Delivering Actionable Data for Education Decision Making

A State-District Partnership for a Learning and Performance Management System:

Description of Proposed Requirements

Illinois State Board of Education

December 1, 2009
# TABLE OF CONTENTS

I. INTRODUCTION .......................................................................................................................1  
II. CORE SYSTEM COMPONENTS ............................................................................................3  
III. OVERALL GUIDING PRINCIPLES ....................................................................................13  
IV. GOVERNANCE STRUCTURE ............................................................................................15  
V. PROFESSIONAL DEVELOPMENT AND IMPLEMENTATION SUPPORT .....................15  
VI. COORDINATION WITH LONGITUDINAL DATA SYSTEM DEVELOPMENT ...........16  
VII. PROCESS AND TIMELINE FOR IMPLEMENTATION ...................................................17  
VIII. BUDGET AND FUNDING STREAMS .............................................................................18  
IX. CONCLUSION .......................................................................................................................19  

APPENDIX A ........................................................................................................................20  
APPENDIX B ........................................................................................................................23
I. INTRODUCTION

What is a Learning and Performance Management System, and Why is it Needed?

Business is undergoing an information technology transformation.¹ For the last three
decades, the predominant information technology solution for the corporate world has been the
client-server computing model, where each corporation maintains its own data center running
purchased software applications, linked to individual employees' PCs.² These systems have led
to complexity and inefficiency. As companies add more applications, they must expand data
centers, install new hardware and software, reprogram existing equipment, and increase IT staff.

Increasingly, however, a new model is emerging – one where centralized data processing
plants serve multiple customers over the Internet, eliminating the need for those customers to
undertake their own massive investments in IT solutions. Capitalizing on advances in the power
of microprocessors and the capacity of storage systems, these efficient "information utilities" use
the broadband Internet to deliver services and achieve economies of scale far beyond what most
companies can achieve with their own systems.³ Software and analytical tools are centrally
hosted by the information utilities, allowing users to forgo their own costly investments and
instead allowing them to access powerful capabilities simply through a web-based interface.

Illinois is uniquely positioned to apply this same transformative model to education data.
The State is embarking on an expansion of its longitudinal data system and the development of
its data warehouse—a multi-year, multi-million dollar investment. The State recently enacted
Public Act 96-0107, the P-20 Longitudinal Data System Act, which calls for Illinois to develop a
State system supporting broad local use and application. State system requirements established
by this Act include:

- Reducing data collection burden on school districts;
- Providing teachers and administrators with student-level data, summary reports, and data
  that can be integrated with local systems to inform education decision-making;
- Linking data to instructional management tools that support instruction and support
  collaboration;
- Providing data reporting, analysis, and planning tools that assist with financial oversight,
  human resources management, and other education support functions; and
- Improving student access to educational opportunities by linking data to student college
  and career planning portals and facilitating the submission of electronic transcripts and
  scholarship and financial aid applications.

¹ For a detailed description of this transformation, see Nicholas Carr, The Big Switch: Rewiring the World, From Edison to Google, W.W. Norton & Company, 2009. The descriptions in the first two paragraphs rely heavily on Mr. Carr's analyses in The Big Switch.
² Carr, pp. 55-57.
At the same time, the criteria established by the U.S. Department of Education for the Race to the Top Fund program include a number of elements suggesting a transformative education data solution. The criteria proposed by the U.S. Department of Education include:

- Development of a state longitudinal data system with all elements from the America COMPETES Act;
- Establishment of a high quality plan to ensure that data from the state's longitudinal data system are accessible to, and are used to inform and engage, key stakeholders;
- A high quality plan to increase the acquisition, adoption, and use of local instructional improvement systems that provide teachers, principals, and administrators with the information and resources they need to inform and improve their instructional practices, decision-making, and overall effectiveness; and
- A consistent theme of "rapid time reporting" – making data available quickly enough to inform current lessons, instruction, and related support.

The potential for significant additional funding through the American Recovery and Reinvestment Act allows the State to envision a system providing vast analytical and information resources that parallels advances in business information technology. As a central part of the State's Race to the Top application, Illinois intends to propose the development of a centrally hosted education information exchange that provides powerful web-based interface tools to support a broad array of instructional and education support functions (referred to throughout as the "Learning and Performance Management System", or "System"). The System will enable the State to host an integrated set of data elements necessary for use by the State and any district wishing to participate, integrate that data with other information held outside of the System, deliver web-based software applications that can be accessed at no-cost or reduced cost to the end user, and allow customization at the user level. The System will provide longitudinal data to a broad range of stakeholders to inform instruction and improve student learning, and ensure these stakeholders have timely access to needed information while protecting student and educator privacy. With the development and implementation of the System, Illinois can move from the current landscape of fragmented data across a multitude of "silod" district and State systems, to a common platform providing actionable data for every Illinois educator.

As districts face increasing resource pressures and seek new tools to prepare students for the 21st Century workforce, the need for a State-district partnership for a Learning and Performance Management System has never been greater:

- By freeing school districts from the client-server computing model, the System will allow districts to retire redundant systems and direct resources to classroom instruction that are currently spent on hardware, software, and IT maintenance.
- The financial and technical barriers to entry are too high for many Illinois school districts to develop high quality information management tools. The System will ensure that all Illinois districts have access to data management and reporting functions that support education decision-making.
- Economies of scale through common System components can help drive greater efficiencies in the delivery of services, and allow innovative features and capabilities to be quickly offered on a statewide basis.
More broadly, the implementation of the System will change the role of the State of Illinois with respect to education data. The State has made (and continues to make) a number of investments to collect data for accountability and compliance with reporting requirements. Moving forward, the State seeks to extend its focus to providing data for continuous improvement.4

Figure 1: From Now to the Future

With the implementation of the Learning and Performance Management System, the State of Illinois intends to move from the "Now" to the "Future" described below.

<table>
<thead>
<tr>
<th>Now</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult to integrate data across state and local systems.</td>
<td>Integrated set of data elements, sourced from districts and the state.</td>
</tr>
<tr>
<td>870 district-specific software/hardware solutions due to wide local system variance.</td>
<td>Common platform to launch a myriad of applications and innovations, easily customizable.</td>
</tr>
<tr>
<td>Multitude of local systems expensive to maintain and update.</td>
<td>Centrally hosted system with updates for all users. District resources can focus on customization and use of data.</td>
</tr>
<tr>
<td>State applications and reporting are not integrated into district views.</td>
<td>Districts receive advanced reporting and instructional tools, with integrated state/local data.</td>
</tr>
<tr>
<td>Small districts cannot afford to develop and maintain robust systems.</td>
<td>Standard applications and freely available (or low cost) third-party applications so that all districts have access to have high quality information management tools.</td>
</tr>
<tr>
<td>Relevant state data accessible to only a limited number of users.</td>
<td>Appropriate, role-based access to relevant data to a broad number of users. Frequent access to data by teachers/administrators provides a “self-cleansing” mechanism.</td>
</tr>
</tbody>
</table>

II. Core System Components

The Learning and Performance Management System will leverage advances in IT infrastructure to increase the availability and usefulness of instructional data while reducing the cost and complexity of innovation and collaboration. At the center of the System will be a centrally hosted "Data Integration Platform" and "Portal Platform," accessible to districts through a "cloud computing" model. All of the System's applications will rely on access to a core, integrated set of data elements, sourced from both the State and participating districts. The Data

Integration Platform will feed directly to Illinois State Board of Education (ISBE) base systems (such as its Student Information System) providing a simplified interface for district data uploads, based upon clear predetermined procedures.

