

Spotlight

Case Study: Nebraska Dept. of Education

Nebraska Department of Education Builds a Data Quality Culture Using eScholar

The Nebraska Department of Education (NDE) deployed the Nebraska Student and Staff Record system (NSSRS) to 254 districts supporting 330,000 students. This system uses the eScholar Complete Data Warehouse® for PK-12 to collect detailed and aggregate level educational data and the eScholar UniQ-ID® for Students to assign and manage identifiers. Deploying this system as a replacement for the previous aggregate data collection was an indication that there was a need for improved data quality. NDE then built a partnership with the districts which clearly identifies roles and responsibilities and validation rules and supports these with a state data conference and extensive data quality training. This partnership has helped to build a data quality culture among the districts where data stewards take pride in submitting clean data.

The Challenge

The project began as a pilot with 15 districts in the 2005-06 school year. In 2006-07, the project was rolled out to the rest of the state as a parallel data submission. In addition to submitting aggregate records as they had been doing, districts submitted individual records as well. As districts began to submit data to NSSRS, it became obvious that there were errors that had not been identified when the data was in aggregate form. NDE created validation reports that showed that over half the errors involved the data that had been entered incorrectly in the source system. To improve data quality they needed to address the source - in the district systems - as the data were being entered.

The Solution

Staff at the NDE realized to address the source data entry, there needed to be a partnership between the districts and the State, as well as between the program and technology staff. It was essential for administration and staff to

understand that this was more than just an IT project and must involve both their program and data entry staff. To do this, NDE developed a four pronged approach to the partnership.

The first step was to define roles of everyone involved and to provide each individual with the necessary tools to carry out his/her responsibilities. Chris Cassel, Project Manager, says that the key to partnership was to "Know what you want, document it, and not change it." The data to be collected were identified and appropriate templates developed and disseminated.

Secondly, data validation tools and reports had to be distributed. The valid values function of the eScholar Data Manager™ was used to catch many of the errors before the data were loaded. NDE also deployed the NSSRS Validation Website that provides districts access to validation reports, verification reports, and lookup tools. Validation reports identify errors, point out inconsistencies in the data, and identify the records and fields that need to be reviewed or corrected. A series of verification reports present data in aggregate so that district personnel could verify that the data are accurate, and identify any missing or inconsistent data.

The Nebraska State Data Conference was the third prong of the partnership. It is sponsored by several state groups including NDE, school boards, administrators, and teachers. The first conference had over 550 attendees. The conference provides practical information on the front line of data collection and reporting, as well as providing valuable networking opportunities. Conference sessions help school district and systems staff understand how state and federal laws impact data collection, understand the state data quality initiatives, and prepare for future changes in state data systems.

Finally, NDE developed an extensive data quality training program. The program began with a one day session for superintendents, principals and school board members to introduce NSSRS and to emphasize the need for clean data and the importance of involving program and data entry staff. This was followed by two days of tactical training for staff involved with the data. The validation and verification tools were also introduced and training provided for their use. The training continually stressed the importance of the data and the impact they have on the district and state. The training is followed up by periodic Work Days. These provide an opportunity for staff from each district to work together. Collectively, they use the validation reports to make necessary corrections before the data are submitted. The overall theme of the training program is "Clean is an adjective, not a verb."

The Benefit

The SEA/LEA partnership is building a "Data Quality Culture." Data administrators are taking pride in loading clean data. They now understand the importance of taking the time to make sure the data are clean before submission. Data quality has become a priority. "We can see the effects of the training in the quality of calls that come through the Help Desk," says Aimee Lempke, Senior IT Help Desk Coordinator. "Instead of asking, 'How do I do this?' we are getting more meaningful questions that indicate a higher level of data sophistication." The level of effort required at the district to submit data initially increased with this project, but has decreased as source data entry quality has improved. Chris Cassel indicated that they could not have done this without eScholar and their data management products.

Currently, the eScholar data warehouse is used primarily for state and federal reporting, especially EDEN and EDFacts. Now that data quality is solid, NDE is looking to broaden the scope of its eScholar capabilities by integrating course and instructor data and expanding from P-12 to include data from postsecondary and higher education.

The partnership that NDE has built with the districts in Nebraska, together with its partnership with eScholar, will ensure that higher quality data is being used to support more and more decisions that help improve the learning of the students in Nebraska.

Highlights:

- Solid management of identifiers is key
- Collecting and cleansing detail level data enables actionable data quality
- Fast and direct feedback are essential to quality improvement
- Clear rules and solid training are a must

About eScholar

eScholar is the nation's leading educational data system company. eScholar clients have achieved phenomenal success using our data management and analysis solutions to track and improve pre-K through postsecondary student achievement. Relied on by over 3,400 school districts across the country, eScholar transforms the way educators use and understand the data collected through a myriad of sources. For more information about eScholar, visit www.escholar.com.



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