



U.S. Department of Education  
Grant Performance Report (ED 524B)  
Executive Summary

OMB No. 1890 - 0004  
Expiration: 10-31-2007

PR/Award #: R372A090008

The goal of the Wisconsin Department of Public Instruction's (DPI) Longitudinal Data System Project is

*To build a data warehouse based on Data Quality Campaign (DQC) standards that not only meets federal requirements, but also enables school and district improvement by driving longitudinal research and analysis, creating a rich picture of student performance over time.*

Significant progress has been made towards important, measurable outcomes that make Wisconsin's LDS better able to meet the needs of state and local educational staff, parents and students, and the public. The last year has seen important advancements in the capacity, products, and support of our LDS.

The Longitudinal Data System Project has stepped into a new role as an agency priority in the past year. To support this priority, positions specifically dedicated to LDS work, including the integral appointment of project lead, have been filled. LDS team members have supported a project reorganization that allows for more efficient work flow and better communication between teams within DPI.

The foundation of any LDS—quality, comprehensive data—continues to be a focus of project efforts. A variety of data sets that were previously stored in unrelated silos throughout DPI have been successfully incorporated into the LDS. By enriching our LDS data warehouse, we are able to create a more complete picture of student academic performance.

In addition to strengthening the foundation of our LDS data warehouse, we have also focused on creating tools to enable the State and districts to utilize the data.

The School District Performance Report (SDPR), available in summer 2009, provides reports using a variety of data: test results, enrollment, program offerings and participation, high school completion, post-graduation plans, district staffing, and finance. This web-based, user-friendly report allows school, district, and public users to analyze data without being data savvy. District data can be compared to other districts in the same athletic conference, and users can create PDF's for reporting.

Availability of the Multi-Dimensional Analytic Tool (MDAT) application provides authorized district and school personnel with their first look at how longitudinal data can be used for analysis. MDAT is a web-based application that allows authorized users to create reports that compare achievement over time in relation to WKCE data for their school or district. By selecting from a wide array of variables, authorized users are able to analyze summary data and compare results to the State or their district. Users with specific access rights are able drill down to student-level information and download summary or student data. Currently over 120 districts are using the tool, including 13 districts from an initial pilot.

Always striving to maintain the security of our data, the release of MDAT was accompanied by Access Manager, a security tool used by district administrators to control who uses MDAT and what data users may access within the application. An updated, more intuitive version was released in February.

Following the successful implementation of our first secured reporting tool, we are now focused on defining and developing a Wisconsin P20 System. We have already completed several tasks that put us in a position to move swiftly towards an implementation within the first 6 months of the second year of our grant.

Wisconsin's P20 initiative will expand the ability of the Wisconsin longitudinal data system to link across the P-20 education pipeline and between state agencies. We are currently working towards integrating postsecondary enrollment and completion data into the LDS. With this data we will be able to determine if and where Wisconsin high-school graduates are enrolling in postsecondary schools, and whether they are completing semesters and earning degrees. We are also working on our P20 Data Sharing & Analysis project. This project features collaboration between DPI and Wisconsin Institutions of Higher Education and significant strides have been made in securing this relationship so that business and technical discussions can begin shortly.

In addition to our P20 initiative, we anticipate that the development of next generation reports measuring student academic growth will be a significant project in the coming year. While technical aspects of report development have not yet begun, our Office of Educational Accountability (OEA) has worked over the last year to create a synthesis of lessons learned from three commissioned studies about measuring and reporting academic growth. Culminating work on the synthesis was the decision to create reports that use Student Growth Percentiles—as developed by Damian Betebenner at the National Center for the Improvement of Educational Assessment, and used by Colorado, Indiana, Arkansas, and other states—to measure academic growth at an individual student and aggregate level. OEA has designed a phased implementation plan and intends to begin providing static reports in a pilot setting later this spring.

An ongoing and ever-present component of our LDS work is to maintain transparent and informative communication with stakeholders, both external and within the Department of Public Instruction. A key strategy has been to develop an inviting and user-friendly series of web pages that provide overall information about Wisconsin's LDS Project, specific information—including step-by-step guides and videos—about LDS applications such as SDPR, MDAT, and Access Manager—details for how to gain access to these applications, and regular updates about additional initiatives associated with the Project. Feedback has been positive about this site; users report regularly consulting it for directions to applications, and appreciate the comprehensive information available.

The first year of Wisconsin's SLDS grant has been a productive one that places our state in an excellent position to continue progress towards our goals of meeting federal requirements and satisfying key aspects of our state's educational priorities: closing the achievement gap, building 21st century skills, moving toward a PK-20 data system in which all stakeholders can make informed decisions based on sound data, and ensuring that every child is a graduate prepared for further education and the workforce.



**U.S. Department of Education  
Grant Performance Report (ED 524B)  
Project Status Chart**

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**SECTION C – WI FY09 Project Narrative**

**Outcome 1.0: Recruit & Hire Project Team**

**a. Outcome Summary**

After some delay, three necessary positions were filled in September 2009. These additions to the original project team include a project manager, an application developer and an education consultant. Adding these resources enables Wisconsin to achieve the goals of this grant.