Any user with high-bandwidth access will be able to utilize a network of centrally hosted instructional and educational resources, without having to operate a separate data center or manage individualized software applications. The System will rely on the Illinois Century Network as its telecommunications backbone—an existing State infrastructure for network access and storage that is in the process of being expanded to serve all school buildings in Illinois.

The System will incorporate a robust set of standard reports providing relevant data at the district, school, and classroom level. The System will also house a number of applications provided by the State, System users, and various third-party entities. By providing an extensible platform on which applications can be built and deployed, the System will provide the infrastructure necessary to provide all Illinois educators with access to robust reporting and analytical tools that support district administration, teaching, and learning.

Figure 2: System Architecture Diagram
A. **Data Integration Platform**

The Data Integration Platform will serve as the central "touch point" for all State and local data systems that connect to the Learning and Performance Management System. This platform will provide a common mechanism for districts to integrate data from existing systems to reside with data provided by the State. The Data Integration Platform will allow for appropriate levels of access to data, host applications that need data, and serve as the keystone for collaboration. Critically, each integrated database will meet the needs of the particular district. While the System will be centrally-housed, each district will retain ultimate control of the district-level integration. The State will only be able to access district-level data maintained within the Data Integration Platform through clear governance rules, as described in Section IV of this document. The Data Integration Platform is not intended to replace ISBE's SIS, which will need to resolve data issues between districts and develop state-level coding of data elements.

While districts will maintain control over data within the Data Integration Platform, this project will make state-level data integration more straightforward. For example, the System will provide similar integration procedures and tools for all districts, allowing ISBE to more readily provide technical assistance. It should lead to some consolidation of district level systems such as HR and SIS, and will provide for commonly integrated tools to be reused across districts.

Features of the Data Integration Platform will include:

1. **School district data upload interfaces:** Districts will be able to import and update data using any of the following approaches:
   
   a. Unattended bulk upload service, using a common data format.
   b. Interactive bulk upload applications, allowing district administrators to manually upload files and interactively discover and correct data errors.
   c. SIF integration – allowing for capture of single transaction messaging of data changes with a SIF zone environment.
   d. Direct single and batch transaction loads through direct APIs.

2. **School district data download interfaces:** Districts will be able to export and update district data systems using any of the following approaches:
   
   a. Unattended download services (with district defined download data formats).
   b. Interactive download procedures (with district defined download data formats).
   c. SIF Integration – system will send outbound SIF messages to SIF Zone environment with updates.
   d. Direct alert and data extract mechanisms through a direct API for both single and batch extractions.
3. **Data mapping and cleaning applications** for use on district data.
4. **Integration application** that allows for use with many data sources.
5. **Feedback and error reporting** for data and applications.
6. **Uploads to State systems**: Application for identifying data to be released to the State on a pre-determined schedule for inclusion in ISBE base systems (such as the Student Information System).

The System developer will be required to provide full-time support staff dedicated to helping districts set up and automate their integration with the Learning and Performance Management System.

Vendors must consider the following when recommending solutions for data integration:

- The State of Illinois has 870 district systems that vary in size from less than 100 students to over 400,000. Solutions will need to be adjusted and estimated for all districts.

- There is no standard SIS vendor in Illinois and therefore many vendors provide student information solutions to districts (30+).

- Similarly, no standards exist for operational systems such as HR and Finance or interim and formative assessment data collection and reporting systems. A goal of this project is to provide opportunities for districts to develop methods to consolidate and enhance their systems.

- The Data Integration Platform will become a "one-stop shop" for State data as well as district data. Therefore, the Platform must integrate with State level systems such as the SIS and teacher credentialing system.

**B. Portal Platform**

The Portal Platform will serve as the mechanism for defining role-based access and the location for providing reports to end-users. The Portal Platform will also act as the base platform for collaboration and structure for navigation. The Portal Platform will define much of the user interaction, and therefore will be difficult to replace after the System has been implemented. As technology improves and the web continues to transform, the Portal Platform must incorporate improvements so that the overall system benefits from enhancements to the underlying platform.

The Portal Platform will incorporate all of the following functional components of the System:

1. Role-based authentication and authorization, allowing different users to view different information based on need and level of responsibility for students. Roles defined in the System will include teachers, counselor/registrar, school administrator, district administrator, student, parent, and SEA staff.

2. Customization – the ability for the user to define the interface.
3. Personalization – the ability for the developer to define the interface based on user roles or groups.
5. Content Management
6. Page layout
7. APIs for adding new functionality
8. Common navigation and search features
9. Integration with Web 2.0/3.0
10. Highly interactive use of web elements
11. Integration with multi-media (video, audio)
12. Allow for Iterative and Modular Design
13. Provide open system that allows for Development Contributions
14. Allow for simple development of workflow
15. Allow for simple development of alerts and forms

C. Network Access and Cloud Infrastructure

Access:

The System will rely on the Illinois Century Network (ICN) as the telecommunications backbone ensuring low-cost, high-speed access to the System by all Illinois school districts. Presently, ICN is the largest broadband network in the nation, serving nearly 8,000 K-12 schools and other government and nonprofit entities throughout all 102 counties in Illinois. While the ICN is currently built on a model of leasing point-to-point connections between 14 Point of Presence (POP) sites, the ICN is transitioning to a State-owned, 1700 mile fiber network that will ensure network access by all public schools seeking to use the System. The State of Illinois has allocated $26 million in State capital funding for the project, and is requesting $104 million in ARRA funding.

Cloud Infrastructure and Data Storage:

In addition to ensuring network access, the State will leverage existing cloud and data center infrastructure to provide System data storage capacity at the lowest possible cost. The data storage/processing center will need to have sufficient capacity to host all of the State's data, data fed into the system by school districts, and possibly data from other states that eventually use the System. Possible components of the cloud infrastructure include the Illinicloud system, a scalable computing resources system spread across three data centers in Illinois, and university systems.

D. Robust Standard and Custom Reports
The System will incorporate a robust set of standard reports sourcing State and local data. The standard reports will incentivize district adoption by ensuring that users are able to receive relevant data at the district, school, and classroom level.

To the extent possible, and depending on the user's role, the System will allow:

- Drill down capabilities allowing the user to disaggregate information included within a report.
- Export of data to permit analysis and custom reporting.

At minimum, the standard reporting will include the reports identified in Figure 3.

