

A Special State-Focused  
Supplement to Education Week's

**TECHNOLOGY COUNTS 2006**

MINNESOTA

# The Information Edge

Using  
Data to  
Accelerate  
Achievement

# About this Report

This year marks the ninth edition of *Technology Counts*. For this report, the Editorial Projects in Education Research Center has surveyed the states to assess the status of K-12 educational technology across the nation. *Technology Counts 2006* explores the inroads states have made in developing computerized systems for managing student and teacher data and in using that information to support instructional decisionmaking. As in previous years, *Technology Counts 2006* continues to track state progress in several critical areas of technology policy and practice – access, use, and capacity. For the first time, this year’s report also assigns grades to the states for their performance in those three categories.

This new *State Technology Report* assembles key findings in an accessible format that allows readers to examine a particular state’s performance on this year’s indicators. For most indicators, national results are also provided as a benchmark against which the state can be compared.

| STATE TECHNOLOGY REPORT CARD<br>2006 |           |                                  |
|--------------------------------------|-----------|----------------------------------|
|                                      | Minnesota | How did the average state score? |
| <b>Access to technology</b>          | <b>D+</b> | C+                               |
| <b>Use of technology</b>             | <b>D+</b> | C+                               |
| <b>Capacity to use technology</b>    | <b>F</b>  | C                                |
| <b>Overall grade</b>                 | <b>D</b>  | C+                               |

### Grading the States

For *Technology Counts 2006*, the EPE Research Center awarded grades for technology leadership to the 50 states and the District of Columbia. Grading is based on 14 individual indicators spanning three core areas of state policy and practice: access to instructional technology, use of technology, and capacity to effectively use educational technology.

Information on technology use and capacity was obtained from a nationwide survey of state technology officials conducted by the EPE Research Center. Indicators related to educational technology access were derived from annual school surveys conducted by Market Data Retrieval, a research company that tracks the use of educational technology.

The EPE Research Center evaluated each indicator, assigning a certain number of points to each. States received credit for an indicator only if they could document that the respective policy or practice was in place. Points were tallied within each of the three technology categories, producing scores on a 100-point scale. To generate an overall score, the research center computed the average of the three category scores and then converted that total score to a letter grade.

| <b>Technology Counts Grading Breakdown</b>        |                         |                              | This table reports the detailed scoring behind the grades for the three major areas of state policy examined in <i>Technology Counts</i> . |                          |                              |
|---|-------------------------|------------------------------|--|--------------------------|------------------------------|
| <b>Access to Technology</b>                       | Minnesota average       | National average             | <b>Capacity to Use Technology</b>  | Does state have policy?  | Number of states with policy |
| <i>Number of students per ...</i>                 |                         |                              | <i>State includes technology in its ...</i>  |                          |                              |
| <i>Instructional computer</i>                     | <b>3.8</b>              | 3.8                          | <i>Teacher standards</i>   | <b>No</b>                | 40                           |
| <i>Instructional computer in a classroom</i>      | <b>10.1</b>             | 7.6                          | <i>Administrator standards</i>   | <b>No</b>                | 33                           |
| <i>High-speed Internet-connected computer</i>     | <b>3.9</b>              | 3.9                          | <i>Initial teacher license requirements</i>  | <b>No</b>                | 21                           |
| <i>Internet-connected computer in a classroom</i> | <b>10.1</b>             | 8.0                          | <i>Initial administrator license requirements</i>  | <b>No</b>                | 9                            |
|   |                         |                              | <i>Teacher recertification requirements</i>  | <b>No</b>                | 9                            |
|   |                         |                              | <i>Administrator recertification requirements</i>  | <b>No</b>                | 6                            |
| <b>Use of Technology</b>                          | Does state have policy? | Number of states with policy | <b>Overall Technology Score</b>  | Minnesota points awarded | Average state points awarded |
| <i>Student standards include technology</i>       | <b>No</b>               | 48                           | <i>Access to technology</i>  | <b>67.0</b>              | 76.8                         |
| <i>State tests students on technology</i>         | <b>No</b>               | 4                            | <i>Use of technology</i>   | <b>69.3</b>              | 78.3                         |
| <i>State has established a virtual school</i>     | <b>No</b>               | 22                           | <i>Capacity to use technology</i>  | <b>59.0</b>              | <b>74.8</b>                  |
| <i>State offers computer-based assessments</i>    | <b>Yes</b>              | 22                           | <b>Total score (average of three categories)</b>   | <b>65.1</b>              | <b>76.6</b>                  |

