

Forum Guide to Education Indicators

developed by the
Education Indicators Task Force
sponsored by the
National Forum on Education Statistics
and the
National Cooperative Education Statistics System

<http://nces.ed.gov/forum>

The Task

To develop a *Forum Guide to Education Indicators* that identifies and promotes “best practice” standards for defining, calculating, and interpreting commonly used elementary and secondary education indicators.



The greatest danger of indicators is the ease with which they can give false impressions because they are misunderstood or interpreted in invalid ways.

—Accountability Mechanisms in Big City School Systems (ERIC/CUE Digest No. 71.).

Audience



- ✓ People who create indicators/report cards
 - SEA and LEA policy makers
 - SEA and LEA data/research staff
 - Education data system vendors

- ✓ People who interpret indicators and results
 - Legislators
 - Public policy analysts
 - Parents and community members
 - News media
 - Business people (e.g., realtors)

Content

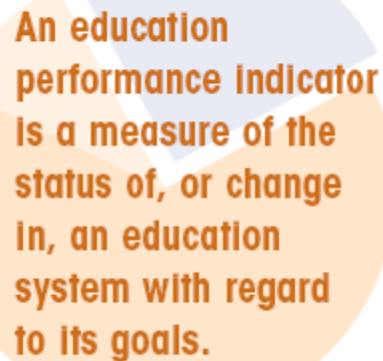
✓ Chapter 1: Introduction to Education Indicators and Systems

Defines the concept of an education indicator and describes the process of establishing a body of education performance and context indicators that will support decisionmaking by supplying useful, valid, reliable, timely, and cost-effective information.

✓ Chapter 2: Catalog of Education Indicators

Provides encyclopedia-type “entries” for 44 education indicators. Each indicator entry contains a definition, a recommended use, a policy question, caveats and cautions, additional information, related indicators, data element components, a formula, commonly reported subgroups, and display suggestions.

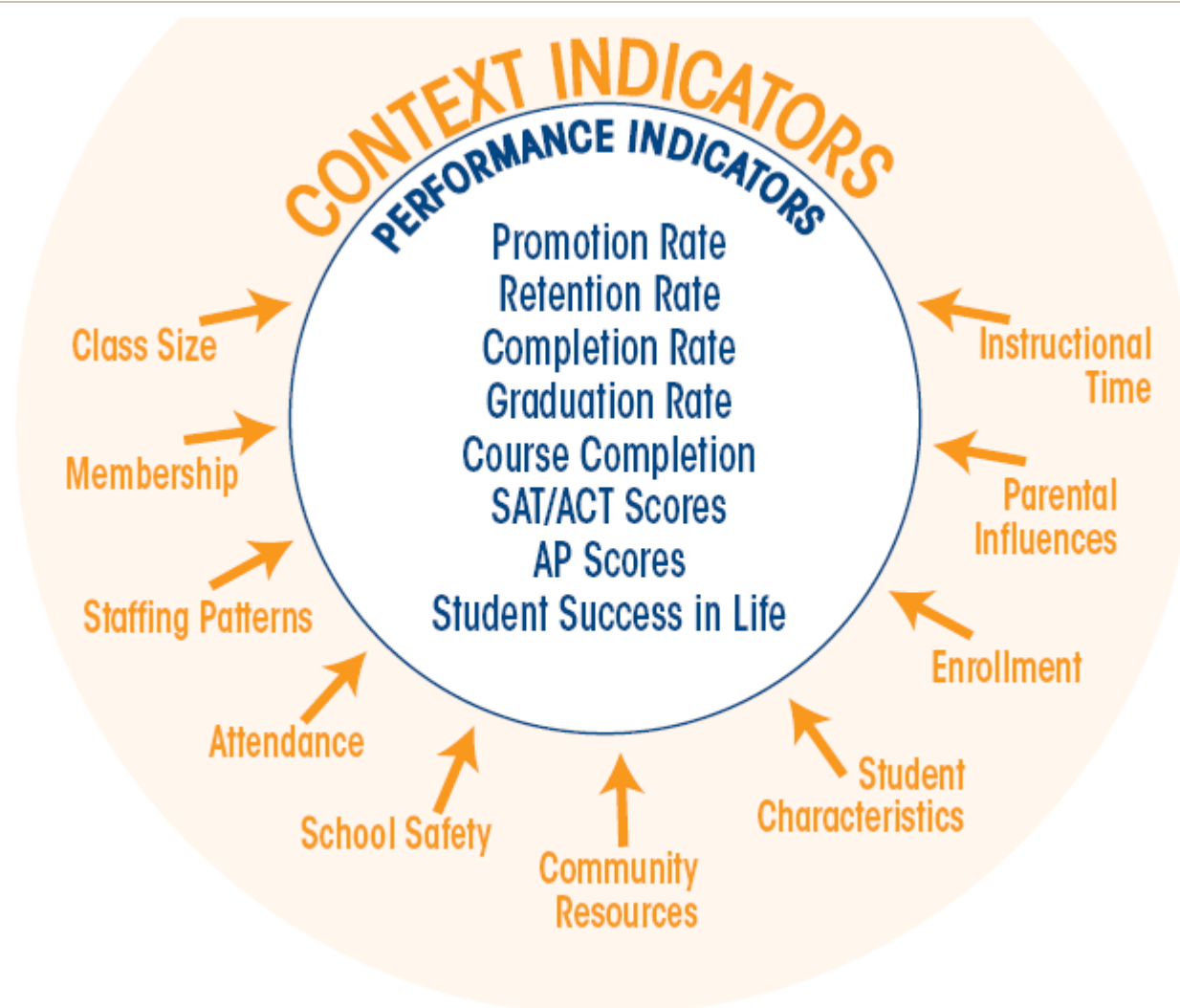
An Education Indicator is...