Project Manager

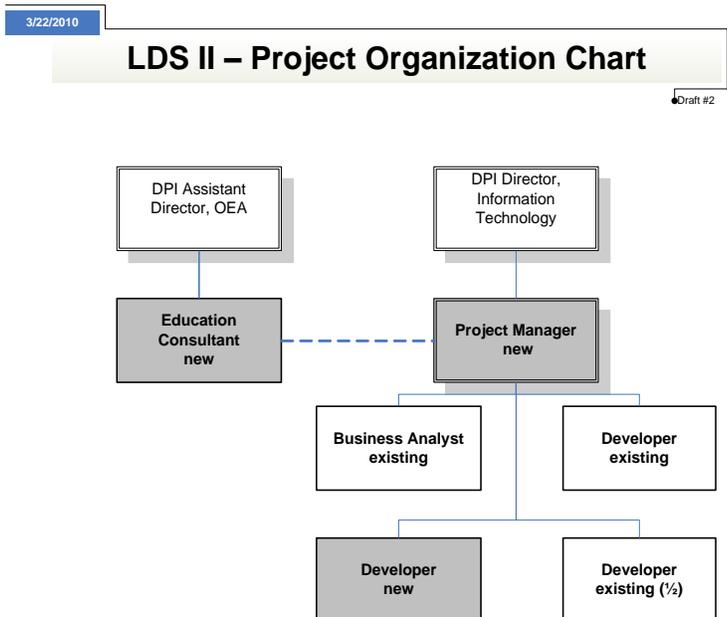
By adding a Project Manager dedicated to the LDS project, we will have one person truly leading the outcomes and initiatives. Having a dedicated project manager ensures that all project objectives and deliverables are on track. The project manager provides direction to the LDS team to accomplish project objectives as well as working with teams throughout DPI for analysis and development. The project is categorized as a “High Profile” project by the state of Wisconsin and thus requires additional attention to documentation, planning, and status reporting.

Educational Consultant

By adding an Educational Consultant in the Office of Educational Accountability (OEA) dedicated to the LDS project we brought on board a team member with program expertise and the perspective of a user of educational data. This person acts as the voice of the LDS and works with multiple groups including the schools, districts, CESA’s, program areas, and other stakeholders to communicate project successes and solicit feedback. The education consultant will positively influence the development and outcome of the varied objectives with a concentrated expertise in the education world and a willingness to understand the Longitudinal Data System as a whole to support data analysis related to business needs.

Developer

With many custom reporting solutions and many more to come, an advanced programmer was needed to ensure that we



continue to support current applications while moving forward with the next generation of toolsets. With a wide range of skills, this developer is able to complete tasks related to application development, reporting, and overall data warehouse initiatives.

#### Current LDS Team

The current LDS team staffing level is now at 5.5 full-time employees. The three new people joined one full-time programmer, one part-time data warehouse developer, and a business analyst.

#### **b. Major Accomplishments**

The additional key project staff members were all in place as of September 14<sup>th</sup>, 2009. At that time we were able to officially kick-off project initiatives and move forward.

#### **c. Plans for Tasks Still to be Accomplished**

The LDS team is now fully staffed. At this time we do not have plans to add additional staff members to the project.

#### **d. Lessons Learned**

The necessary additions to the LDS Project Team were identified and funded by this grant. However, the State of Wisconsin processes and approvals caused a delay. As a result of this delay, the LDS Team was unable to move forward with most of the outcomes listed until September 2009, about 4 months after we had planned to start. In the future we intend to start the process of identifying staffing needs for projects as early as possible and do what we can to move position requests through the approval chain as quickly as we can.

The new team has worked together to define a coherent and productive organizational structure within the LDS Project. Internal communication is an important component of any project. Now that the project has become an agency-wide priority, the LDS staff strives to provide regular agency-wide updates on current and planned initiatives to maintain agency support and buy-in.

## **Outcome 2.0: Define and Develop Wisconsin's P20 System**

### **a. Outcome Summary**

Wisconsin's P20 initiative will expand the Wisconsin longitudinal data system by linking across the P-20 education pipeline and between state agencies, driving longitudinal research and analysis that enables school and district improvement by creating a richer picture of individual student performance over time.

We envision that P20 will continue to be defined (2.1) for Wisconsin throughout the next few years as we work towards developing and communicating a shared understanding of what the WI P20 system will be, what benefits it will provide, what will be developed, and what responsibilities accrue to all stakeholders involved. The P20 initiative will involve a variety of phases and projects that may include analysis, development and implementation efforts around the following:

- Integrating postsecondary enrollment and completion data into the data warehouse
- Building capacity to communicate with Wisconsin Institutions of Higher Education
- Building capacity to communicate with other Wisconsin State agencies
- Integrating postsecondary remedial coursework information into the data warehouse
- Developing useful reports to help educators, administrators, parents, and the public of Wisconsin better understand how elementary and secondary education translates into postsecondary readiness, enrollment and persistence.