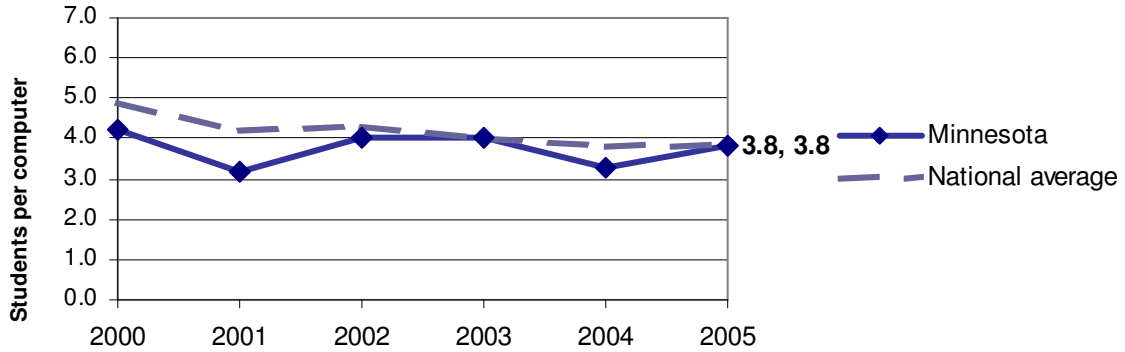
**Grading Curve** A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), F (0-59)

Technology Access

Note: Indicators of access to technology capture the number of students who share computers used for instructional purposes. Lower values on these measures indicate greater levels of access.

Trends in access

This chart tracks student access to instructional computers over time.

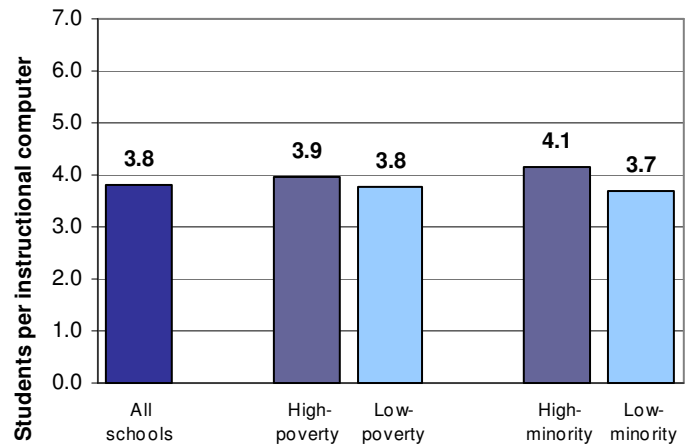
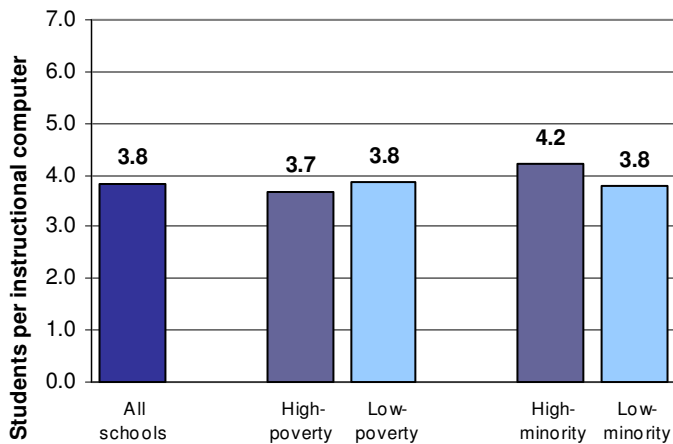


Students per instructional computer

These charts show the average number of students sharing access to each computer available for instructional purposes for public schools in your state and the nation as a whole during the 2004-05 school year.