An education performance indicator is a measure of the status of, or change in, an education system with regard to its goals.

- ✓ **Performance indicators**—
Indicators that measure the outcomes of the education system (i.e., student achievement and post-school success).
- ✓ **Context indicators**—
Measures of system inputs and processes that aid in the interpretation of performance indicators.

Context Informs Interpretation



Inputs + Processes \square Outcomes

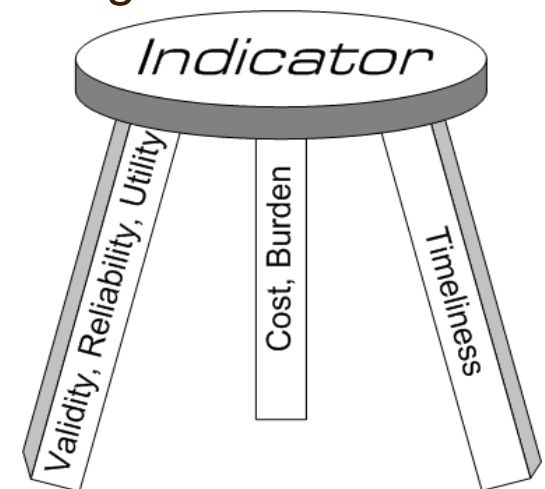
Figure 1. Education indicator categories as system inputs, processes, and outcomes.



Characteristics of Good Indicators

Demands to generate high quality indicator data require that indicators be:

- ✓ Useful—i.e., relevant to the issues in question
- ✓ Valid—i.e., measure what they purport to measure
- ✓ Reliable—i.e., produce consistent measures over time
- ✓ Timely—i.e., available to inform decision-making
- ✓ Cost-Effective – i.e., produce information that is valuable enough to justify the collection burden




Indicator Selection Criteria

Indicators included in the *Guide*:

- ✓ help develop a picture of the elementary/secondary education system by measuring system inputs, processes, or outcomes
- ✓ are commonly accepted and frequently used in some form
- ✓ produce valid and reliable information
- ✓ provide measures that identify trends and inform policy and practice in a timely manner
- ✓ can be derived from typical elementary/secondary administrative record systems

Caveat

The indicators in this *Guide* have slightly varying definitions across the nation. Therefore, the definitions, formulas, and characteristics of each indicator included here represent examples of good practice used by some, but not all, education organizations. This *Guide* provides recommendations that support the creation of useful, valid, reliable, timely, and cost-effective education data. While these recommendations are not a federal mandate, for comparability purposes, the task force recommends that consistent definitions be used nationally.