In addition to meeting the goals and priorities of our LDS grant, these initiatives will move Wisconsin towards meeting State Fiscal Stabilization Fund requirements for a Statewide Longitudinal Data System as defined by the America COMPETES Act and will align with the agencies Every Child a Graduate effort to ensure our students benefit from both college and career preparation, learning the skills and knowledge necessary to be contributing members of our communities.

### **b. Major Accomplishments**

The first project associated with the PK20 initiative is the Postsecondary Enrollment Data & Reporting Project (2.3). The goal of this project is

*To integrate postsecondary enrollment and completion data from the National Student Clearinghouse into the Longitudinal Data System data warehouse for research, analysis and reporting.*

In December we received Cabinet approval to move forward with contracting with the National Student Clearinghouse (NSC). The NSC will provide DPI with postsecondary enrollment and degree data on high-school graduates who continue on with their education. Specifically, it will enable us to expand the K-12 data existing in the data warehouse today by incorporating the following student level data elements:

- College name, state, type (two- or four-year, public or private, etc.)
- Enrollment begin and end date

- Graduation date, degree title, major

NSC data will enable DPI to create public and secured reports that answer questions such as:

- Where do our high school graduates enroll college?
- What are the characteristics of the college?
- How long after high-school graduation do they enroll?
- How long do their education efforts persist?
- Do they graduate from college? If so, what degrees do they earn?

This project will also benefit our local educational agencies. Each individual high-school can submit, at no cost, a cohort of students for local analysis. The NSC will provide each high-school with a plethora of aggregate reports detailing the post-secondary trends of their specific students and well as training and support for each local educational agency during the file exchange process.

The second project associated with the P20 Initiative is the P20 Data Sharing & Analysis project (2.2). To meet requirements of Wisconsin Act 59, which requires a relationship between DPI, the University of Wisconsin System (UWS), the Wisconsin Technical College System (WTCS), and the Wisconsin Association of Independent Colleges and Universities (WAICU) to study each other's education programs and to discuss the best method for data sharing to enable analysis, the DPI Legal Office has signed a compact agreeing to work together towards an interoperable data system with UWS, WTCS, and WAICU, that may include a unique statewide student identifier. DPI is developing a memorandum of understanding with each individual organization. We anticipate requirements gathering and design discussions with the three external stakeholders will start within the next 3 months.

**c. Plans for Tasks Still to be Accomplished**

The P20 initiative in Wisconsin and the work to be accomplished to meet our goals is still being defined. Work will continue on the two initiatives already begun. Other initiatives, such as integrating remedial coursework information into the LDS, will be a next step. Additional tasks not yet defined may be added to the plan for completion in the next few years.

**d. Lessons Learned**

During meetings with external stakeholders it became evident that groups outside of DPI do not have the capacity, in resources or technological architecture, to develop the capacity to share data. We recently submitted a grant application that attempts to address these issues by providing WAICU, WTCS, and UWS the means necessary to contribute to the project. In addition, because the postsecondary enrollment and completion will be obtained from an external organization the team needed to complete a sole source to justify the cost and contract with the NSC was necessary to obtain the dataset. We did not anticipate the approval to take months instead of weeks. In the future we will need to build time into our project plan to complete this type of task.

### **Outcome 3.0: Develop student-level data collection including course completion and teacher/student connection**

#### **a. Outcome Summary**

Wisconsin will implement a new statewide data collection early in 2011. This collection will capture the data necessary to satisfy the requirements of the American Recovery and Reinvestment Act (ARRA) and by reference the America Competes Act. This student-level collection will be integrated with the existing Individual Student Enrollment System (ISES) already in place and make the connection between a teacher, a specific course section and a student. Grades will be captured for high school students. Standard NCES course codes will be used.

The Applications Development team is currently leading the effort for building the course collection system. Once the data is available the LDS Team will be responsible for managing and completing the effort to move the data to the LDS data warehouse. (3.7)

#### **b. Major Accomplishments**

Project conceptualization (3.1) is complete and the project charter was published in November 2009. Project analysis (3.2) is very close to completion and includes a further definition of project objectives, deliverables, timeline, issues and cost.

Key members of the development team, including a project lead, 2 developers, and a part-time analyst are in place and technical design (3.4) is also in progress.

#### **c. Plans for Tasks Still to be Accomplished**

The DPI development approach is a traditional waterfall methodology. Project integration, scope management, time management, communications management, risk management and quality management are on-going activities. Subsequent project phases will include:

- Preliminary design
- Detailed design
- Development & Testing (3.5)
- Implementation & Monitoring (3.5, 3.6)

The preliminary date for the first collection is February 2011.

#### **d. Lessons Learned**

Wisconsin is struggling at this time to secure the necessary expertise and commitment from the impacted program areas to aid the developers. It is not clear to this Agency who should “own” this mandated collection at this time and how to fund a long-term commitment, including the involvement of non-IT staff.

## **Outcome 4.0: Build Next Generation Analysis and Reporting Tools**

### **a. Outcome Summary**

The development of next generation analysis and reporting tools incorporates many of the overarching philosophies and goals that serve as the foundation of our Longitudinal Data System. Analysis and reporting tools should draw from a variety of data sources to create a more complete and robust picture of student academic performance for both technical and non-technical users. These tools should also be accompanied by comprehensive training and support documentation. In addition, data should be reported and available in a timely manner with secured and flexible access to confidential data.