**Figure 3: Standard Reporting and Data Access**

<table>
<thead>
<tr>
<th>Recipients</th>
<th>Description of Reports and Data Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>Teacher reports will consist of timely, structured, and relevant access to student data to inform instruction, including:</td>
</tr>
<tr>
<td></td>
<td>a. Access to detailed student reports, organized by classroom, on academic performance, attendance history, and services provided.</td>
</tr>
<tr>
<td></td>
<td>b. View of classroom data showing integrated views of current and historical high-stakes assessment data alongside interim assessment data.</td>
</tr>
<tr>
<td></td>
<td>c. Early warning system reports that provide information on whether individual students are at risk and in need of extra assistance.</td>
</tr>
<tr>
<td></td>
<td>d. Readiness reports to identify whether and to what extent each elementary, middle, and high school student is on track for success at the next transition point and prepared for college or the workforce by high school graduation.</td>
</tr>
<tr>
<td>Administrators</td>
<td>Administrator reports include the same reporting functions provided to teachers, and also include:</td>
</tr>
<tr>
<td></td>
<td>a. Goal-oriented reports focused on school and district improvement (with a direct connection to school and district improvement plans).</td>
</tr>
<tr>
<td></td>
<td>b. Dashboards on key student performance and staff performance measures, such as:</td>
</tr>
<tr>
<td></td>
<td>i. School-based attendance, including trend indicators,</td>
</tr>
<tr>
<td></td>
<td>ii. Ratio between retention rates of top- and bottom-quartile teachers, based on performance evaluation data, and</td>
</tr>
<tr>
<td></td>
<td>iii. Percentage of top-quartile teachers in high-needs schools.</td>
</tr>
<tr>
<td></td>
<td>c. Feedback and early warning reports integrated across districts and postsecondary institutions using data fed into the System through the State's longitudinal data system. Elementary school districts can receive reports on 9th grade performance, while unit and high school districts can receive reports on postsecondary success. High schools can receive information on student needs and early warning indicators involving students from multiple feeder districts.</td>
</tr>
<tr>
<td>Board Members</td>
<td>School board members will have access to many of the same goal-oriented reports provided to Administrators. The System will also centralize key data for board members to use in decision-making processes and provide greater access and communication with the communities they serve.</td>
</tr>
</tbody>
</table>
| **Students** | Each student will have access to a “Student Vault” which collects the education history of a student, including data from pre-school through post-secondary. The Student Vault would permit students to:  
- Access all of their data held by schools, colleges and related partners (e.g., workforce organizations) and use it for education and career planning.  
- Develop and transmit college, job and loan applications, transcripts, and required data; receive information from colleges and other partners on career and educational opportunities; analyze alternative career and educational scenarios (e.g., credit transfers, time to degree, return on investment); and integrate student data with applications provided on the Applications Exchange (see Section II.F). |
| **Parents** | Parents will have access to their own student's data, including summative and formative data, information on how it is used, and resources for education and career planning. |
| **Custom User Groups** | Various custom user groups could develop their own standardized reporting functions integrated with the System, including industry associations, education-related boards and task forces, statewide associations (e.g., Management Alliance, teacher unions), and community-based organizations. |
| **General Public** | The System will include a public web interface that provides non-confidential data reports and permits queries so that parents, media, and other members of the public can more easily access information. The system can also be integrated with "traditional" report card data currently provided by the State. |

The standard reporting and data access functions will enhance and build off of a number of existing State reporting tools, including the following:

- **Illinois Interactive Report Card (IIRC):** The IIRC, administered by Northern Illinois University, provides publicly available data on test results and accountability information on all Illinois public schools and students, includes the ISBE web-based school and district improvement planning templates, and provides school districts with access to student-level data for analysis and planning. IIRC has developed a number of evaluation tools permitting analysis of comparative school and district performance. For example, IIRC has developed scatterplot arrays for every school and district allowing educators and parents to see how the school and district performs based on a variety of student or school characteristics, compared to all schools in the State arrayed by the same characteristics.

- **ILEARN:** The Illinois Local Education Agency Retrieval Network (ILEARN) was created to provide information on how the business of education is conducted. ILEARN permits access to information on school district revenues and expenditures at the county, district, or regional level. ILEARN allows comparison of a school district to a similar district or region of the state.

- **High School Feedback Reports:** ISBE, the Illinois Board of Higher Education, the Illinois Community College Board, the Illinois Shared Enrollment and Graduation File, and ACT are in the process of creating a high school feedback report utilizing information from both public 4-year institutions and community colleges. The report will also include information from private institutions who wish to participate. The initial
reports are scheduled to be released in Spring 2010. Questions addressed by the charts and tables in the report will include:

- How did fall semester college grade averages for our students compare to those of others statewide and by college?
- Did students who achieve ACT College Readiness Benchmark Scores earn higher freshman grades?
- How important was rigorous preparation in high school math or high school science for success during the first year of college?
- How did student ACT Composite scores compare to those of enrolled freshman statewide and by college?
- Were students who took the recommended college preparatory coursework more successful during their first-year at college?
- How many students were assigned to developmental coursework, and what were their ACT scores and fall college GPAs?
- How many students persisted into year 2 and enrolled at the same campus as year 1?

Reports will also integrate with the State's longitudinal data system. In essence, the reporting capabilities of the Learning and Performance Management System will be a more robust version of that available through the State's longitudinal data system, as districts participating in the Learning and Performance Management System will have access to reports that use both state and district-level data.

E. Knowledge Management and Collaboration Tools

While teachers often use collaboration tools to support and guide their work, the Learning and Performance Management System will connect all teachers to best practice information and networks to guide instruction and school improvement planning. Web 2.0 provides an interactive bi-directional Web where users are not merely the consumers of content but also the creators and organizers. To move from early adopters to greater acceptance of Web 2.0 tools and resources, the System will facilitate collaboration that models the real networks that develop in districts and schools (e.g., the new teacher looking for help creating a lesson plan, or a teacher looking for specific effective solutions to address an instructional challenge with a group of students).

To enable productive collaboration, the System will need to provide educators with the ability to undertake all of the following:

- Access resources and expertise to support instructional practice
- Collaborate with and learn from fellow educators within a district, or across the State
- Share insights, experiences, and materials that work
- Build on and adapt contributions from others
- Upload files and course materials as learning resources
- Tag learning resources with a sophisticated taxonomy engine
F. **Applications Exchange**

The System will incorporate an Applications Exchange that allows applications developed by the State, school districts, vendors and others to be packaged and shared across users.

**Standard Applications:**

Standard applications freely available to all users will primarily consist of State analysis and support tools that will be integrated into the System. ISBE, other State education agencies, and various State partnership organizations have developed a number of web-based applications that support district administration and teaching and learning. However, these applications are spread across numerous sites, and cannot be accessed through a single portal. The System will permit all of these applications to be integrated into one location, accessed based upon user role.

Over time, the System should seek to build-out a suite of standard applications and freely available (or low cost) third-party applications so that all districts, regardless of size, have access to high quality information management tools.

