



NCLB Policy Recommendation

Grants for Statewide Data Systems: Leveraging Federal Reporting Requirements for Data Informed Instruction & Accountability

Purposes:

- Provide states with block grants that support systemic approaches to school improvement using the Federal reporting requirements as leverage for states to recognize need for planning and implementation of “just in time” instruction with the data collected.
- Use federal leadership to expand upon the current investments in technology and build the human capacity of state, district and school educators to recognize the importance of state wide data systems both planning, implementation, and the need for educators to learn the skills to analyze the appropriate data.
- Use federal reporting requirements in combination with the proposed state grants as a catalyst for state funding to modernize pedagogical approaches that inform instruction, increase personal accountability, and improve the quality of information shared among stakeholders.
- Provide incentives for states to invest in the implementation of statewide data systems that not only report NCLB required data but improve teacher and student accountability, real-time assessment, and achieve individualized instruction for each student.

The Need

A New Title Addressing Statewide Data Systems Under NCLB for State Grants:

President Bush mentioned the need for proper technology infrastructure to increase productivity and reduce costs within the Healthcare industry during his State of the Union Address. This is also imperative in building a competitive workforce through our nation's public educational institutions – Which are similarly inadequately equipped to maximize productivity due to a lack of leadership and ownership of the technological infrastructure within most states.

Leverage the Investment Already Made

The federal government has allocated resources to wiring the classrooms with Internet access and providing teachers and students with computers, but this investment has resulted in “islands of excellence” rather than wide ranging transformation. The vast potential of this past investment will not truly be realized until states have the capacity to leverage networked Internet ready computers into a cohesive data system for high-stakes online assessments, project based learning, student-centered portfolios, online professional development and individualized instruction.



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School and Teacher Quality

The data being collected for federal reporting requirements should be used for accountability purposes, but this data should also be shared with district and school level educators in the form of user-friendly data points and reports that inform specific instructional approaches and promote the advancement of student learning. The real-time reports should not be punitive, but serve as professional development tools to address individual teacher and school quality.

We Are Not There Yet

The National Council for Educational Accountability (NCEA)'s survey on statewide data systems found that many states currently have statewide data systems and/or collection vehicles in place, but none of them are robust enough to fully address the Essential Elements for Statewide Data Systems that are necessary to fully deliver on the goals of No Child Left Behind (NCLB). In fact, only 16% of the states have more than six of the ten essential elements in place. For details view:

http://www.dataqualitycampaign.org/activities/state_of_nation.cfm.

Business as a Model: True Accountability through Proper Data Use

We witnessed business successfully take the leap to data driven decision making in the last 20 years, but it wasn't without investment and pain. With demonstrated productivity gains, it is evident that the investment made by businesses provided them with a solid return.

Business Using Data for Accountability: A strong business example of accountability through the appropriate use of data is the case of United Parcel Service (UPS) and/or Federal Express. Both companies embraced the notion of accountability and invested in a technological infrastructure necessary to track each package individually from point A to point B. These businesses are thriving due to their strategic decisions to embrace accountability and streamline its processes with data systems.

- ***One Decision: UPS Goes Bluetooth - To track its millions of packages, UPS is going to a wireless scanning system.***
http://www.technologyreview.com/BriefcaseSpecialSection/wtr_16269_326,p1.html
- <http://www.sustainability.ups.com/future/main.html>

It is not being suggested that America's students are to be treated like packages. But in the case of UPS each package is treated as an individual entity – which is the goal of NCLB. It cannot be accomplished with pen and paper. Robust statewide data systems must be in place to achieve “data informed instruction” for all learners.



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Just In Time Teaching With Flexible Content & Quality Data - Another possible example where business can inform the discussions of effective uses of technology in education is Dell Computer's just in time manufacturing approach. Instead of carrying the cost of inventory on computers that have not been sold and may not address the needs of the purchaser, Dell chose a business model that provides them with the flexibility to build each computer to the exact specifications of each customer. This approach keeps costs low and it ensures that each customer receives a computer that matches their specific needs.

Dell's Make-To-Order System Leaves Competitors in the Dust
<http://www.manufacturingnews.com/news/98/0703/art1.html>

Dell's approach to customize production and output is something to analyze in education reform discussions. Just as each Dell Customer has different needs, each American student has different needs. One book does not necessary fit all learners. Dell's approach in education would explore the notion of replacing costly printed books with quality learning objects available in various media (some books) that is all mapped to federal, state and local standards. Teachers could select these learning objects for their whole class, as individual interventions, or as enrichment activities for excelling students. Leveraging the potential of a statewide data system to organize and deliver flexible and individual learning objects that are tailored to each student's learning needs would provide teachers with more influence on each student's learning path and it would decrease overall costs by paying for only what is actually being used for instruction. Additionally, the individualized approach would hold the teacher more accountable for his/her pedagogical approaches and the students more accountable for their own learning.

More Business Approaches

The American Productivity & Quality Center (APQC) is a non-profit membership organization that analyzes business approaches and shares best practices. APQC has created some valuable research and reports that use business as a model to address the proper use of data in schools. APQC believes that, "Every school has opportunities for improvement and can leverage the membership's expertise and methodology. Go to http://www.apqc.org/site/bookstore/html/Education_Publications.html to view best-practice research, metrics, and tools, and authored by leading experts.

Comprehensive Research Glossary

For references and resources supporting the planning and implementation of statewide educational data systems, visit the research section of "*Using Data for School Reform*" chapter.