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Layout for Each Indicator Entry

Indicator Name Identifies the primary indicator name used in this document.

Cross References Lists any alternative name that is commonly used for the indicator, and is cross-referenced to the indicator in this *Guide*.

Definition Describes or defines the indicator.

Recommended Uses Provides suggestions for the appropriate application of the indicator.

Policy Questions Identifies one or more broad policy questions that may be informed by the indicator.

Caveats and Caution Introduces specific issues to be considered in order to avoid misapplication or misinterpretation of the indicator.

Additional Information Explains other issues that may influence the use of the indicator.

Related Indicators Identifies other indicators that may be used in conjunction with the indicator to provide additional information.

Components Lists the data elements and aggregate, calculated, or derived statistics needed to generate the indicator.

Formula Provides the actual mathematical formula for computing the indicator value.

Commonly Reported Subgroups Identifies subgroups commonly reported for the indicator.

Display Suggestions Presents recommendations about the types of graphical or tabular display that are appropriate for the indicator (see appendix C).

Assessment, Average Student Score

Assessment Results
Average Student Assessment Score
Student Performance
Test Results



Definition

The average score earned by students taking an assessment.

Recommended Uses

This indicator may be used to measure student performance on an assessment, including student subgroup performance and subsequent "achievement gaps."

Policy Questions

Are students meeting academic goals? Is performance improving over time?

Caveats and Cautions

- > This indicator does not distinguish between students who were tested without modifications and students who took alternative assessments or for whom special test-taking modifications were allowed.
- > Average student performance may improve within a reporting category (i.e., basic, proficient, and advanced) without students advancing from one reporting category to the next. This may lead *Assessment, Average Student Score* to improve without a corresponding change in *Assessment, Percentage Students Demonstrating Proficient or Advanced Performance*.

Related Indicators

Adequate Yearly Progress (AYP), Percentage Local Education Agencies (LEAs) in Improvement Categories
Adequate Yearly Progress (AYP), Percentage Schools in Improvement Categories
Adequate Yearly Progress (AYP), Percentage Schools Making
Assessment, Percentage Student Participation
Assessment, Percentage Students Demonstrating Proficient or Advanced Performance

Components *Italicized terms are defined in chapter 2, appendix A, or appendix D.*

Components include the score results for all students taking the assessment, and the total number of assessments generating a valid score (i.e., the total number of test takers).

Numerator: Sum of all *Score Results*

Denominator: Number of assessments generating a valid score

Formula

Assessment, Average Student Score is calculated by dividing the sum of all student scores on an assessment by the total number of exams generating a valid score (i.e., the total numbers of test takers).

$$\frac{\text{Sum of student } \textit{Score Results}}{\text{Total number of assessments generating a valid score}}$$

Commonly Reported Subgroups

Age, grade level, disability status, economic disadvantage status, English proficiency, migrant status, race, sex, and full- versus part-academic year enrollment.

Display Suggestions

This indicator is often, but not always, presented in the form of XX.X (or other appropriate format based on the scoring scale); and displayed in tables or bar charts by subgroup. Generally, each subject matter area is shown separately, but scores from multiple subjects may be compared in the same table or graph if the subject area assessments use the same scale.

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For more information...

Browse: <http://nces.ed.gov/forum/indicators.asp>

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For more information about the Forum: <http://nces.ed.gov/forum>