Minnesota

U.S. Average

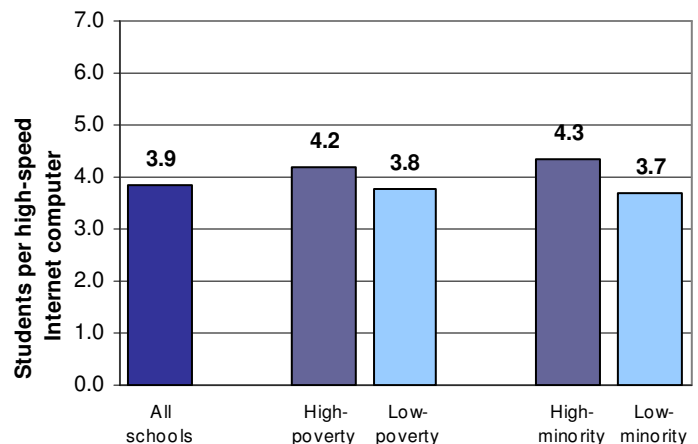
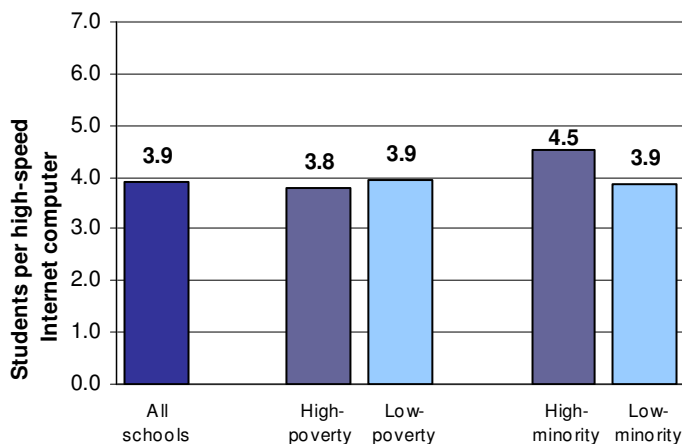


Students per high-speed Internet computer

These charts show the average number of students sharing access to each instructional computer with high-speed Internet access for public schools in your state and the nation as a whole during the 2004-05 school year.

Minnesota

U.S. Average

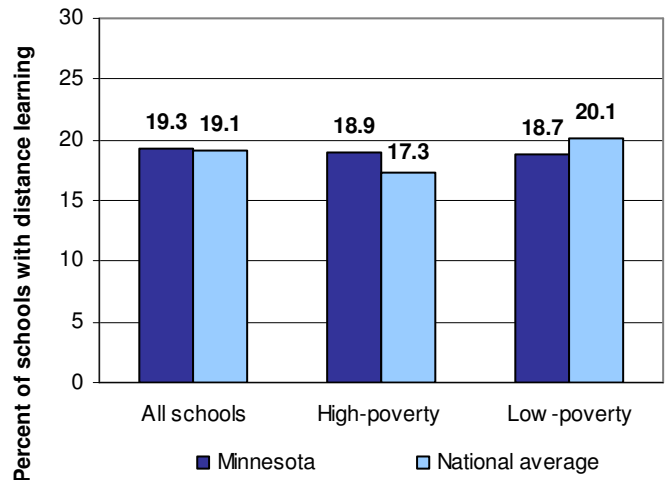
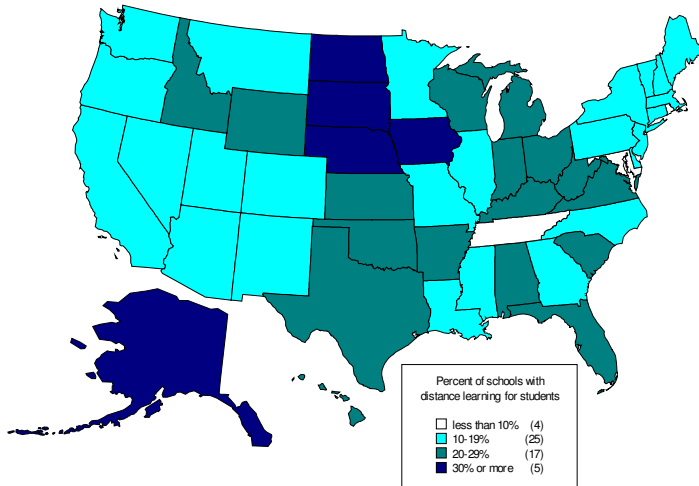


## Distance Learning

These charts report the percent of public schools offering distance learning for students during the 2004-05 school year.