### **b. Major Accomplishments**

Significant progress has been made towards these goals. Specifically, the LDS Project has released the following reporting and security applications in the last year:

The School District Performance Report (SDPR) (4.1) (June, 2009). A district's annual public school report, the SDPR includes a variety of data (test results, enrollment, program offerings and participation, high school completion, post-graduation plans, district staffing and finance) that can be compared to other districts in the same athletic conference. Users select from tabs on the top of the screen to navigate between reports. Users may create a PDF of their district's results. Additionally, NAEP data reports were created and linked off of the SDPR (4.10). NAEP results are also included in the newly created State Report Card (4.11).

The Multi-Dimensional Analytic Tool (MDAT) (4.8) (January, 2010). An enhanced version with additional functionality was released in March, 2010 (4.13). MDAT is the first secured reporting tool associated with Wisconsin's LDS Project and is geared towards local educational agencies. MDAT is a web-based application that allows authorized users to create reports that compare achievement over time in relation to WKCE data for their school or district. By selecting from a wide array of variables, authorized users are able to analyze summary data and compare the results to the State or District data. Users with specific access rights are able to drill down to student-level information and/or download the summary or student data. Feedback has been positive, and over 130 districts are using the tool leading us to believe that the application is user-friendly for both data-savvy and less technical users. Support documentation is easily accessible from the LDS webpage, along with training videos. Additionally, LDS staff has provided overviews of MDAT to almost every regional service agency in the state, and a variety of district users. Continued support is planned throughout the summer.

The Longitudinal Data System Access Manager (LDSAM) (4.9) (January, 2010). Security enhancements for this release included additional tiers to limit access to student-level downloads, economic indicators, and student-level data in general, student-level logging to log who accessed specific student records and when it was viewed, and a user agreement to ensure a user understands the importance of securing student-level data and accepted the responsibility for using the tools to access this type of data for legitimate education purposes only (4.2). A version with multiple user-friendly enhancements was released in February (4.14). The confidential nature of data

included in our LDS, and made available through MDAT, requires a reliable security application to manage access to secure applications and data. The LDSAM application is used to manage access to secure LDS applications, MDAT for example, and specific data or features within these applications. The LDSAM application allows the District Superintendent (Administrator) the ability to determine for their district who can manage access to the applications (Delegated LDS Security Administrators), who has access to certain applications, and what a user can see/do with an application (roles).

**c. Plans for Tasks Still to be Accomplished**

While SDPR and MDAT are useful applications, particularly for districts that may not have dedicated research staff, Wisconsin continues to consider new useful and innovative reporting methods as part of the scope of the MDAT 2 reporting task (4.4). Currently, Wisconsin is in the early stages of soliciting stakeholder feedback about providing student growth percentile reports. We have an implementation plan for these reports that includes a limited pilot, followed by the release of static reports for all districts, and eventually the implementation of a comprehensive application that will allow users to evaluate aggregate and disaggregated (student-level) growth data in a variety of ways.

We plan to create new tools to generate a student profile (4.12) and to incorporate local data into the data warehouse (4.7) so that districts and schools can add specific data from their systems to personalize their analysis. Both tools will be flexible so that we can use them for stand-alone analysis, within MDAT, or within future reporting technologies. Both tools will greatly enhance student-level reporting and inform classroom-level interventions increasing the capacity for more in-depth local analysis. The team is also planning on building reports that enable analysis of English Language Acquisition data (4.3).

We also must improve the timeliness of our reporting. Currently, the applications above are in-house creations, and the time and effort needed from the LDS team to create and maintain these tools and reports hinders our progress towards new initiatives.

Wisconsin plans to evaluate new reporting technologies (4.5) for possible implementation (4.6) in an effort to add to our toolset the capacity for DPI, District, and School users to create their own ad hoc reports that draw from our data warehouse.

**d. Lessons Learned**

Meeting the data and reporting needs of every user is a challenge. Thus, it is important to involve stakeholders throughout development and implementation to collect feedback as well as to communicate project scope and benefits which results in increased user confidence, support, and buy-in for each project. Our LDS email account also provides a forum to answer questions and collect feedback that is incorporated into our applications.

## **Outcome 5.0: Upgrade LDS Infrastructure**

### **a. Outcome Summary**

In order to ensure that our applications and reporting technologies continue to provide the level of availability and capacity needed for a successful user experience with using the applications and technologies, the LDS Application Production Environment needed to be upgraded (5.2).

For a true development lifecycle to exist to promote quality development and extensive testing without impact to production applications and the user community, the LDS Application Development Environment needed to be upgraded (5.1) and built to mirror the existing LDS Application Production Environment.

We anticipate increased development and the need for additional reports and reporting tools in the near future. By upgrading the environments we are paving the way for the growth of our LDS.