Examples of currently developed or planned State applications that can be integrated into the System are described in Figure 4.
## STANDARD APPLICATIONS

*The System will host a variety of State-developed applications that support district administration and teaching and learning*

### CURRENTLY DEVELOPED

<table>
<thead>
<tr>
<th>Application</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>e-Plans</td>
<td>The Illinois State Board of Education requires all Illinois education districts and schools to organize their educational improvement and technology integration planning through use of electronic Illinois e-Plans. These planning instruments are accessible via interactive templates on the Interactive Illinois Report Card (IIRC) that automatically populate available data. The template directs the creation of plans that target data-identified deficiencies.</td>
</tr>
<tr>
<td>On-line IEP</td>
<td>ISBE is in the process of developing a web-based IEP form that pre-populates and integrates student-level data from ISBE systems.</td>
</tr>
<tr>
<td>What's Next Illinois</td>
<td>What's Next Illinois is a web-based college and career planning portal developed by the Illinois Student Assistance Commission (ISAC). The site includes tools and resources for high school planning, college planning, career planning, and financial aid planning.</td>
</tr>
<tr>
<td>STARS SES System</td>
<td>All approved Supplemental Educational Services providers are required to use the STARS system for tracking student enrollment and attendance in SES classes and thereby to invoice districts.</td>
</tr>
<tr>
<td>Parental Involvement Analysis Tool</td>
<td>The Parental Involvement Analysis tool enables districts to perform an analysis of their parent involvement policies and compact using a web-based template.</td>
</tr>
</tbody>
</table>
| IIRC Searchable Library of Instructional Resources | The IIRC makes available a searchable library of instructional resources designed for classroom application by teachers at all school and grade levels. For example, IIRC’s Searchable Library includes:  
  - Assessment Frameworks describing actual assessment objectives and the number of test items on each learning standard, allowing teachers to align their lesson plans and teaching materials to the topics assessments actual cover  
  - Lesson plans organized by learning standards, organized by grade and subject  
  - Sample test questions that can be utilized for formative assessments on each grade and subject; the sample test questions provide scoring, guidance on correct answers, and the actual "look and feel" of state test books |
| Agricultural Education Resources | The Illinois Committee for Agricultural Education (ICAE), through direct State support, has developed extensive curriculum resources, including over 600 lesson plans, that all schools can use to strengthen and expand agriculture education offerings. |

### PLANNED OR UNDER CONSIDERATION

<table>
<thead>
<tr>
<th>Application</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards Implementation Tools</td>
<td>Voluntary curriculum supports and assessment frameworks aligned to the multi-state, internationally benchmarked standards.</td>
</tr>
</tbody>
</table>
| Performance Evaluation Supports | Various systems and tools to support district implementation of more effective evaluations, including:  
  - Model templates  
  - Tools to assist with classroom observations  
  - Instruments to provide feedback to principals on instructional environment within a school. |
Kindergarten Readiness Assessment | Assessment instruments to measure students on key domains for kindergarten readiness.
---|---
Growth Model Reports | Web-based reports providing growth information at the district, school, teacher, and student level.
STEM Learning Exchanges | In key STEM application areas, the State is seeking to develop open collaborative learning platforms that:
- Provide students access to e-learning resources including on-line courses, assessment and feedback systems, reference materials, software tools (e.g., engineering design software) and data bases hosted throughout the world as well as connections to other students, teachers, and mentors and tutors.
- Provide students with project management resources to work in open collaborative teams to address real-world interdisciplinary problems.
- Provide teachers and instructional support staff the capacity to develop and share learning resources and participate in professional learning communities to support students within specific disciplines (e.g., English, math) and application areas (e.g., Health Sciences).
- Include curriculum options structured to qualify for dual credit in the various STEM-application areas.

**Third Party Applications:**

In addition to the standard applications described above, the System will host applications developed by various third-party entities, including school districts, universities, nonprofits, and vendors. Applications can either be modified to integrate with the System or packaged, deployed and hosted directly within the System's "cloud."

The Applications Exchange will be vendor neutral – any entity can develop an application that can be integrated with or hosted on the System. The processes and rules for adding applications to the Exchange will involve charging vendors to access the Exchange, thereby creating a revenue stream for ongoing System maintenance and improvements.

As part of the development process, the System developer will need to coordinate with educational support and application providers working with significant numbers of Illinois school districts to integrate their data and software with the System. For example, major student information system providers and interim and formative assessment vendors will be expected to integrate their applications and data with the System, at no cost to either the State or participating districts.

**III. Overall Guiding Principles**

The following ten guiding principles will inform the development of the core System components described in the preceding Section:

1. **Meaningful Support for All Districts:** The System must provide benefits and meaningful support for the full range of school districts in Illinois, ranging from large districts with sophisticated existing data systems to small districts with little to no
data infrastructure. While districts may rely on the System to varying degrees to address local data needs, all districts should benefit from participation.

- Figure 2, in the previous Section, depicts various district participation scenarios. Some districts may rely on the System for certain functions, such as teacher and administrator reports, student college and career planning portals, and access to various instructional and management applications. However, these districts will continue to maintain a number of district-managed systems that provide data for, but are not housed on, the Learning and Performance Management System. Other districts may have little prior data system infrastructure, and rely on the Learning and Performance Management System and software residing on the System for most data management needs.

2. **Flexible Hosting (Self hosted, vendor hosted, combination):** While the System may be initially hosted by a vendor, ISBE should be able to takeover hosting if necessary or move hosting to another vendor. Some System components may be hosted by a vendor, while other services may be hosted by the State.

3. **Highly Scalable:** The System must be highly scalable. Eventually, this System should be envisioned to be used by every student and teacher everyday, representing millions of users.

4. **"Packaged":** The System must minimize the need to custom-build core system components--as much as possible should be packaged.

5. **Low Technical Expertise for Districts:** The System must not require extensive technical expertise to access and use the System. However, the System must also permit users with high levels of technical expertise to have access to the full range of functions.

6. **Standards-based:** All data integration, web building, and other System components must be Standards-based. For example, exposed APIs will use web services where appropriate. Interactive components will use AJAX. The State will have maximum capability to move to different vendors because components of the System have been built using existing standards.

7. **Vendor Neutral:** Where appropriate, the System will be vendor neutral. In particular, ongoing development of the System must be possible with multiple vendors regardless of the underlying platforms chosen. Use of a vendor's software platform must not preclude development by other vendors on the System.

8. **Low Ongoing Costs:** The System must have low ongoing costs, including no or minimal licensing costs for software platforms, low maintenance costs, low upgrade costs, and inexpensive development and customization costs.

9. **Product Longevity/Open Source:** All underlying software components will be considered for longevity. In addition, while it is understood that software requires
upgrades, the chosen software platforms must impact users minimally (and inexpensively) when upgrades are necessary. In keeping with the goal of software longevity, open source software will be given priority, with the idea that even if the platform company no longer exists or does not support the software, the open source nature of the platform will allow the State or some other entity to continue platform support.

10. **Vendor Supported:** Despite the goal of using open source software, the State will also require vendor support. The balance between software that is in the free domain, but also provides for a known entity to provide support and ongoing System development, must be maintained.

**IV. GOVERNANCE STRUCTURE**

One of the most critical factors to the success of the System is not a technology or data integration challenge. Rather, the State and participating districts must develop a governance structure for the System that clearly defines a partnership approach to data use and management. The State will need to have access to necessary data from the System for uploading into ISBE base systems to support a wide variety of reporting, program audit and evaluation, and support functions. However, the System will need to be designed to have clear rules on when these uploads will occur and to ensure that districts can undertake necessary cleansing and validation processes beforehand (though these processes should be less necessary with frequent user access to data). Otherwise, districts will not have adequate trust in the State's use of data maintained within the System, and therefore will not use it.