### National Snapshot

### State vs. U.S. Comparison



## Data Access and Analysis Tools

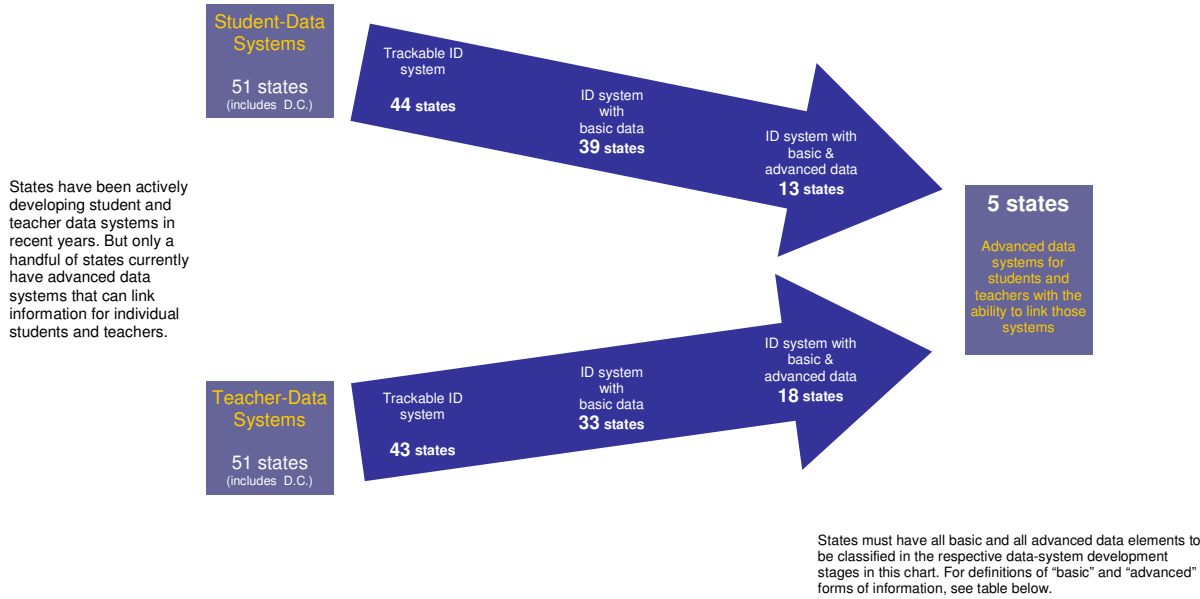
The EPE Research Center asked state technology officials about the kinds of access educators have to information on student and school performance as well as tools to help analyze data.

|   | Does Minnesota provide the data or analysis resource? | Number of states with data or analysis resource |
|---|---|---|
| <b>Provides educators with access to school performance data and analysis tools</b>                                   |   |   |
| Interactive school-level database for analysis  | Yes   | 34  |
| Interactive data system to compare own school to similar ones   | No  | 20  |
| Educators can access more data and analysis tools than the public   | Yes   | 36  |
| <b>Provides educators with access to different types of student-level data through a centralized portal or system</b> |   |   |
| Student demographic data  | Yes   | 24  |
| Program participation data  | Yes   | 23  |
| Current state assessment results  | Yes   | 29  |
| Current state assessment subscale or item results   | Yes   | 24  |
| Performance data over time  | Yes   | 27  |
| <b>Provides educators with resources to assist in the analysis and use of data</b>                                    |   |   |
| Capacity to download state data files   | Yes   | 45  |
| Capacity to upload local data to state system   | No  | 6   |
| Templates for analysis or graphing  | Yes   | 21  |
| Guides for data analysis  | Yes   | 26  |
| Training in use of data for instruction   | Yes   | 27  |

## State Data Systems

The EPE Research Center asked state technology officials to describe their statewide data systems. They provided information about the ability of these systems to track individual students and teachers over time as well as the types of information collected.

### National Perspective



## Characteristics of Minnesota's Data System

|  | Student data system |  | Teacher data system |
|--|---------------------|--|---------------------|
| <b>Unique identifiers</b>  |                     |  |                     |
| State has a system of unique identification codes able to track individual students over time as they move within the state. | Yes                 | State has a system of unique identification codes able to track individual teachers over time as they move within the state. | Yes                 |
| <b>Basic forms of information linked to identifiers</b>  |                     |  |                     |
| Demographic characteristics  | Yes                 | Teaching assignment  | Yes                 |
| Program participation  | Yes                 | Demographic characteristics  | Yes                 |
| Assessment results   | Yes                 | Education background   | Yes                 |
|  |                     | Certification status   | Yes                 |
| <b>Advanced forms of information linked to identifiers</b>   |                     |  |                     |
| Attendance data  | Yes                 | Years of experience  | Yes                 |
| High school dropout or completion status   | Yes                 | "Highly qualified" status for NCLB   | No                  |
| Transcript information   | No                  | Salary information   | Yes                 |
| <b>Linking student and teacher data</b>  |                     |  |                     |
| Information from statewide student- and teacher-data systems can be linked using identification codes.                       |                     |  |                     |
| No   |                     |  |                     |

## Notes and Sources

### Technology Counts 2006

For *Technology Counts 2006*, the Editorial Projects in Education Research Center surveyed the states to assess the status of K-12 educational technology across the nation. As in the past, the report continues to track state progress in several critical aspects of technology policy and practice: access, use, and capacity. For the first time, this year's report assigns grades to the states for their performance in those three areas. *Technology Counts 2006* also explores the inroads states have made in developing computerized student- and teacher-data systems that can be used to support data-driven decisionmaking.

