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## HAWAII DEPARTMENT OF EDUCATION

### ENABLING EFFECTIVE LONGITUDINAL DATA USAGE IN HAWAII

**Project Start Date: 3/1/2009**

**Project End Date: 2/28/2012**

**Amount Awarded: \$3,477,053**

Similar to many organizations who were early adopters of the “data driven decision-making” movement, the Hawaii Department of Education (HIDOE) has begun to realize the limitations of using cross-sectional data analyses for critical decisions. National movement towards the use of growth models and four-year graduation rates show that increased validity in measuring educational achievement will come from the ability to analyze student-level longitudinal data.

The objectives proposed for this project will build upon the success of past efforts in information systems implementations as well as current efforts to capture instructional practice including the implementation of standardized statewide secondary course codes. The project will focus on increasing the quality of data collected, interoperability of data between systems, analysis of data over time and most importantly moving the use of data from operational and accountability purposes towards strategic usage in increasing student achievement.

The work proposed for the project is categorized under two main areas:

***Development of a statewide longitudinal data system:*** The project proposes to implement a statewide longitudinal data system utilizing the Zachman Framework as the systems planning mechanism which will insure that the longitudinal data needs of all relevant stakeholders are captured and included in the system design. An object-centric approach comprising objects, services, business rules and indices is anticipated to be deployed as the technical foundation of the system. The technique will eliminate the limitations associated with traditional relational databases and build agility into the system which is critical in evolving application implementations.

***Cultivating the use of longitudinal data with the intent of improving student academic achievement:*** A successful information systems’ implementation involves more than technical components. The stakeholders identified as end users of the system must be trained and supported if maximal value is to be achieved. Under the direction of Dr. Ronald Gallimore, Dr. Bruce Matsui and the Claremont Graduation University, the project intends to develop end-user support for the initial system implementation as well as develop a framework for supporting evolving longitudinal data requirements. The issues of data integrity, privacy and confidentiality will also be examined through an investigation of the policies and procedures being implemented in organizations faced with the Health Insurance Portability and Accountability Act (HIPAA) and Sarbanes- Oxley compliance mandates.