

A Solution-Finding Report

Title: State Data Systems

Date: March 12, 2009

Prepared for: Southeast Comprehensive Center (SECC)

This document responds to a request from, Camille Chapman, of the Southeast Comprehensive Center. The request was initiated by Dr. Kris Kaase, deputy superintendent for instructional programs and services in the Mississippi Department of Education (MDE). Requesting information about what other states are doing regarding their data systems, the query specifically focuses on the following two areas:

- a data system that can generate customized reports for stakeholders for analyzing student and school performance.
- provide a web-based data system that guides school improvement planning through the retrieval of school data, multi-year, disaggregated student assessment data, and suggested resources for addressing areas in need of improvement.

In the request, Dr. Kaase stated that the MDE is very interested in access to view other SEA systems. The MDE is interested “particularly in what Massachusetts and Iowa are doing, but also would like information on any other state systems that seem appropriate.”

This *Solution-finding Report* is intended to provide a quick response to the request for information; it is not intended to be a definitive literature survey or synthesis of the topic.

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1. MASSACHUSETTS

A. Education Personnel Information Management System (EPIMS)

<http://www.doe.mass.edu/infoservices/data/epims/>

“As state and federal reporting requirements, and requests for information get more detailed and complex, it has become increasingly difficult to answer such requests through an aggregate data collection. Collecting individual data will allow the Department to aggregate the data in many different ways and to do so consistently across all districts. In addition to meeting federally mandated NCLB highly qualified teacher reporting requirements, the Department will use this data to understand what is working and what is not and to identify shortage areas and plan for the future. Some examples of the questions being asked include:

- What type of licenses do middle school teachers typically have?
- How many educators are nearing retirement age?
- What percentage of new staff stay for more than one year? Does that vary across districts?”

“Aggregate data will be accessible via the Department's website. More detailed data will be made available upon request. This data collection will not make anything public that was not already public information and accessible via a request to the districts and charter schools. The Massachusetts public records law requires the Department of Elementary and Secondary Education to provide, upon request and within statutory constraints, a copy of any public record that the Department maintains.”

“The Department uses data on the races of school and district staff only in the aggregate. The Department anticipates using the data to analyze the impact of policy decisions on issues such as the diversity of the Massachusetts educator workforce. The Department also plans to use the aggregated data to help schools and districts to recruit, hire, and support a diverse educator workforce. In addition to meeting the requirements of Massachusetts law, collecting the data through EPIMS will also assist in complying with U.S. Department of Education (USDE) requirements. Each year, the Department is required to submit a wide range of education data to the USDE as part of the ED Facts data initiative via the Education Data Exchange Network (EDEN).

“Districts will be able to access a number of standard reports based on their own school and district data. In the future, the Department hopes to increase the functionality of the database to provide districts with more querying capability, such as the ability to support recruitment activities and to identify potential candidates for shortage areas.”

“In keeping with current practice, if a problem regarding licensed personnel is identified, the Department will work with districts to correct the problem. It is the responsibility of districts to ensure that all personnel are properly licensed.”

B. Student Information Management System (SIMS)

<http://www.doe.mass.edu/infoservices/data/sims/>

“The Student Information Management System (SIMS) is a student-level data collection system that allows the Department to collect and analyze more accurate and comprehensive information, to meet federal and state reporting requirements, and to inform policy and programmatic decisions. The SIMS has two important components:

- A unique student identifier for all students receiving a publicly funded education in Massachusetts, and
- Transmissions of data from districts to the Department for all students via the security portal.

Collected and reported student data includes, but is not limited to the following:

- Assigned student identifiers combined with unique school and district codes for longitudinal data gathering
- Gender, race/ethnicity, enrollment status and financial responsibility (of districts)
- Grade Level
- Days enrolled and Days in Attendance
- Low-Income Status: That is, 1. The student is eligible for free or reduced price lunch; or 2. The student receives Transitional Aid to Needy Families benefits; or 3. The student is eligible for food stamps.
- Title I Participation
- Limited English Proficiency, LEP Students in their First Year in U.S. Schools, their Immigration Status, and their first (native) language, the type of ELL program in which a student is enrolled
- Enrollment in an alternative education program; Title I school choice participation, that is, an indication of a student’s enrollment in a school after transferring from a Title I school in the district that is identified for improvement, corrective action, or restructuring.
- Career/Vocational Technical Education Participation and Competency Attainment: participation in and program type in which a student is enrolled or a credential issued to a student enrolled in a specific career/vocational technical education program.
- Special Education—Nature of Primary Disability: The major or overriding disability condition that has been identified by a team [of evaluators and that is] known to be causal to an inability to make effective progress in education and requires special education services in order to access the general curriculum or specially designed curriculum.
- Special Education — Level of Need: The degree of service that the student receives as determined by the school district upon review of the student’s IEP.
- Special Education Placement, ages 3–5, and ages 6–21: An indication of the educational environment of a student with disabilities
- High School Completer Plans: An indication of what a student plans to do after completing high school.
- Graduate, Completed Massachusetts Core Curriculum: an indication of whether a student has met the graduation requirements of the Massachusetts Core Curriculum, designed to prepare students for college, work, and citizenship.
- Number of In-School Suspensions: The number of disciplinary actions imposed by school officials that removed the student from academic classes and placed him/her in a separate environment. The student remained in school during the suspension period.
- Number of Out-of-School Suspensions: The number of disciplinary actions imposed by school officials that removed the student from participation in school activities. The student remained out of school during the suspension period.
- Student Truancy: The number of school days a student was recorded as truant
- Advanced Placement Courses 1–5: The program includes a demanding academic course of study in college-level subjects such as physics, biology, calculus, and foreign languages, among others. A student who performs above a specified level on the assessment may be awarded college credit for certain courses upon entry to the institution, as defined by the National Center of Education Statistics (NCES).

C. Education Data Warehouse

<http://www.doe.mass.edu/infoservices/dw/>

“The Education Data Warehouse (EDW) is a collaborative effort of the Massachusetts Department of Elementary and Secondary Education and local school districts to centralize K-12 educational performance data into one state coordinated data repository hosted by the Department. The most important facts for districts to know about the EDW are the following:

- It is free and available now.
- It already contains the SIMS and MCAS data for every district in the state.
- It will soon contain the EPIMS data for every district in the state.
- The SIMS and MCAS data moves with the student from district to district.
- Over 30 reports exist to compare data from individual schools and districts to state totals.
- Districts can load local data into the EDW and write their own reports.

The Education Data Warehouse User Guide is available for download below. Additional information and instructional documentation, including a six-course training program complete with training materials, is available to authorized EDW users on the EDW portal.

<http://www.doe.mass.edu/infoservices/dw/>


Among information there, see especially Chapter 3, <http://www.doe.mass.edu/infoservices/dw/chapter3.pdf>, which explains how to run “predefined reports,” that is, “reports that have been created by the Department’s Education Data Warehouse team for districts to access state-loaded SIMS and MCAS data.” See also Appendix B—*Glossary of Predefined Reports*, “created as part of the curriculum... *Informing Instruction with Data*,” webpage (<http://www.doe.mass.edu/infoservices/dw/reportlist.pdf>), which presents the predefined MCAS reports with “detailed descriptions of what they were designed to show and how they are intended to help districts.” Also explained in Chapter 3 are Analysis Cubes, “a web-based, multi-dimensional analysis tool that provides secure data access and fast retrieval of data through a cube structure. Multi-dimensional analysis is a process where you selectively identify and evaluate multiple aspects of performance against key performance indicators. Selective performance-data records for your district are gathered, summarized, organized, and presented in the way you think about your student performance questions.”


2. IOWA

Sections of the Iowa Department of Education’s Educational Statistics webpage are presented below. [In general, the data presented there at this time seems to be static rather than dynamically manipulable, but that may be a function of accessibility; further this *Solution-finding Report* cannot account for planned augmentation or that already underway—editor].

http://www.iowa.gov/educate/index.php?option=com_content&task=view&id=346&Itemid=2454

“This section presents the data collected by the Department in various formats. While most of the data are presented in excel spreadsheets that users can download for their own analysis, maps and written reports, including the annual [Condition of Education Report](#), are also included. Topics covered include (but are not limited to) enrollment, free and reduced meal eligibility, limited English students, and technology.

Condition of Education Reports: “The Annual Condition of Education Report provides a wide range of Iowa education statistics and data. Included in the report is information on student and staff demographics, enrollments and enrollment trends, student achievement, district programs, and school finance. Information published in the report is intended to provide the citizens of Iowa a comprehensive look at the education system in Iowa.” See for example:  [2008](#). Data relates to regional and national as well as instate information.

State Report Cards: “The No Child Left Behind Act of 2001 requires each state to provide an annual report card to inform stakeholders about the progress of students and schools on indicators of student achievement and other information that is related to student success.” See for example:  [2008 \(revised\)](#).

Non Student District Data: “This information category includes various data regarding [building](#) and [district directories](#), district/[AEA](#) reorganizations, [technology](#) in districts and district/[AEA maps](#).”