### **b. Major Accomplishments**

New hardware was purchased to replace the existing LDS Application Production Environment. The existing LDS hardware was then used to upgrade the LDS Application Development Environment. During the upgrade to both environments the hardware was configured the same way for both the development environment and the production environment. This resulted in having both environments upgraded with new hardware as well as being configured to match the other. Both environments are upgraded, configured, and functioning as expected. The benefit to having a development environment has been recognized through the recent efforts to develop, test, and implement the Multi-Dimensional Analytic Tool. We are now able to complete development and testing without impacting production. The production application remains available to users with normal response time not impacted by additional load on the system. The new environment has benefited DPI programming staff by truly mimicking the production environment.

The work to complete this outcome was moved up in the schedule due to difficulty in hiring other staff and subsequent delays in starting the other project outcomes.

### **c. Plans for Tasks Still to be Accomplished**

The LDS infrastructure update is complete. At this time no additional hardware upgrades are planned.

## **Outcome 6.0: Build Detailed Student-Level Datasets**

### **a. Outcome Summary**

A key component of an LDS is a data warehouse storing student and school data from a variety of sources. Student-level datasets that can be linked over-time by a student ID are the basis for a valuable and far-reaching longitudinal data system. Overall, the WI LDS team strives to add useful, student-level data from various state data collections into the data warehouse. When combined, these data provide a complete, robust longitudinal picture of student academic performance over time to facilitate data-driven decision-making.

### **b. Major Accomplishments**

The team has added four new datasets into the LDS this year. These datasets include ISES Discipline, ISES Outcomes, ACT, and WI Covenant data. The LDS has become the “single” source for student-level data. Currently DPI staff members are able to query the data warehouse using query tools. Public reporting (WINSS) and federal reporting (EDFacts) are also utilizing LDS data.

#### ISES Discipline

The ISES Discipline dataset (6.1) provides student-level information on incidents of discipline. Once in the LDS, discipline data is used to compare district expulsions and suspensions across gender, race/ethnicity, disability status, and grade level. Reporting has been completed on the types of incidents resulting in suspensions vs. expulsions, the length of expulsions, services offered during expulsions, the percent of students returning to school after expulsion, and the number of days of suspension or expulsion as an element of impact on performance. This data is also incorporated into MDAT for reporting.

#### ISES Outcomes

The ISES Outcomes dataset (6.7) provides an annual composite picture of student's demographics, mobility, end-of-year outcomes, and school year outcomes. Data for each student from multiple datasets are combined into a single record per student per year. This dataset was created to facilitate data-informed planning/policy making by busy education professionals with expertise in data analysis but limited knowledge of DPI's complex raw data structures and/or database tools. The data may be used separately or joined with other tables in the LDS database such as district/school characteristics, test results, or student program participation. Currently the state version of this dataset is available and the data is incorporated into MDAT.

#### ACT

Adding ACT data (6.2) to the LDS increased assessment data available for reporting. We are now able to analyze ACT subject-area scores in conjunction with course tasking habits to determine if specific classes are indicators of ACT success. We will also be able to examine if ACT scores have any correlation with postsecondary enrollment or persistence or between different demographic groups and/or schools and districts.

#### WI Covenant

The Wisconsin Covenant program (6.6) was created to encourage students to take the steps necessary to graduate from high-school and move on to postsecondary education.

With this data integrated with LDS data, we will be able to determine if being a part of this program is a strong indicator of high school graduation and postsecondary enrollment and completion.

**c. Plans for Tasks Still to be Accomplished**

The team recognizes the importance of incorporating additional useful datasets into the LDS. Multiple initiatives have been started and others planned to incorporate data into the LDS for reporting and analysis. These initiatives will raise the quality of LDS reporting.

Course Completion

Development has begun on a coursework completion data collection (6.4). The LDS team will begin work to add the reported data into the LDS once the collection is in place in early 2011. The new collection will provide data on student course taking habits and will enable creation of a teacher and student link. Once in LDS, this course data will help us determine the programs and classes that result in high school graduates ready for postsecondary education and the workforce.

Postsecondary Enrollment

Analysis and design has started to integrate postsecondary data from the National Student Clearinghouse into the LDS. This data will enable us to report on how many of our Wisconsin graduates pursue postsecondary education as well as the types of schools they attend (i.e., two- or four-year, in- or out-of-state, and public or private). With the incorporation of this data into the LDS, Wisconsin will be able to meet important SFSF reporting requirements. Specifically, we'll be able to answer how soon after graduation a student enrolled in an institution of higher education, if they enrolled a second year, and how students many receive a degree.

Future initiatives will include incorporating race/ethnicity changes as defined by the USDOE (6.5), creating district and school level outcomes data (6.7), and integrating career and technical education (CTEERS) data (6.3) into the LDS. The team will also continue to research different avenues of enriching the data in the Wisconsin Longitudinal Data System by adding datasets that expand our longitudinal picture from K-12 to PK-16 and beyond.

**d. Lessons Learned**

Although the team understands the importance of quality, detailed, student level datasets, creating these datasets does not come without challenges. Properly and completely identifying the student associated with each piece of data from disparate sources is a key element of an LDS. Incomplete or overly simplified matching can cause unnecessary holes in the longitudinal view, or worse, incorrect and illogical combinations of results that create a flaw in otherwise good and important associations.

