Department of Education is reconsidering publishing statistics on average daily attendance because the data are so poor. To illustrate, California claims that its average daily attendance is 98 percent of enrollment—not because

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98 percent of enrolled children are in school each day, but because California counts as present anyone with a valid excused absence. The nation has no way of keeping track of either the quality of teachers or the material covered in textbooks and only sporadically assesses the titles of courses students take. There is a clear need to focus on steps such as reaching common definitions and data collection procedures for indicators like dropout rate, attendance, teacher quality, and so on.

A second reason for the present concern involves the conjunction of three societal trends: a tremendous increase in our capacity to gather, store, and process statistical information; an increased national concern for holding government institutions accountable for their outcomes; and a perceived need for improving the quality of the educational system.

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Improved education indicators could help state and local agencies to:

1. Monitor changes in such things as the quality of the teaching staff and the curriculum and the performance of students, which would alert them to impending problems.

2. Assess the impact of educational reform efforts, which is especially critical today as state after state adopts sweeping reforms.

3. Encourage the educational system, or parts of it, to do better by contrasting the U.S. system with those of other nations and parts of the U.S. system (such as state and local education agencies) with each other.

4. Focus attention on educational subsystems that may require improvement, such as vocational education, provisions for the handicapped, and bilingual education.

Almost everyone agrees that there will be significant resource constraints in the future, inevitably placing education in competition with other social services. It will become increasingly common to weigh the value of one service against another. In an article in *Scientific American*, Preston (1984) compares services for the elderly with services for children, noting the societal shifts that have caused a greater valuing of services for those over 65 and a devaluing of services for those under 20. To meet this challenge, we must be able to show convincingly that we are taking steps to improve the quality of education and are evaluating our progress.

Tempering the Trend Toward Centralization

The press toward accountability and the opposite focus on retaining local control over educational decisions are straining the U.S. educational system now more than ever. A common set of indicators will undoubtedly increase the drive toward centralization. The trick will be to have a set of measures that reflects the complexity of the system so that more centralized policies can be attuned to use the diversity to enhance quality rather than stamp it

out. We have made progress in the last two decades through developments such as the National Assessment of Educational Progress and the “High School and Beyond” longitudinal study by the National Center for Education Statistics. We will continue to make greater progress if we are bold enough to take control of the quality of the data we use to judge the quality of education.

A fundamental assumption underlying the movement to identify indicators is that educators are responsible for assessing their own successes and failures. It is no longer defensible for us to criticize the weak attempts of those outside education to measure its quality. Clearly the public—the source of support for public education—wants to know how well we are doing, and we have no choice but to respond. □

These groups included the National Association of State Boards of Education, the National Governors’ Association, the Education Commission of the States, the National Education Association, the American Federation of Teachers, the National School Boards Association, the American Association of School Administrators, the National Association of School Principals, and the National Association of Elementary School Principals.

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