

## Connecting Policy and Data:

### What legislators need to know about state education data systems

*Most policymakers at the state and federal level have some awareness of the need for longitudinal student data systems within state education agencies. This awareness has been driven by the cohort graduation rate requirement of the No Child Left Behind Act, the current interest in growth models vs. status models for calculating Adequate Yearly Progress, and the Data Quality Campaign's promotion of the '10 essential elements' needed to track student achievement over time. To help states gain the best results from the investments they are making in the development of longitudinal student data systems, members of CCSSO's Education Information Management Advisory Consortium identified the following key considerations for policymakers.*

#### 1. MORE THAN TECHNOLOGY IS NEEDED.

- a. New systems require cultural and organizational change in how an agency collects, stores, and uses data in order to make full use of information.
- b. Effective project management is needed to shepherd systems development and long-term use.
- c. Professional development around use of new systems and data use is needed to realize the full potential of data systems and ensure security/privacy of data. Those who input data, have access to data, and analyze data can benefit from training.

#### 2. STRATEGIC PLANNING CAN ENSURE LONG-TERM COST EFFICIENCIES.

- a. Investing in strategic and tactical planning upfront will result in the best system at the lowest cost.
- b. New demands on systems will continue in the years ahead. It's best to build as flexible a system as possible to accommodate future changes.

#### 3. COST IS A COMPLICATED ISSUE.

- a. The cost of building a system depends on a number of factors, including:
  - i. Quantity and complexity of the data—number of students, teachers, schools, districts; number of data points collected.
  - ii. Characteristics of the legacy system. Is it necessary to start from scratch? Can the existing system be upgraded? How much upgrade is needed?
  - iii. Are districts contributing to the cost of the system? Or, is the state paying for necessary changes to the district systems as well as the state system? Are there economies of scale in securing statewide licenses by states on behalf of districts?
  - iv. Staff resources are needed to develop and maintain the system, along with professional development costs for training users. How much expertise currently exists in-house?
- b. A data system is never 'done.' Funds for sustainability—maintenance, upgrades, etc., are critical.

#### 4. STUDENT-LEVEL DATA REQUIRES PRIVACY, SECURITY, AND DATA GOVERNANCE CONSIDERATIONS.

- a. Student-level data allows for tremendous capacity to improve student achievement. Privacy statutes (federal and state) need to balance respect for student privacy with sufficient access in order to best serve the student.
- b. The issue of ownership is key to many privacy and security issues: Who owns/controls the data? Who owns/controls the exchange of electronic student records/student transcripts? The state or the district? What is the role of regional service districts?
- c. Data warehouses may be centralized or distributed. Who controls the data warehouse? Who decides on the kinds of reports/analyses that can be created using business intelligence tools with the data warehouse?
- d. Some security features can be embedded in the technical infrastructure; other security measures must be implemented through a data use/data access policy.
- e. Data use policies should outline both appropriate and inappropriate uses of the data.

#### 5. DATA QUALITY IS A CONSTANT CHALLENGE.

- a. Education data originate in the school and are reported up through the district, state, and federal levels. Every individual who generates, collects, and reports data has an impact on the quality of the data in the state system. The quality of the data used for decision-making will affect the soundness of the decisions made. Investments in assuring data quality are critical.
- b. A statewide data dictionary can help ensure the consistent use of data definitions and greatly improve data quality. Use of the data dictionary should be required by all schools and districts in the state.
- c. States need a well-defined and enforceable calendar for data collections to ensure timeliness, and collection mechanisms should be uniform for all collections.
- d. Sufficient lead time is needed to collect new data elements or implement changes in data definitions or calculations. Generally, at least one to two years are needed to implement system changes to collect a new data item.
- e. Longitudinal, cohort calculations require consistent data definitions over time and sufficient years of data.
- f. A good strategy to improve data quality is to only collect data that is useful to the data provider (i.e., schools and districts).

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