The governance structure will also need to ensure that student data is maintained, shared, and accessed in strict accordance with the Family Educational Rights and Privacy Act (FERPA), the Illinois School Students Records Act (105 ILCS 10/2 et seq.) (ISSRA), and other privacy protection laws. All aspects of the System must be developed and implemented with a continuing focus on both student and educator privacy protection. The System must only allow access to student and educator data in accordance with clearly articulated standards, depending upon privacy protection requirements and the user's purpose in obtaining the data.

**V. PROFESSIONAL DEVELOPMENT AND IMPLEMENTATION SUPPORT**

Professional development and training will need to be differentiated for various types of users, including classroom teachers, principals and coaches, media specialists, district and state leadership, and parents and students. With the scale and scope of this project, ISBE assumes that a training of trainers model will be used for professional development for district and school personnel.

The System developer will train a cadre of ISBE, regional, and district professional developers who will work with districts and individual schools. At the district level, the trainers will work with district tech directors to guide the change management process involved with moving district systems to the cloud. At the school level, the professional development model will incorporate direct training of 2-3 teacher implementation leaders from each school, who can
work with their principal to ensure that all teachers in the building receive the necessary support to become effective users of the System. Once the System is implemented, these trainers will continue to serve as support references for users in their location.

Training must also be provided for non-traditional users—students, parents, workforce boards, etc. On-line training modules and support will be leveraged to the extent possible to lower cost and permit large-scale implementation; however, the training of trainers model should also provide for direct in-person training of these user groups. For students, in-person training can be facilitated by the Illinois Student Assistance Commission (ISAC) Corps. As result of the College Access Challenge Grant, ISAC hired 56 recent college graduates which make up the ISAC Corps and deployed them across the state in community college districts. Corps members are building partnerships with local schools, businesses, and nonprofits in order to deliver free career and college planning and preparation services to students from families with no prior college-going experience. Assistance with career exploration, college selection, test preparation, scholarship searches, application completion and the financial aid process are examples of the services that the Corps are currently providing. These services can be extended to effective use of the "Student Vault" and other components of the Learning and Performance Management System.

The System's Help Desk will be a critical factor in the success of the project. ISBE anticipates that the agency will operate the Help Desk, with vendor support for tier 2 and tier 3 issues.

VI. COORDINATION WITH LONGITUDINAL DATA SYSTEM DEVELOPMENT

The development of the Learning and Performance Management System will integrate with ISBE's development of a data warehouse and a longitudinal data system. The following aspects of the State's data warehouse/longitudinal data system project will relate directly to the development of the Learning and Performance Management System:

- **Data Architecture and Definitions:** ISBE has established a State Education Data Advisory Group and will be procuring a data architecture contractor to develop an enterprise-wide data architecture to support various forms of federal reporting, provide data to LEAs in a useful format, and support data reporting from LEAs. The process to develop an enterprise-wide data architecture for the State's longitudinal data system should be coordinated with the development of the data architecture for the Learning and Performance Management System.

- **User Authentication:** ISBE intends that LEA and regional office users of the data warehouse will access data through a web-based interface through the ISBE Web Application Security (IWAS) portal. The IWAS portal provides all necessary authentication and authorization security. The IWAS portal will need to be integrated with the user authentication system for the Learning and Performance Management System. The System developer will need to determine whether it is possible and appropriate to expand and enhance IWAS to address user authentication for the Learning and Performance Management System.
• **Reporting:** As described in Section II.D of this document, reports at the district, school, and classroom level available through the Learning and Performance Management System must integrate with reporting available through the State's longitudinal data system. In essence, the reporting capabilities of the Learning and Performance Management System will be a more robust version of that available through the State's longitudinal data system.

• **Integration of Data from Other Districts:** A critical function of the Learning and Performance Management System will be to provide LEAs with immediate access to data on students who transfer to or are first entering school within the district (e.g., providing districts with data from early learning programs, or providing high school districts with student data from elementary grades). The integration of the Learning and Performance Management System with the longitudinal data system will permit access to this data.

• **Integration of Postsecondary/Workforce Data:** The development of the State's longitudinal data system will include:
  - Combining P-12, postsecondary, and employment data to facilitate the evaluation and audit of federal and state programs and longitudinal research; and
  - The development of postsecondary feedback reports for high schools on the success of their graduates in college and entry into the workforce.

The integration of P-12, postsecondary, and employment data for the longitudinal data system will also ensure this data is available for appropriate reporting and analysis within the Learning and Performance Management System.

**VII. PROCESS AND TIMELINE FOR IMPLEMENTATION**

ISBE will be posting this draft of the Learning and Performance Management System Proposed Design Requirements on the Illinois Procurement Bulletin in order to solicit comment and feedback from prospective System developers and other interested parties. This input will then be incorporated into System Proposed Design Requirements that will be included within the State's application for the Race to the Top Fund application. Illinois intends to submit an application for "Phase 1" of the Race to the Top competition. The application due date for Phase 1 is January 19, 2010, with funding decisions anticipated in April 2010.

While the funding decision on Illinois' Phase 1 application is pending, ISBE intends to undertake further stakeholder engagement and requirements development. This process will include:

- Identifying a range of districts of varying sizes and local data system sophistication to provide input on desired reporting and other capabilities and integration with district systems.
- Regional planning processes that engage a broader range of stakeholders including parents, workforce boards, the business community, etc.
- Further definition of the governance structure.
• Coordination with the Project Manager for the State's longitudinal data system to further define the relationship between the Learning and Performance Management System and Longitudinal Data System.
• Consideration of how the System could be developed and scaled to permit other states to participate, including the technical, legal, and governance issues associated with a multi-state model.

If Illinois receives a Race to the Top grant in Phase 1, ISBE will issue a Request for Sealed Proposals (RFSP) for the System's development in July 2010. After selection of the contractor, design and development would occur through August 2012. Pilot implementation would occur during the 2012-13 school year, with a focus on those school districts that have elected to participate in the State's Race to the Top application.5 Full implementation of the System would commence during the 2013-14 school year. If Illinois does not receive a Race to the Top grant in Phase 1 of the competition, these timelines will be adjusted based upon the availability of funding.