## **Outcome 7.0: Build Comprehensive Educational Portal**

### **a. Outcome Summary**

The goal of this component is to build (7.1) and implement (7.2) a one-stop-shop portal for LEAs, Educators, DPI and the Community to access data and information on Education in Wisconsin. Ultimately, we envision a single, easy-to-access site for anyone interested in learning more about Wisconsin schools. Public users will be able to view redacted reports on a variety of educational indicators captured in our LDS. Users with authorized access (such as school staff) will be able to log in to secure, non-redacted views of data to which they have access, as well as ad hoc report development via an interactive analysis and reporting application.

Currently Wisconsin educators and community members may access data from a variety of reporting tools, found through multiple access points. While most publicly reported data may be found on WINSS (The Wisconsin Information Network for Successful Schools), many public reports remain distributed in a variety of locations, mainly throughout DPI's public website, on program area pages. Users unfamiliar with DPI's organizational structure may have difficulty locating desired data, or even finding out if such data are available. Additionally, district and school users who need regular access to these data and reports find the organization inconvenient and confusing. Current report and analysis tools include

The Wisconsin Information Network for Successful Schools (WINSS): A public resource for educators, parents and community members that provides information on academic standards; how students are performing each year; and how our schools are staffed and funded. WINSS data are redacted and searchable by school, district, or State. Data displayed is for current and previous years and can be sorted by grade level, gender, race/ethnicity, economic status, disability, English proficiency, and migrant status.

The School District Performance Report (SDPR): Serves as a district's annual public school report, and available for all Wisconsin school districts. SDPR include data on test results (achievement, ACT, AP), enrollment (attendance, dropouts, truancy, suspension, and expulsions), program offerings and participation, high school completion, post-graduation plans, staffing, and finance. These data can be accessed and compared to other districts within the same athletic conference, as required by state law. WINSS, Adequate Yearly Progress (AYP), accountability, and Special Education District Profile reports may be accessed from the SDPR website.

The Multi-Dimensional Analytic Tool (MDAT): Created specifically for use by local educators and DPI staff, MDAT is the first secured reporting tool associated sourced completely from the LDS Data Warehouse. MDAT is a web-based application that allows authorized users to select from a wide array of variables to create reports that compare achievement (as measured by Wisconsin Knowledge and Concepts Examination scale scores) over time for groups of their creation. Authorized users are also able to drill down to student-level information and download data for local use.

Each data access point (WINSS, SDPR, MDAT) provide data and information specific to the goals of each application without a common location to access all of the applications. With such a plethora of information available, we must provide an easier access point to promote data use around the State which is easy for users to use and

understand. The LDS needs to leverage the existing WINSS and SDPR reporting methods to provide the greatest benefit to the educational community of Wisconsin.

**b. Major Accomplishments**

The first step in the transition from disparate data views to a common portal began in January with the rollout of a new WINSS homepage. Additionally, a comprehensive LDS Homepage was created to provide visitors with up-to-date information about the LDS Project, LDS reporting, analysis, and security applications, and steps to take to get access to these tools. Links to SDPR, the LDS webpage, and the secure login for MDAT were added to the WINSS navigation bar so that all of these data and information links are in one place for users. In addition, the LDS Data Warehouse has been used to source some of the WINSS and SDPR datasets. Finally, early development of a student-level course completion collection, and the planned addition, this year, of postsecondary data promise an LDS warehouse that is able to fuel more informative research and reports.

**c. Plans for Tasks Still to be Accomplished**

While updating the WINSS homepage to include LDS links was a significant step forward for an agency that has historically maintained single, disparate access points for data sources, much remains to be done to meet our goal of creating a comprehensive data portal that will serve all customers of confidential and public state education data. The current ad hoc structure of data and report placement has resulted in a less-than-transparent data access process. To address this issue, we continue to research agency reporting methods and district needs to construct a data portal that provides internal and external value. Additionally, efforts continue to 1) incorporate additional internal data sources into the LDS, and 2) collect new (student transcript and postsecondary enrollment) data to improve the quality of our LDS. We anticipate the addition of postsecondary enrollment and completion data to our LDS before July, 2010, and the addition of student-level coursework data that will link students and teachers in late 2011.

**d. Lessons Learned**

Stakeholder involvement is essential when transitioning to new methods of providing data. We intend to ensure our users are involved—to provide ideas and feedback—throughout the processes of designing and implementing our comprehensive data portal. Additionally, the process of deploying a new WINSS homepage has taught us to plan ahead and take the timeline into consideration when working towards final approval for a new portal. As we continue to better understand the process of changing WINSS and SDPR source datasets, we are prepared to complete these tasks more efficiently. We anticipate additional lessons learned will be acquired as we move forward with this component.