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Incentive for State Funding

The existing IES State Longitudinal Grants are a good start, but do not adequately fund full implementation or provide the necessary incentives that will drive state funding to enhance each state's data systems. It is recommended that the current IES grant be expanded under the reauthorization of NCLB to include 1) a competitive process for small states that have

not begun their data system projects and 2) a formula based on a per pupil allocation based on a state match for the enhancement of their existing data systems.

This proposed state grant under NCLB could provide state level educators with the leverage necessary to secure matching state level funding to address the vital need in every state to enhance their current systems. The grant will help convince state legislators of the need for funding to enhance or create statewide data systems even in the case of difficult budget circumstances or push-back on perceived unfunded mandates and over-zealous reporting requirements from the Federal Government.

State Grant: Key Components

Component A: Alignment to Federal Reporting Requirements & Analysis of Needs

States will use this funding to align state data to the EDFAX federal reporting requirements. States will need to develop a glossary of common language as well as document excepted practices around data collection for their state that address federal reporting requirements, data transferability among states and districts, and streamlining reports and data dissemination processes.

This component will also address the importance of analyzing current resources at the school and district level to ensure participating jurisdictions have the technology (Internet connections, computing power, software, servers, and hard disk space) necessary to successfully implement the data collection, reporting, assessment processes and content delivery the system demands.

- Developing a data dictionary of all the elements
- Alignment of state and federal standards
- Address transferability of data among states
- Streamlining reports and processes

Leadership & Communications

Successful grantees will outline a consistent communications plan that includes an active Statewide Leadership Team including:

- MIS Professionals
- Education Technology Professionals
- Business Administrators
- District Level Leaders



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- State Level Leaders (Deputy Commissioner or Assistant Commissioner)
- Curriculum Professionals
- Virtual Learning Professionals
- Professional Development Professionals
- Assessment Professionals

This Leadership Team will develop a communications plan that includes consistent reports to the federal and state government on the progress of the data system implementation process.

Component B: Successful Implementation, Long Term Maintenance & Sustainability

Each state will assess and demonstrate its ability to manage, implement, and maintain the data system. As part of the block grant application process, each state must demonstrate its ability to maintain the system adequately and independently with state and/or private funding preceding the federal development phase involvement of the program.

This analysis should include:

- School connectivity and bandwidth analysis through surveys and observations.
- Security plans and safeguards from an MIS and data perspective. Seven year development project plan with implementation timelines for a data system based around the NCEA framework that will include but not be limited to how the system will:
 - Collect and distribute assessment data at the student level.
 - Maintain the privacy of teachers, students, and parents.
 - Enhance parental and community participation in school effectiveness with a strong communications infrastructure.
 - Align teachers with students and distribute effectiveness data to schools for accountability purposes.
 - Aggregate and disaggregate data.
 - Track teacher certifications and professional development activities.
 - Integrate state and federal standards at the student level.
 - Provide virtual learning opportunities aligned to standards and assessments in core curriculum areas such as math, science, foreign language, and social studies.
 - Offer interoperability for schools to easily share records of migrant students.
 - Provide students with individualized learning opportunities such as “my education space” and portfolios.

Component C: Data Integrity Training at the School & District Levels



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A successful grant application will address school level MIS needs including extensive training for administration employees and/or an adequate regional system to address technology maintenance needs at the school and district levels, privacy policies (FERPA training), data integrity issues, report planning and processes.

This data integrity training will be best managed by the person at the state level who is familiar with the federal reporting requirements for data and who has a strong MIS background. The data integrity component is critical to the success of the statewide data system and thus needs to develop appropriate processes within the state's infrastructure to address the goal of having flexible, quality data that can be manipulated for federal reporting as well as individualized instruction at the student level.

Component D: Data Informed Instruction & School Improvement

A significant portion of the grant should be allocated to professional development of teachers, office personnel and administrators regarding the opportunities for individualized instruction through the proper use of data. This portion of the program will leverage the data and use it to enhance teaching and learning for all students. This component will be administered by the person in charge of educational technology within the state in cooperation with the overall data system leadership team. It will provide professional development and technical assistance on data analysis, provide user friendly solutions for manipulating the data, strategies for identifying individual learning needs, and tools for addressing those needs through innovative, individualized approaches.

Each grantee will address the need for a process to analyze and disseminate best practices, strategies, and approaches regarding pedagogical advancement that will leverage the data system for the expressed purpose of enhancing teaching & learning.

Assessment/Evaluation of Success

The NCEA's Essential Elements for Data Systems listed below should be the framework for a grant evaluation as well as the state's performance against time lines and the implementation plan complete with the elements above set forth.

1. A unique statewide student identifier
2. Student-level enrollment, demographic and program participation information
3. The ability to match individual students' test records from year to year to measure academic growth
4. Information on untested students
5. A teacher identifier system with the ability to match teachers to students
6. Student-level transcript information, including information on courses completed and grades earned
7. Student-level college readiness test scores
8. Student-level graduation and dropout data
9. The ability to match student records between the PreK-12 and higher education systems



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10. A state data audit system assessing data quality, validity and reliability

Grant Process for Funding

The funds will be distributed to all states based upon a per-pupil formula where each participating state is required to match at least 25% of the federal funding received for the purpose of developing and/or enhancing the statewide data system.

Those small states that may have more extensive development needs would be candidates for a grant administered under a competitive basis similar to the current IES State Longitudinal Grant.