Program Data: “This information category includes data on [Early Childhood Programs](#) and [Curriculum](#).”

Staff Data: “This information category includes data at the District and AEA levels regarding staff salary and experience.”

Student Data: “This information category includes data regarding [Enrollment](#), [Enrollment Projections](#), [English Language Learners](#), [Free and Reduced Lunch Eligibility](#), [Immigrants & Migrants](#) and [Student Performance](#).”

3. DELAWARE

Certain data on student academic progress is derived from the Delaware Student Testing Program (DSTP), but the state anticipates replacing the current DSTP with an improved online assessment by late 2010. General plans for the new assessment may be review at

<http://www.doe.k12.de.us/news/2009/0305.shtml>

A. Delaware Student Testing Program (DSTP) Online Reports

<http://dstp.doe.k12.de.us/DSTPmart9/>

Currently, the Delaware Student Testing Program provides the following online reports:

Statewide Summaries: “Percent meet or exceed standard, percent below standard, average scale scores, and number of students aggregated at state level for each of the five content areas [reading, mathematics writing, science social studies] on any DSTP tests.”

Summaries By District: “Various summary statistics for each of the five content areas and any DSTP test by district for cross-district comparisons.”

Disaggregated Summary at the State Level: “State level disaggregated summary statistics by Education Type, Low-Income, Race, Gender, ELL Status, Title 1 Status and Migrant Status for any content area and any DSTP test.” [These categories are dynamically selectable by content area (reading, mathematics writing, science social studies) and year, beginning with 1998–99 through 2007–08.]

Achievement Gap Analysis - State Level: Statewide Achievement Gap Analysis for minorities, low-income, student with disabilities, ELL, and Title-1.

District Summary: For a selected District, aggregated or disaggregated summary reports, INC reports, Matched-Score reports, By-School reports. Also drill down to obtain school level summary reports.

Charter School Summary: For a selected charter school, aggregated or disaggregated summary reports, INC reports, Matched-Score reports, By-School reports.

Instructional Needs Reports: Instructional Needs Comments Reports for Reading, Math and Writing for a selected test year and test grade. [Comments are noted by the number of students receiving comments, total number tested and, percentages of students receiving comments. For example, the following present the six comments used for the Instructional Needs Comments Report for statewide eighth grade reading (without accompanying numbers or percentages):

“Determining meaning by reading more carefully to retell or restate information from the text.
Interpreting meaning by drawing conclusions about the central ideas in a text and understanding why a text was written.
Interpreting meaning by understanding elements of text (e.g., figurative language, genre, fact/opinion, comparisons)
Extending meaning by drawing conclusions and using critical thinking to connect and synthesize information within and across text, ideas, and concepts.
Extending meaning by evaluating text for bias and accuracy in order to formulate and support opinions.
Continuing use of good reading strategies.”]

Matched Scores Performance Level Comparison Matrix: “Comparison matrices of performance levels for various matched-score pairs. For example, reading performance levels comparison based on matched-scores of students tested both in 2005 Grade 8 and 2002 Grade 5.”

DAPA Summaries: Summary for Delaware Alternate Portfolio Assessment (DAPA).

Student Survey Summaries: Summary for Student Survey at each DSTP test. [Likert-like scales, disaggregated by race or gender, and by content area, to a series of questions; e.g., “How often do you actually use scientific equipment (e.g., balances, microscopes, thermometers, probes, calculators, hand lenses, etc.) in your science class?”]

B. Customized DSTP Summary Reports

<http://dstp.doe.k12.de.us/DSTPmart9/SliceDiceStep1.aspx>

“Build your customized DSTP reports.” [This feature allows users to generate, through a series of customizing, dropdown menus, three different report types, (“general summary,” “instructional needs,” or “matched scores”) in five content areas for years beginning in 1998 (or all years), for any number of selected individual districts and/or schools, or statewide, for specific grade levels or all grades tested, and then filtered by race, sex, special education, low-income, LEP, Title I, and/or migrant variables. This feature seems to be similar to the Analysis Cube available at the Massachusetts Department of Education’s Data Education Warehouse.]

4. GEORGIA

The Georgia Department of Education’s Data Utilization webpage provides a wide range of assessment reports and useful data for data-driven decision making as well as a *Utilization Guide* that promise a “one-stop-shop for all your data interpretation and analysis needs. Topics range from interpretation of hard copy reports to professional development activities for your staff.” For student achievement, Georgia has instituted a “balanced assessment approach as described [and advocated] by NEA...[that is] a comprehensive system; one where large-scale state assessments are used in concert with frequent formative classroom assessments. Both measures are of equal importance.” The Data Utilization webpage may be accessed at the following URL

http://www.doe.k12.ga.us/tss_school_improve.aspx?PageReq=TSSSchoolImpData

Follow the instructions for downloading the Zip files and accessing the *Guide*, which describes the types of assessments administered in Georgia, their uses, provides sample reports and templates for use by administrators and faculty, a description of the Online Assessment System, a guide to further using student level data, and resources for school improvement.