**Figure 5. Proposed Timeline for System Development**

<table>
<thead>
<tr>
<th>Timeline Activity</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through January 2010 ISBE and LPMS Working Group further define requirements</td>
<td></td>
</tr>
<tr>
<td>January 2010 Illinois submits Race to the Top Phase 1 application including the</td>
<td>Learning and Performance Management System</td>
</tr>
<tr>
<td>January 2010 – April 2010 Stakeholder engagement and further requirements</td>
<td></td>
</tr>
<tr>
<td>development</td>
<td></td>
</tr>
<tr>
<td>April 2010 Illinois receives notification on Phase 1 Race to the Top funding.</td>
<td><em>Subsequent timelines assume Phase 1 Race to the Top funding is received</em></td>
</tr>
<tr>
<td>May – June 2010 Development of RFSP</td>
<td></td>
</tr>
<tr>
<td>July 2010 RFSP issued</td>
<td></td>
</tr>
<tr>
<td>October 2010 System developer selected</td>
<td></td>
</tr>
<tr>
<td>November 2010 – August 2012 Design and development of System</td>
<td></td>
</tr>
<tr>
<td>September 2012 – August 2013 Piloting, with a focus on RTTT participating districts</td>
<td></td>
</tr>
<tr>
<td>September 2013 Full implementation</td>
<td></td>
</tr>
</tbody>
</table>

**VIII. BUDGET AND FUNDING STREAMS**

Based upon a review of the cost to develop similar large-scale systems in other states and large districts, ISBE is proposing to include $60 million for the development and implementation of the Learning and Performance Management System in its Race to the Top application. Of the $60 million, $40 million will be allocated to System development in the 10-11 and 11-12 School Years. $20 million will be allocated to maintenance and district integration assistance in the 12-

---

5 Under the Race to the Top program, school districts must agree to participate in the State's plan in order to receive funding.
13 and 13-14 School Years. Presumably, some costs to integrate local systems will be borne by participating school districts. However, these costs will be offset by long-term savings for hardware, software, and IT maintenance.

Various other federal funding streams may be available to assist with System development and implementation. For example, districts seeking to participate in the System could partner with ISBE to submit an application for funding through the $650 million Investing in Innovation (i3) Fund. An i3 grant could support district transition to the System, while Race to the Top funds pay for its development. The proposed priorities for the i3 Fund include prioritize funding for:

- "Scale-up Grants" with the potential to reach hundreds of thousands of students; and
- Programs that provide teachers, principals, administrators, families, and other stakeholders with data they need to inform and improve school and classroom instructional practices, decision-making, and overall effectiveness.

A number of additional funding sources for System development and implementation are described in the Data Quality Campaign's publication "Leveraging Federal Funding for Longitudinal Data Systems: A Roadmap for States," available at http://www.dataqualitycampaign.org/resources/arra_programs.

IX. CONCLUSION

The American Recovery and Reinvestment Act of 2009 provides the largest one-time Federal investment in education in our nation's history, and represents a historic opportunity for the State of Illinois to advance critical education reforms. The State of Illinois seeks to take advantage of this opportunity to move from primarily collecting education data for compliance purposes, to using data for continuous improvement at the district, school, classroom, and individual student levels. A Learning and Performance Management System, as described in this document, can enable all Illinois educators, parents, and students to access the information they need to inform education decision-making and drive improved student outcomes.

# 8875305_v6
Appendix A

Description of Request for Information and Working Group Processes

Request for Information:

In July 2010, ISBE issued a Request for Information (RFI) in order to ascertain the number of potential vendors and the various learning and performance management systems available in the marketplace. The RFI requested responses to all of the following items:

1. Describe your system(s) and product(s). This description may include system(s) or product(s) under development or proposed for development, if the proposed system(s) or product(s) meet the objectives of ISBE as described in this RFI.
2. Indicate whether you have experience implementing your systems/products on a statewide level, and, if applicable, give examples and describe the process and results.
3. Describe the manner in which the various products/systems directly support instructional activities in the classroom, specifically describing how the system links data to instructional modification and support.
4. Describe the ease of accessibility of data at the State, district, school, educator, parent, and student level, and identify the types of reports available at each level.
5. Describe architectures and methods for integrating data throughout the state education system such as within districts, schools, and across the state.
6. Describe how this system might integrate with existing and future state systems such as the state SIS system, data warehouse, and longitudinal data system.
7. Identify any features of the system that use data reporting, analysis, and planning to assist with financial oversight, human resources, and other educational support functions.
8. Describe any system capabilities providing analysis of financial data and funding allocation as related to student performance.
9. Describe any system capability that would provide support for posting and accessing curriculum tools and instructional strategies.
10. Describe any features of the system that improve student access to educational opportunities by linking data to college or career planning, application, and enrollment systems.
11. Describe any social networking or on-line community aspects of the system.
12. Provide details or examples of a public internet web interface that provides non-confidential data reports to demonstrate statewide, district, or school performance data to the public.
13. Highlight features that differentiate your system and do not fit into the categories described above.
14. Describe the initial training provided to the State, district, schools, educators, parents, and students upon implementation.
15. Describe the ongoing service and support provided to the districts and individual educators.
The RFI also asked for four references, including cost and pricing structure for implementation.

ISBE received 23 responses from the following entities:

1. Choice Solutions
2. eScholar
3. eVerge
4. GlobalScholar
5. IBM
6. illuminate
7. Infinite Campus
8. InformationBuilder, Inc. & KPMG
9. Integrity Solutions
10. iObservation
11. Mariner
12. McGraw-Hill
13. Microsoft Education Services
15. Pearson
16. Programming Solutions, Inc.
17. Public Consulting Group
18. SchoolNet
19. Synaptic Mash LLC
20. University of Chicago – Urban Education Institute
21. University of Illinois – Center for Prevention Research and Development (CPRD)
22. University of Illinois – Department of Educational Policy Services

ISBE, with assistance from Advance Illinois, distributed, analyzed, and summarized all of the responses.

Working Group:

ISBE formed a Working Group with expertise from across the State and a broad range of stakeholders to inform its review of the RFI responses and development of the proposed requirements described in this document. The Working Group includes the following members:

<table>
<thead>
<tr>
<th>Working Group Member</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alsop, Amy</td>
<td>Illinois Federation of Teachers</td>
</tr>
<tr>
<td>Beever, Scott</td>
<td>Illinois State Board of Education</td>
</tr>
<tr>
<td>Bianchini, Sharon</td>
<td>Community Unit School District 220</td>
</tr>
<tr>
<td>Boer, Ben</td>
<td>Advance Illinois</td>
</tr>
<tr>
<td>Cegelis, Christine</td>
<td>Illinois Century Network</td>
</tr>
</tbody>
</table>
Chamberlain, Terry  Illinois State Board of Education
Chumbley, Bryan  Peoria District 150
Cullen, Marica  Illinois State Board of Education
DeWitt, Vicki  Director, Area 5 Learning Technology Center
Drone, Mark  Regional Superintendent, Fayette, and Effingham Counties
Evans, John  University of Illinois
Frank, Larry  Illinois Education Association
Furr, Jonathan  Holland and Knight
Hopper, Gina  Illinois State Board of Education
Loveless, Abe  Belleville Township High School District 201
Montoya, Abel  Illinois Student Assistance Commission
Morrison, Daryl  Illinois Education Association
Nielson, Robert  Bloomington Public Schools District 87
Nowell, Amy  Chicago Public Schools
Parke, Scott  Illinois Community College Board
Peterson, Jim  Bloomington Public Schools District 87
Shake, John  Illinois State Board of Education
Sheets, Robert  Department of Commerce and Economic Opportunity
Summers, Warren  Illinois State Board of Education
Tyszko, Jason  Office of the Governor Pat Quinn
Wise, Connie  Illinois State Board of Education

