



OREGON DEPARTMENT OF EDUCATION

INTEGRATION OF LONGITUDINAL DATA SYSTEMS FOR RESEARCH AND PRACTICE ILDS - RP

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Project End Date: 2/28/2012

Amount Awarded: \$3,696,615

This proposal focuses on enhancing the statewide longitudinal data system that has been developed over the last decade in Oregon. The state has successfully used legislative funding and federal awards to develop a centralized and standardized system for organizing and storing student records and transcripts in statewide data warehouses. At the individual level, educators now have a unique staff identifier that allows them access to a secure system for focusing on school improvement. At the institutional level, common file formats now allow integration of records from K-12, community colleges, and the Oregon University System (OUS).

The data structures and integration protocols are in place, but to be most effective in using student performance and progress data to drive educational decisions, the data system needs three enhancements. First and foremost, *classroom data need to be added* as a critical ingredient to complement the data elements currently present. While demographic data are important as blocking factors for analyzing and reporting data, they are not changeable and therefore limited as targets for instructional design. Although statewide test data are present, performance is distal to daily classroom events and progress is eventual in showing change. Second, better *empirical analyses need to be conducted* to create first-order change that can lead to more localized, second-order change. Recent advancements in statistical analyses that take into account the nested nature of performance using hierarchical and growth models can now be used to better understand the complex nuances of student performance and progress. Third, *teachers need to be better prepared* to not only mine the data, but also use it in finding systematic patterns that have curriculum and instructional implications. This training is best done at the beginning of teachers' careers so that teaching and learning can become integrated in a holistic approach. Given the explosion in creation, transfer, storage, and reporting of information with advancements in computing technologies, teachers need to learn how to place learning first so that teaching can be appropriately developed and delivered.

Over the next three years, we propose to enhance the data integration system in the statewide data warehouses by incorporating classroom performance and progress measures; building largescale data sets for policy analysis and development; and creating pre-service teaching materials that use classroom performance and progress measures. We will use an extant curriculum-based measurement (CBM) system that has been developed at the University of Oregon. This system is operational and currently used by teachers in all 50 states, with districts having the option of both benchmarking testing (as predictors of

performance on the statewide test) and progress monitoring (as students are identified at risk of failure and require more formative evaluation).

In this project, we will adapt the easyCBM data warehouse system to allow districts to control exchange of student demographic information and state scores into their local district's easyCBM site. Once these data have been integrated into local (district) data warehouses, the Oregon Department of Education (ODE) can integrate them across regions and begin the process of file creation for large-scale data mining by policy analysts. Using secure access control points and systematic file structures, university researchers can work with ODE to conduct specific studies of longitudinal data sets to better understand district and state policy initiatives. Finally, using previous work conducted at the University of Oregon, a series of web-based teacher training modules will be developed for incorporation into pre-service programs within the seven-school Oregon University System (OUS).