Code	Proposed Outcome	Status	Proposed Start Date	Proposed End Date	Grantee Comments	NCES Comments
1.0	<b>Recruit &amp; Hire Project Team</b>	<i>Operational</i>	5/2/2009	9/14/2009	Official grant start date recorded as 5/2/2009. All new staff for the LDS project hired and ready to go as of 9/14/09.	
2.0	<b>Define and Develop Wisconsin P20 System</b>	<i>Work In Progress</i>	9/23/2009	10/1/2010		
2.1	Define P20 Initiatives	<i>Work In Progress</i>	9/23/2009	4/1/2010	Survey being developed to inquire about current data items, data standards, and data sharing practices used today within the stakeholders group including post-secondary, workforce, and early childhood. The first two major initiatives within P20 for Wisconsin involve postsecondary education. The first initiative (2.2) will be to collaborate with the Institutions of Higher Education to enable data sharing for analysis. The second initiative (2.3) is exclusive to DPI and will integrate postsecondary enrollment and degree information into the LDS. As we move forward other initiatives will be defined and prioritized. Outcome Goal: A shared understanding of what the WI P20 system will be, what benefits it will provide, what will be developed, and what responsibilities accrue to all stakeholders involved.	
2.2	Define, Develop & Implement P20 Data Sharing & Analysis	<i>Not Begun</i>	4/1/2010	10/1/2010	This effort will ensure WI can meet the requirements from the America Competes Act to communicate with higher education data systems. The DPI Legal Office, in conjunction with UWS, WTCS, and WAICU, has signed a compact within Act 59 agreeing to work together to have an interoperable data system that may include a unique statewide student identifier. Act 59 details the proposal for a relationship to study each other's education programs and to discuss integrating the post-secondary data they have available into our LDS. Analysis for the LDS effort will begin soon.	
2.3	Define, Develop & Implement Postsecondary Enrollment Data and Reporting	<i>Work In Progress</i>	2/22/2010	10/1/2010	Received Cabinet approval on 12/7 to move forward with contracting with the National Student Clearinghouse (NSC). Currently working with the DPI Business Office and Legal Office on the Sole Source Justification and Contract. Project Kick-Off meeting to be held on 2/22. Design and technical meetings in progress. Contract and sole source in progress.	
3.0	<b>Develop Student-Level Data Collection including course completion and teacher/student connection</b>	<i>Work In Progress</i>	11/1/2009	6/30/2011		
3.1	Project Conceptualization	<i>Operational</i>	11/1/2009	1/30/2010	Project charter completed in November. Kickoff held November 18th. Determine how best to match teacher data with student data and capture courses completed including grade earned. Define project objectives, scope & constraints.	
3.2	Perform Analysis	<i>Work In Progress</i>	2/1/2010	4/15/2010	Project analysis for the new data collection was completed in March 2009 and includes a further definition of project objectives, deliverables, timeline, issues and cost.	
3.3	Perform Tollgate Review	<i>Not Begun</i>	4/15/2010	4/15/2010		
3.4	Perform Design	<i>Work In Progress</i>	3/15/2010	4/30/2010	Technical design for the new collection application is in progress.	
3.5	Build and Implement New Collection	<i>Not Begun</i>	5/1/2010	1/15/2011		
3.6	Monitor and Support New Collection	<i>Not Begun</i>	1/1/2011	3/30/2011		
3.7	Move new datasets to LDS Data Warehouse	<i>Not Begun</i>	4/1/2011	6/30/2011		

Code	Proposed Outcome	Status	Proposed Start Date	Proposed End Date	Grantee Comments	NCES Comments
4.0	<b>Build Next Generation Analysis and Reporting Tools</b>	<i>Work In Progress</i>	1/1/09	7/1/11		
4.1	Build one-click School Performance Report	<i>Operational</i>	1/1/09	6/30/09	<a href="https://wlds.dpi.wi.gov/spr/">https://wlds.dpi.wi.gov/spr/</a>	
4.2	Implement Security Enhancements	<i>Operational</i>	7/1/09	1/22/10	Security enhancements were made to the LDSAM and MDAT applications to accommodate new security requirements. 1. Additional Tiers were added to limit access to student-level downloads, economic indicators, and student-level data in general. 2. Student-level logging was added to log who accessed as student record and when it was viewed. 3. A user agreement was added to ensure a user understand the importance of securing student-level data and accepted the responsibility for using the tools to access this type of data. General Availability announced Jan 11th and 12th. Notification was sent to the Districts on Jan 22nd. LDSAM R2 Usability Enhancements were implemented in production successfully on 2/18.	
4.3	Build Eng Language Acquisition Reports	<i>Work In Progress</i>	4/1/10	10/1/10	Mock-up created. Waiting to be prioritized. Meet federal reporting requirements for English language acquisition	
4.4	Build Multidimensional Analytic Tool 2 (MDAT2) (Growth Report)	<i>Work In Progress</i>	11/1/09	9/30/10	Mock-up created. Prioritized. Initial discussions started to determine what exactly this effort will entail. Research being conducted on utilizing the Colorado Growth Model.	
4.5	Evaluate New Reporting Technologies	<i>Work In Progress</i>	1/21/10	12/31/10	Initial research started. Next step is to submit an RFI, talk with other WI State agencies, and talk with other States about what they are doing. Also looking at open source BI solutions.	
4.6	Purchase & Implement New Reporting Technologies	<i>Not Begun</i>	1/1/11	6/1/11		
4.7	Build Local Data Variable	<i>Not Begun</i>	1/1/11	7/1/11	This project will enable the WI education community to define an unique cohort with an LEA defined, ad hoc, variable uploaded into the LDS data warehouse. Reports can then be generated utilizing this data variable.	
4.8	Multi-Dimensional Analytic Tool (MDAT) Version 1	<i>Operational</i>	1/1/09	1/22/10	The Multi-Dimensional Analytic Tool is the first secured reporting tool associated with the Wisconsin Department of Public Instruction's LDS Project. MDAT is a web-based application that allows authorized users to create reports that compare achievement over time in relation to WKCE data. Initial efforts completed between 1/1/09 and 7/1/09. Security enhancements were added beginning 7/1/09 and are detailed in 4.2. General Availability was announced Jan 11th and 12th. Notification was sent to the Districts on Jan 22nd. As of today we have 102 Districts with access to the LDSAM tool to assign access to MDAT within their District. Development for Release 2 is ready for initial testing. MDAT enabled the WI education community to explore annual test data in new and powerful ways.	
4.9	Longitudinal Data System Access Manager (LDSAM) Version 1	<i>Operational</i>	5/25/09	1/22/10	Security tool used to manage access to secured LDS applications.	
4.10	NAEP Data included in School Performance Report	<i>Operational</i>	11/18/09	12/21/09		
4.11	State Report Card (including NAEP data)	<i>Operational</i>	11/18/09	1/15/10		
4.12	Build Student Profile	<i>Not Begun</i>	1/1/11	7/1/11	Build a profile of a student with data from the LDS.	
4.13	Multi-Dimensional Analytic Tool (MDAT) Version 1 Release 2	<i>Operational</i>	10/1/09	3/25/10	An enhanced version of MDAT released. The release includes: Group size highlighting State and district comparisons Availability of student detail from a district wide query (Tiers 1-3 only) The addition of school name to the download file (Tier 1 only) An option to download all student details for certain queries (Tier 1 only)	
4.14	Longitudinal Data System Access Manager (LDSAM) Version 2	<i>Operational</i>	11/1/09	1/22/10	Second release of Access Manager-with usability enhancements-implemented successfully.	