The Working Group met on September 24, 2009 to discuss the RFI responses, consider the proposed requirements for the System, and address a series of discussion questions relating to the System. Feedback from the Working Group session was incorporated into the proposed design requirements set forth in this document. The Working Group met via webinar on November 24, 2009 to review and offer feedback on a draft version of this document.
Appendix B

Illustrative Diagrams and Examples from RFI Responses

Note: The following materials were received by ISBE in response to the RFI described in Appendix A. The materials are simply intended to provide examples of how various concepts and aspects of the proposed requirements could be addressed. Inclusion of materials from a specific vendor does not imply that ISBE is seeking a solution consistent with the vendor's response, nor does it imply endorsement of a particular approach to the proposed requirements. Permission to reproduce these materials has been obtained from the respondents to the RFI.
Vendor: University of Illinois – Dr. Trent

Concept: Providing teachers & administrators with student-level data, summary reports, and data that can be integrated with local systems to inform education decision-making

Description: Displays Tinkerplot* reporting, a type of data format that can be drilled down to the student-level to display identifiable information for teachers and administrators

* [http://www.keypress.com/x5715.xml](http://www.keypress.com/x5715.xml). The information included in the screen “snapshot” is presented through use of proprietary, third party software that is not owned by the Board of Trustees of the University of Illinois and that any license to use Tinkerplots® must be obtained through an authorized retailer or through the site listed immediately above.
Vendor: Public Consulting Group

Concept: Providing teachers & administrators with student-level data, summary reports, and data that can be integrated with local systems to inform education decision-making

Description: Performance data is summarized concisely in student profiles that can be drilled down to from larger aggregate reports
## Demographic

<table>
<thead>
<tr>
<th>School Year</th>
<th>School</th>
<th>Grade Level</th>
<th>FRL</th>
<th>Disc</th>
<th>IEP</th>
<th>ELL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2007</td>
<td>High</td>
<td>Grade 9</td>
<td>Reduced Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-2006</td>
<td>Middle 7</td>
<td>Grade 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004-2005</td>
<td>Middle 7</td>
<td>Grade 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003-2004</td>
<td>Middle 7</td>
<td>Grade 6</td>
<td>Reduced Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002-2003</td>
<td>Elementary 3</td>
<td>Grade 5</td>
<td>Free Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001-2002</td>
<td>Middle 3</td>
<td>Grade 4</td>
<td>Free Lunch</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Trend

<table>
<thead>
<tr>
<th>School Years</th>
<th>Math SGP</th>
<th>Reading SGP</th>
<th>Prof Writing</th>
<th>Absences</th>
<th>Mobile</th>
<th>ELL</th>
<th>IEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>806.66667</td>
<td>758</td>
<td>754</td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>2005-2006</td>
<td>800.33333</td>
<td>744.75</td>
<td>703.3333</td>
<td></td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>2006-2007</td>
<td>790.00000</td>
<td>755</td>
<td>755</td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

## Report Card

<table>
<thead>
<tr>
<th>Course</th>
<th>Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGY 1</td>
<td>C</td>
</tr>
<tr>
<td>ENGLISH 1</td>
<td>C</td>
</tr>
<tr>
<td>GEOMETRY</td>
<td>B</td>
</tr>
<tr>
<td>PHYS &amp; HEALTH ED</td>
<td>A</td>
</tr>
<tr>
<td>SPANISH 2</td>
<td>C</td>
</tr>
<tr>
<td>WORLD HIST 1</td>
<td>C</td>
</tr>
</tbody>
</table>

### 2005-2006

<table>
<thead>
<tr>
<th>Course</th>
<th>Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALG 1 GIFTED 8</td>
<td>B</td>
</tr>
<tr>
<td>ENGLISH GIFTED 8</td>
<td>B</td>
</tr>
<tr>
<td>P E HEALTH 8</td>
<td>A</td>
</tr>
<tr>
<td>PERF ARTS 8</td>
<td>A</td>
</tr>
<tr>
<td>PHYSICS 1</td>
<td>B</td>
</tr>
<tr>
<td>SOC STUDY GIFT8</td>
<td>B</td>
</tr>
<tr>
<td>SPANISH II</td>
<td>C</td>
</tr>
</tbody>
</table>
Vendor: IBM

Concept: Linking data to instructional management tools that support instruction and collaboration

Description: Displays a module specifically designed for assessing data reports and linking the presented findings to instructional support
Vendor: IBM

Concept: Provide in-depth reporting to track progress in terms of assignments, assessments, benchmarks, grade levels at the state, district, school, class, and student level

Description: Displays reporting dashboards that can be drilled down between levels and tracks.
Vendor: eVerge

Concept: Providing data reporting, analysis, and planning tools that assist with financial oversight, human resources management, and other education support functions

Description: Displays a number of easily accessible dashboards providing summaries of educational information of various areas, in this case: Assessments, Attendance, Cohort Completion, Enrollment, and Financials
Vendor: University of Chicago: 6to16 project

Concept: Improving student access to high school and post-secondary educational opportunities by providing a classroom and online college readiness curriculum, a collaboration platform for e-mentoring and linking data to college and career planning tools

Description: Displays a student homepage for college preparation, networking with support contacts, and interactive content encouraging college and career planning
**Vendor:** Infinite Campus

**Concept:** Development of a state longitudinal data system

**Description:** Displays a layout for a system of data management that includes a back end database, data extraction, front-end reporting functionality, and a user-interface.
Vendor: Northern Illinois University – Illinois Interactive Report Card

Concept: Facilitating instructional improvement by granting access to data and linking it to possible incorporation into lesson plans and curriculum

Description: Displays a collection of reports available to be viewed at state, district, school, and grade levels that can be tracked in terms of adherence to performance standards and broken down to specific items, along with guides for students themselves.
## Item Analysis Summary