A. Online Assessment System (OAS)

“The Georgia Online Assessment System contains a large number of test items spanning grades one through eight (CRCT items), and high school (GHSGT items) in all content areas assessed at a specific grade level. The online system permits students to take released CRCT/GHSGT items via the internet. This provides a channel for students to become familiar with the test format, receive feedback on their strengths and weaknesses within content areas, and review questions that he/she answered incorrectly. Therefore, students can begin to evaluate their own progress and follow up on their unique needs. Parents are not only allowed to access the system, but encouraged to assist their child and to review his/her progress.

“The system is especially useful to teachers while creating assessments at the end of instructional units. Multiple class level and student level reports are available that may assist teachers in the evaluation of their instruction. In addition, the system aids in pinpointing student needs that can be addressed prior to the end of the year assessment. Therefore, the OAS can be thought of as a formative tool that can be used throughout the year prior to the summative assessment.”

B. Student-Level Data Analysis

This component allows, through the use of Microsoft Excel (and guides for novice Excel users), installed on most computers, teachers and administrators “to reorganize student information quickly” develop “summary information at a ‘deeper’ level than what the hard copy reports provide....The instructions contained within this section are intended to be an overview of three convenient Excel tools: Filtering, Pivot Tables [which allows disaggregation of data in any column within the file], and the Data Analysis Tool Pak. In addition, specific practical applications of the tools are provided....This section is meant to save [users] time and/or provide more information ...to assist students.”

5. ARKANSAS

A. NORMES School Performance

The Arkansas State Department of Education data system has been reported by CII contacts as being “very impressive.” On its NORMES School Performance webpage, users can view an on-line version of

the performance report for the state, or view and compare by district or school. The Advanced Compare tool of this webpage provides “educators, parents, policy makers and researchers a powerful tool to inform their decisions. The Advanced Compare site allows users to search for schools that match selected criteria and returns schools that meet those criteria. For example, [users] can search for schools that have a certain enrollment or have a given percentage of free/reduced lunch participants. This site allows users to identify schools that look like their own school and to compare performance between schools.” Bar graphs effectively highlight longitudinal changes in performance. See the webpage at:

<http://normessasweb.uark.edu/schoolperformance/>

B. GAPS, the Geographic Academic Policy Series

The NORMES School Performance system is also used to address certain research questions through GAPS, the Geographic Academic Policy Series, “to provide a quick snapshot using geographical information and colors to represent the results for the analyses. This process began by obtaining the latitudinal and longitudinal information for the geographical boundaries of school districts. Next, [Arkansas personnel] analyzed districtwide performance data from the Arkansas Benchmark and End-of-Course exams for literacy and mathematics, *based on some of the most frequently asked questions about educational policy* [editor’s italics]. Finally, for each map, we provide a narrative of the methodology and a brief interpretation from our perspective.” See the webpage at:

<http://normessasweb.uark.edu/gaps/>

C. Statewide Information System Database

Also available is the Statewide Information System Database, with a variety of state, county, district, school, student, personnel information:

http://www.adedata.k12.ar.us/FY06_07/

6. THE STATEWIDE LONGITUDINAL DATA SYSTEM GRANT PROGRAM

<http://nces.ed.gov/programs/slids/>

State officials may wish to contact personnel connected with the Statewide Longitudinal Data System Grant Program, administered by the National Center for Education Statistics, as a possible source for information of what specific features a robust state data system might provide. Because the program is now about 7 years old, administrators should have some recommendations on design and implementation procedures. CII personnel recommend contacting Kashka Kubzded at NCES, 202-502-7411, Kashka.Kubzdela@ed.gov.

“The Statewide Longitudinal Data System (SLDS) Grant Program, as authorized by the Educational Technical Assistance Act of 2002, Title II of the statute that created the Institute of Education Sciences (IES), is designed to aid state education agencies in developing and implementing longitudinal data systems. These systems are intended to enhance the ability of States to efficiently and accurately manage, analyze, and use education data, including individual student records. The data systems developed with funds from these grants should help States, districts, schools, and teachers make data-driven decisions to improve student learning, as well as facilitate research to increase student achievement and close achievement gaps.”