Code	Proposed Outcome	Status	Proposed Start Date	Proposed End Date	Grantee Comments	NCES Comments
<b>5.0</b>	<b>Upgrade LDS Infrastructure</b>	<i>Operational</i>	7/1/2009	9/30/2009		
5.1	Upgrade LDS Development Environment	<i>Operational</i>	7/1/2009	9/30/2009	Increased usage and planned load require greater discipline and upgrades to the computer hardware.	
5.2	Upgrade LDS Production Environment	<i>Operational</i>	7/1/2009	9/30/2009	Increased usage and planned load on the production environment required upgrades to the computer hardware.	
<b>6.0</b>	<b>Build Detailed Student-Level Datasets</b>	<i>Work In Progress</i>	3/1/2009	10/1/2011		
6.1	Build Discipline Data Sets	<i>Operational</i>	3/1/2009	6/1/2009	Incorporate data from discipline collection into the LDS data warehouse, build necessary summary tables	
6.2	Build ACT Data Sets	<i>Operational</i>	1/1/2009	4/1/2009	Incorporate data from annual ACT Exams into the LDS data warehouse, build necessary summary tables	
6.3	Build VEERS Data Sets	<i>Not Begun</i>	7/1/2011	10/1/2011	Incorporate data from Vocational Education Enrollment and Reporting into the LDS data warehouse, build necessary summary tables	
6.4	Build Course Completion Data Sets	<i>Not Begun</i>	1/1/2011	4/1/2011	These datasets are the result of the new collection that will be built in 2010 and include the student/teacher connection	
6.5	Apply Race/Ethnicity Fixes	<i>Not Begun</i>	4/1/2010	6/30/2011	LDS Impact discussions to start soon. Logic decisions needed by July to incorporate the changes to race / ethnicity reporting as defined by the US Department of Education.	
6.6	Build Wisconsin Covenant Flag	<i>Operational</i>	11/1/2009	12/31/2009	Merged data from the Wisconsin Covenant Project with the LDS. A flag was set at the student-level which indicated whether or not a student was involved in this program. This flag will enable future reporting on these students.	
6.7	Build ISES Outcomes Data Sets	<i>Work In Progress</i>	6/1/2009	1/11/2010	ISES OUTCOMES provides an annual composite picture of student's demographics, mobility, end-of-year outcomes, and school year outcomes. Data from multiple collections/records for each student are processed/combined into a single record per student per year. ISES OUTCOMES was created to facilitate data-informed planning/policy making by busy education professionals with expertise in data analysis but limited knowledge of DPI's complex raw data structures and/or database tools. ISES OUTCOMES may be used separately or joined with other tables users of the LDS database can utilize. These other tables focus on district/school characteristics, test results, and student program participation. The State level Outcomes data has been approved for production. Creating user documentation before implementing.	
<b>7.0</b>	<b>Build Comprehensive Educational Portal</b>	<i>Not Begun</i>	7/1/2011	9/30/2012		
7.1	Build Wisconsin Educational Portal	<i>Not Begun</i>	7/1/2011	7/1/2012		
7.2	Implement Wisconsin Educational Portal	<i>Not Begun</i>	7/1/2012	9/30/2012		