### Grade 5: Mathematics

<table>
<thead>
<tr>
<th>Results From Multiple-Choice Items</th>
<th>Assessment Objective</th>
<th>% of Items</th>
<th>SCHOOL</th>
<th>DISTRICT</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State Goal 6: Number Sense</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard 6A: Representations and Ordering</td>
<td>6.5.01</td>
<td>7</td>
<td>71</td>
<td>61</td>
<td>55</td>
</tr>
<tr>
<td>Read, write, recognize, and model equivalent representations of whole numbers and their place values up to 1,000,000,000.</td>
<td>6.5.02</td>
<td>-</td>
<td>74</td>
<td>75</td>
<td>73</td>
</tr>
<tr>
<td>Read, write, recognize, and model whole numbers and their place values through thousands.</td>
<td>6.5.03</td>
<td>1</td>
<td>73</td>
<td>63</td>
<td>44</td>
</tr>
<tr>
<td>Recognize, translate between, and model multiple representations of decimals, fractions less than one (halves, quarters, fifths, and tenths), and percents (0%, 25%, 50%, 75%, and 100%).</td>
<td>6.5.04</td>
<td>1</td>
<td>69</td>
<td>44</td>
<td>43</td>
</tr>
<tr>
<td>Read, write, recognize, and model decimals and their place values through thousandths.</td>
<td>6.5.05</td>
<td>-</td>
<td>73</td>
<td>74</td>
<td>73</td>
</tr>
<tr>
<td>Represent multiplication as repeated addition.</td>
<td>6.5.06</td>
<td>1</td>
<td>80</td>
<td>74</td>
<td>73</td>
</tr>
<tr>
<td>Order and compare whole numbers up to 1,000,000.</td>
<td>6.5.07</td>
<td>-</td>
<td>74</td>
<td>63</td>
<td>31</td>
</tr>
<tr>
<td>Order and compare decimals through hundredths.</td>
<td>6.5.08</td>
<td>1</td>
<td>69</td>
<td>43</td>
<td>31</td>
</tr>
<tr>
<td>Order and compare fractions having like or unlike denominators with and without models.</td>
<td>6.5.09</td>
<td>-</td>
<td>69</td>
<td>43</td>
<td>66</td>
</tr>
<tr>
<td>Identify and locate whole numbers, halves, fourths, and thirds on a number line.</td>
<td>6.5.10</td>
<td>-</td>
<td>75</td>
<td>69</td>
<td>66</td>
</tr>
<tr>
<td>Solve problems involving descriptions of numbers, including characteristics and relationships (e.g., odd/even, factors/multiples, greater than, less than, square numbers).</td>
<td>6.5.11</td>
<td>2</td>
<td>75</td>
<td>69</td>
<td>66</td>
</tr>
<tr>
<td><strong>Standard 6B: Computation, Operations, Estimation, and Properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solve problems and number sentences involving addition, subtraction, multiplication, and division using whole numbers.</td>
<td>6.5.12</td>
<td>3</td>
<td>75</td>
<td>64</td>
<td>65</td>
</tr>
<tr>
<td>Solve problems and number sentences involving addition and subtraction of decimals through hundredths with or without monetary labels.</td>
<td>6.5.13</td>
<td>3</td>
<td>71</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>Model situations involving addition and subtraction of fractions.</td>
<td>6.5.14</td>
<td>1</td>
<td>70</td>
<td>64</td>
<td>59</td>
</tr>
<tr>
<td>Solve problems involving the commutative, distributive, and identity properties of operations on whole numbers (e.g., 37 x 46 = 46 x 37; 270+55 = (200+55)+ (70+0)).</td>
<td>6.5.15</td>
<td>1</td>
<td>92</td>
<td>82</td>
<td>77</td>
</tr>
<tr>
<td>Make estimates appropriate to a given situation with whole numbers, fractions, and decimals.</td>
<td>6.5.16</td>
<td>2</td>
<td>75</td>
<td>72</td>
<td>62</td>
</tr>
<tr>
<td><strong>Standard 6D: Ratios, Proportions, and Percents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify and express ratios using appropriate notation (e.g., 2:3, a:b, and 2/3). Identify equivalent ratios.</td>
<td>6.5.17</td>
<td>2</td>
<td>63</td>
<td>82</td>
<td>53</td>
</tr>
<tr>
<td>Solve problems involving proportional relationships, including unit pricing (e.g., one apple costs $0.50, so four apples cost $2.00).</td>
<td>6.5.18</td>
<td>1</td>
<td>69</td>
<td>59</td>
<td>54</td>
</tr>
</tbody>
</table>
Vendor: Integrity Schools
Concept: Facilitating instructional improvement by granting access to data and linking it to possible incorporation into lesson plans and curriculum

Description: Displays reporting and student pages that allow instructors to view results of state assessments drilled down to specific aspects and standards, track the progress of the entire class toward benchmark goals, maintain records of student behavior, and receive feedback from students themselves.
Vendor: McGraw-Hill
Concept: Facilitating instructional improvement by granting access to data and linking it to possible incorporation into lesson plans and curriculum
Description: Displays an array of reports aimed at synthesizing information on student progress to parents, as well as allowing teachers and administrators to examine the performance of students on state assessments through a variety of factors.
Vendor: Microsoft

Concept: Facilitate curriculum support through linking performance results with lesson-creation, supporting curriculum sharing amongst instructors, and providing platform for curriculum management

Description: Displays course home page screen where syllabi, assignments and announcements are posted, and a curriculum management section that allows for instructors to develop and arrange curriculums and lessons with specific skills in mind
Vendor: Microsoft

Concept: Provide for a portal platform that allows stakeholders immediate access to personally pertinent information available dependent on level of clearance, and tools for collaboration and networking.

Description: Displays a Parent portal that grants access to pertinent news, parent-focused resources, calendars, saved documents, and a module for monitoring the progress of their children.
Vendor: eScholar

Concept: Provide clean detail level, longitudinal data to support in-depth reporting and track progress in terms of assignments, assessments, benchmarks, grade levels at the state, district, school, class, and student level

Description: Supports standards-based reporting taking advantage of industry standard reporting and analysis tools to track educational results for administrators on a state, district, and school level with figures that can be tracked for progression over time.

---

**Assessment of State Reading Standards**

**All Students**

- Overall Percentage Proficient
- Overall Performance Percentages for All Students Meeting or Exceeding Standards

<table>
<thead>
<tr>
<th>Years</th>
<th>Grade 03</th>
<th>Grade 04</th>
<th>Grade 05</th>
<th>Grade 06</th>
<th>Grade 07</th>
<th>Grade 08</th>
<th>Grade 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2003</td>
<td>N/A</td>
<td>78.73%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>78.81%</td>
<td>77.28%</td>
</tr>
<tr>
<td>2003-2004</td>
<td>N/A</td>
<td>84.83%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>85.68%</td>
<td>83.10%</td>
</tr>
<tr>
<td>2004-2005</td>
<td>N/A</td>
<td>86.26%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>87.50%</td>
<td>86.78%</td>
</tr>
<tr>
<td>2005-2006</td>
<td>N/A</td>
<td>86.36%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>86.44%</td>
<td>67.24%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>97.71%</td>
<td>91.48%</td>
<td>67.96%</td>
<td>89.25%</td>
<td>86.33%</td>
<td>91.71%</td>
<td>69.54%</td>
</tr>
</tbody>
</table>

% of Change: Compares the percentage of students proficient on the first state assessment to the current year's results.

*Beginning in 2007-2008 school year, data were collected at the student level.

N/A: Standards were assessed in a different grade level for the given school year.
Vendor: eScholar

Concept: Reducing the data collection burden on individual school districts

Description: Provides the ability to manage files, data quality, and data loading through a simple web interface to collect, cleanse and integrate data into one state-wide longitudinal data system.
Vendor: Wireless Generation

Concept: Provide in-depth reporting to track progress in terms of assignments, assessments, benchmarks, and grade levels at the state, district, school, class, and student level

Description: Displays capabilities for customized reporting including examining how individual school populations compare to statewide performance, comparing how one population fares over different measurements and assessments, tracking growth across the system, and measuring the success of instructional methods and individual teachers.
Vendor: Wireless Generation

Concept: Consolidate student information from disparate sources into a singular access point

Description: Displays a consolidated student profile that offers student personal information, attendance records, performance and proficiency levels in each major subject, current class list, and emergency contact information.