



Indicator: The district provides schools with technology, training, and support for integrated data collection, reporting, and analysis systems. (5625)

Explanation: It's tough to keep up with all the advances in technology these days, but somebody has to do it. And that somebody is the district, providing an infrastructure of technology for itself and its schools and providing training and support so that the technology is put to good use. Student personnel data, assessment data, curriculum, instructional planning, classroom instruction, and improvement reporting are all facilitated by technology-based systems. Good systems relieve people of paperwork burden, structure their work, and place valuable information in their hands.

Questions: What kinds of technology does your district use to help schools manage the various kinds of data they use? How does your district train personnel to use the technology, and how does it support them in its use?

The need for dependable and consistent data collection in the service of school reform is apparent. First of all, federal and state accountability necessitates data-driven decision making in school district. Secondly, regulatory compliance requires schools to maintain some coordination of evaluation and research. Thirdly, financial audit reports, civil rights compliance information, special education and Title 1 data all require a system of data collection that provides reliable feedback.

Fragmentation in data organization has contributed to problems of inaccessibility, coordination, and accountability. In large urban districts, even superintendents encounter difficulties in gaining full access to the district's entire data base that connects students to their classroom teachers. In such situations, attempts at providing feedback are weakened (Wong, 2007)

This weakening works against what research indicates regarding the use of comprehensive feedback. Black and William (1998) report there is substantial evidence to assert that initiatives focusing and strengthening the use of formative assessments often observe substantial learning gains. They also report that in situations with many low performing students, the use of formative assessments can raise underperforming students' achievement and also improves achievement for the entire group, with effect sizes between 0.4 and 0.7 in the experiments they observed. A district which collects, organizes, and supplies ample feedback through technology, training, and support enables teachers to modify their teaching and learning standards for all of their students. For example, districts in New Jersey use the NJ Standards Measurement and Resource for Teaching (NJ SMART), a student level data reporting and unique statewide student identification system which provides important resources to districts:

- Integrated state assessment data, providing districts with access to assessment reports that will allow easy monitoring and comparison of critical performance measures;
- Unique student identification numbers (SID) that allow students and their performance to be tracked more

effectively over time, even as students transfer in and out of districts;

- Local departments which will offer the opportunity for districts to bring together data that are currently stored in a variety of locations into one integrated data warehouse, allowing staff to access linked student data. (State of New Jersey, 2007, p. 6)

Another example is the Texas Assessment of Knowledge and Skills. This web-based portal allows teachers to access Profiler for Academic Success of Students, a student information management system (Wong et al., 2006).

Districts are charged with keeping abreast of an ever changing technological world. Technology can include “computers, mobile/handheld devices, interactive white boards, social media and multimedia tools, simulations, and games” (National High School Center, 2011, p. 127). Classrooms are now equipped with laptops and ipads, but “the effective integration and implementation of educational technology is critical to ensure that these tools can make a difference in the academic achievement of all students” (National High School Center, 2011, p. 127). Bransford, Brown, and Cocking (2000) state that the “mere existence of these tools in the classroom provides no guarantee that student learning will improve; they have to be a part of a coherent education approach.”

References and Resources

- Black, P., & Wiliam, D. (1998). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 80(2), 139–44.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. Expanded edition. Washington, DC: National Research Council.
- Brier, B., et al. (2006). When technology supports teachers' work: Implementation of Houston's Teacher Tools Online Initiative. In K. Wong & S. Rutledge (Eds.), *System-wide efforts to improve student achievement*. Greenwich, CT: Information Age Publishing.
- Center for Implementing Technology in Education, www.CITEd.org *A one-stop Web site for vetted resources on implementing technology into teaching and learning, categorized into custom searches and role-based responsibilities.*
- Center for Implementing Technology in Education. (n.d.). *Technology Works! Information Briefs*. CITED Learn Center. Retrieved from http://www.cited.org/index.aspx?page_id=2 *Articles written for practitioners on focused topics around the use of emerging technologies for learning.*
- Center for Implementing Technology in Education. (n.d.). *EdTechLocator*. Retrieved from <http://www.edtechlocator.org> *A role-based map and self-assessment for implementation teams to use for technology planning and implementation.*
- Center for Implementing Technology in Education. (n.d.). *Implementing and Scaling Up Technology*. Retrieved from http://www.cited.org/index.aspx?page_id=190 *Based on the science of implementation, these research briefs identify the key issues in implementing, scaling up, and sustaining a technology initiative.*
- Center for Implementing Technology in Education. (n.d.). *Multimedia Technologies*. Retrieved from http://www.cited.org/index.aspx?page_id=141 *12 articles to help integrate multimedia technologies into classroom teaching.*
- National Center for Technology Innovation, www.NationalTechCenter.org *Project that connects implementation leaders, technology developers, policymakers, and consumer technology trends and research.*
- National Center for Technology Innovation. (n.d.). *Consumer Guides*. Retrieved from <http://www.techmatrix.org/consumerGuides.aspx> *Decision-support tools for school administrators as they consider purchasing and implementing technology.*
- National Center for Technology Innovation. (2008, January). *The Power of Social Media to Promote Assistive and Learning Technology*. Retrieved from <http://www.nationaltechcenter.org/index.php/2008/01/29/rpt-power-of-social-media-final/> *An Issue Paper by the National Center for Technology Innovation that provides guidance and rationale for using social media tools to communicate and educate.*
- National Center for Technology Innovation. (2009). *The Tech-Matrix*. Retrieved from <http://www.techmatrix.org> *A free, searchable online database of products reviewed for their accessibility and universal design features along with a database of research on the use of technology for students with disabilities.* [p://www.techmatrix.org](http://www.techmatrix.org)
- National Center for Technology Innovation. (2009). *Unleashing the Power of Innovation for Assistive Technology*. Retrieved from <http://www.nationaltechcenter.org/index.php/2009/11/16/rpt-innovation-for-assistive-technology/> *An Issue Paper by the National Center for Technology Innovation that outlines five key themes in technology development that define “state-of-the-art” educational and assistive technologies.*
- National High School Center. (2011). Choosing and implementing technology wisely. In C. L. Perlman & S. Redding (Eds.), *Handbook on effective implementation of school improvement grants* (pp. 127–128). Charlotte, NC: Information Age.
- Wong, K., et al. (2006). District initiatives to improve curriculum and instruction: Views of administrators on Houston's Teacher Tools Online Initiative. In K. Wong & S. Rutledge (Eds.), *System-wide efforts to improve student achievement*. Greenwich, CT: Information Age Publishing.