*Technology Counts 2006* can be accessed online at <http://www.edweek.org/tc06>.

The *State Technology Reports* assemble key findings in an accessible format that allows readers to examine a particular state's performance on this year's indicators. For most indicators, national results are also provided as a benchmark against which the state can be compared.

### State Technology Indicators

Most of the state policy indicators reported in *Technology Counts* are obtained through an original policy survey conducted annually by the Editorial Projects in Education Research Center. The research center sent surveys to the chief state technology officers in all 50 states and to the superintendent of the District of Columbia public schools. Respondents provided information on policy indicators related to educational technology, statewide data systems, and supports for accessing and analyzing data. Every state response was carefully verified using additional evidence provided by the state, such as documentation describing a state statute or administrative rule.

For a subset of indicators on access to technology, the EPE Research Center obtained information from Market Data Retrieval, or MDR, a research organization in Shelton, Conn., that tracks trends in educational technology.

### Grading the States

For *Technology Counts 2006*, the EPE Research Center graded state leadership in the areas of technology access, use, and capacity, based on data compiled for 14 individual indicators of state policy and practice. Each indicator was evaluated and assigned a certain number of points, with some indicators receiving greater weight than others. States were not awarded credit for an indicator unless they were able to document that the respective policy was in place.

The research center tallied points within each of the three policy categories on a 100-point scale. These three subscores were averaged to produce an overall technology score, which was then converted to a letter grade. A detailed explanation of the grading methodology can be found in the full edition of *Technology Counts 2006*.

### Technology Access

Students per instructional computer: Market Data Retrieval, "The K-12 Technology Review 2005," and unpublished tabulations from MDR's Public School Technology Surveys (2000-2005).

Students per high-speed Internet-connected computer: Market Data Retrieval, "The K-12 Technology Review 2005" and unpublished tabulations from MDR's 2004-05 Public School Technology Survey.

For the purposes of this report, high-poverty schools are those in which more than half of students are eligible for the federal free or reduced-price lunch program. High-minority schools are those in which more than half the students belong to minority racial or ethnic groups.

### Distance Learning

Percent of schools that offer distance learning for students: Market Data Retrieval, "The K-12 Technology Review 2005."

### Data Access & Analysis Tools

Editorial Projects in Education Research Center annual state technology survey, 2006. Survey respondents were asked about the extent to which the state provides educators with access to information on student and school performance and to tools for data analysis. States received credit for an indicator only when they were able to provide clear evidence that the respective policy or practice was currently in place.

### State Data Systems

Editorial Projects in Education Research Center annual state technology survey, 2006. The research center asked respondents to describe the structure and content of their statewide data systems. Specifically, respondents provided information about the ability of these systems to track individual students and teachers over time as well as the types of information collected. States received credit for an indicator only when they were able to provide clear evidence that the respective data-system feature was currently in place.

## About Editorial Projects in Education

**Editorial Projects in Education (EPE)** is a nonprofit, tax-exempt organization based in Bethesda, Md. Our primary mission is to help raise the level of awareness and understanding among professionals and the public of important issues in American education. We cover local, state, national, and international news and issues from preschool through the 12th grade. Editorial Projects in Education Inc. publishes *Education Week*, America's newspaper of record for precollegiate education, *Teacher Magazine*, [edweek.org](http://edweek.org), and the Agent K-12 employment resource. We also produce periodic special reports on issues ranging from technology to textbooks, as well as books of special interest to educators.

The **EPE Research Center** conducts annual policy surveys, collects data, and performs analyses that appear in the *Quality Counts* and *Technology Counts* annual reports. The center also produces independent research reports and contributes original data and analysis to special coverage in *Education Week*, *Teacher Magazine*, and [edweek.org](http://edweek.org).



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## Technology Counts 2006: The Information Edge

- **Technology Counts 2006** – This year’s full report investigates state progress in developing computerized systems for managing student and teacher data and in using that information to support instructional decisionmaking. For the first time, *Technology Counts* grades the states in three critical areas of technology leadership: providing access to technology, use of technology, and capacity to use technology effectively.
- **State Technology Reports** – Individualized reports featuring state-specific findings from the 2006 *Technology Counts* report are available for all 50 states and the District of Columbia.
- **Education Counts** – This online database contains hundreds of state-level indicators on K-12 education collected over the past decade for *Education Week’s* annual *Technology Counts* and *Quality Counts* reports. Use the Custom Table Builder feature to create graphs, tables, or maps for specific indicators.

You can access *Technology Counts* online at  
[www.edweek.org/tc06](http://www.edweek.org/tc06)

