

# Quarterly Performance Review of the Arizona Education Learning and Assessment System: AELAS

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Submitted to the Arizona Department of Education and the  
Arizona Department of Administration by WestEd and  
CELT

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## EXECUTIVE SUMMARY

### INTRODUCTION

This report documents a quarterly performance review of the Arizona Education Learning and Assessment System (AELAS) by an independent evaluator as required by *Arizona Revised Statutes* (ARS) 15-249. WestEd and CELT were hired by the Arizona Department of Education (ADE) to serve as that independent evaluator. The quarterly monitoring is a follow-up to the performance review conducted in 2013, with a report submitted on September 9, 2013. The agreed upon scope of the quarterly monitoring is to:

1. Provide feedback on issues or good practices relative to the currently funded projects for AELAS.
2. Provide feedback on the degree to which the recommendations in the performance report are being appropriately addressed.
3. If needed, provide a gap analysis between the functionality that is currently funded (baseline) and the full vision of AELAS – as can be discerned from the business case and from information gathered from the project teams. The gap analysis would provide information about the components that may not be feasible to implement, given funding constraints. To date, this was not an issue for the FY14.

To accomplish these objectives for this quarterly monitoring report, WestEd and CELT reviewed and analyzed recent documentation related to AELAS, conducted monthly monitoring calls with AELAS domain leaders and key managers, and completed a three day on site visit to interview AELAS team leaders and ADE leadership on AELAS project statuses. In particular, the WestEd/CELT team used as a guide and interview protocol the set of recommendations documented in the September report to determine the progress being made by ADE. In response, our team paid particular attention to the AELAS work plan, staffing, budget, and timeline to assess the amount of project progress.

An objective of the monitoring is to work with ADE to help them develop an actionable project plan that takes into account the necessary coordination among business owners within ADE, stakeholders, and user groups. For FY15 the ADE has developed a comprehensive AELAS project plan which includes a work break down structure for AELAS efforts. WestEd/CELT staff reviewed this plan against which AELAS progress will be measured, accounting for the delivery of project components against planned activities.

This report describes the progress made on each of the original oversight team recommendations, documents commendations for AELAS work going particularly well and highlights areas of challenge for future monitoring by ADE and development of mitigation plans.

Ultimately, the objective of the report is to provide ADE with formative and constructive information about AELAS, its implementation and functioning, and to help guide ADE's own progress monitoring plans. The report is also intended to provide to ADE actionable steps, through the progress noted on the series of recommendations.

The ADE continues to make progress in effectively addressing the recommendations in the September 9, 2013 report. The ADE team has created a management and reporting plan for the WestEd/CELT recommendations and has prioritized the recommendations according to their urgency and impact upon the effective planning and deployment of AELAS. Significant progress is being made in the appropriate recommendations areas in a well managed manner. The FY15 budget continues the maturation of AELAS from an enterprise financial and reporting system into an instructional improvement system in line with the original AELAS business case. Communication, planning and program support efforts have been significantly improved since the last monitoring report. The program leadership and functional domain leaders have begun to lead AELAS system configurations which is critical to system success, these efforts will need to be enhanced as AELAS capabilities increase into instructional improvement. As AELAS functionality increases the ADE and LEA teams will need an increase in data literacy and the associated application of data to instructional and school improvement activities to effectively utilized AELAS capabilities to improve student outcomes. Data quality and governance efforts have been expanded. Overall the ADE team continues to effectively address the original recommendations.

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## **INITIAL RECOMMENDATIONS**

The baseline from which the WestEd/CELT team this quarterly report were the ten, initial recommendations outlined in the September 9, 2013 report. As a reminder, the recommendations were:

1. Staying on course with the full scope of work for AELAS, which includes opt-in components, is important to successfully achieving both the legislative intent for establishing a robust data collection and reporting system and the classroom need for quality information to support effective teaching and learning. Our experience shows that the reporting of data to state agencies for compliance reasons, when there is no subsequent benefit or use of those data by the districts and schools, results in generally poor quality data. Providing systems and dashboards that help schools and teachers use data for improving classroom instruction will help ensure that the data are not only accurate but useful. This will ultimately result in better quality data for ADE, which is the spirit and intent of the legislation. It is recommended that ADE continue to pursue the current scope for AELAS.
2. A business architecture (e.g., vision, goals, processes, policies, and use cases) for an integrated learning enterprise system that includes the functionality found in student information systems (SIS), instructional improvement systems (IIS), and individualized education programs (IEP) systems. It is recommended that using an education business

architecture model, that ADE work to define an integrated system of processes, data, and applications built around the planned real-time operational data store (ODS).

3. It is recommended that ADE clearly address and communicate AELAS/SAIS/SLDS costs and budget within fully developed project plans, deliverables, costs, funding sources, interdependencies and schedules.
4. Improved communication to diverse audiences, including educators, policymakers and other stakeholder groups is strongly recommended using strategies such as; recruiting champions from all sectors across the state and providing “talking points” to them as well as use-case vignettes, one page overviews and longer briefs (avoiding technical jargon) and working closely with public information officers in local education and partner agencies to disseminate information. Engage a professional communications person or agency outside of the IT organization to lead the communications efforts.
5. It is recommended that ADE continue to establish the data governance process by effective use of data stewards and the development of data standards for key AELAS systems, prioritizing the SIS data categories. Using the guidance of national education standards, such as the Common Education Data Standards (CEDS) developed through the Council of Chief State School Officers, will ensure that such data as discipline and attendance can be standardized and agreed upon by the districts to derive data quality benefits from using a common SIS.
6. It is further recommended to continue to reduce the level of redundancy of data collections and to implement the plan for reducing the data collections recently developed with the districts. It is important to be transparent and explicit about the frequency of and expectations for data upload, and communicate these changes on a timeline that allows districts (and their vendors) to make needed adjustments. Also, the use of a roster verification tool and process for the teacher-student data connection is recommended. Such a tool is currently being piloted by the ADE. This will improve reliability and build credibility among the teachers for the quality of the data linkages.
7. A key recommendation of this report is to establish a not-for-profit organizing structure that is separate from, but endorsed by, the legislature and ADE, to engage the districts and charter schools more in the leadership, support (technical and programmatic), risk management, and coordination of the opt-in components of AELAS. This group would be responsible for managing the ongoing operations (or contracts for software as a service) of the opt-in AELAS components including the specification and contracting for the components and the cost and revenue model.

8. It is recommended that ADE provide ongoing training to improve the capacity of educators to use data. The focus should be on system training and data literacy. This would include reaching out to Arizona State University, Northern Arizona University, the University of Arizona and other partners in higher education to work with them to have data use included in course offerings.
9. A recommendation to ensure adoption throughout the state includes consideration for smaller LEAs. This has started and should continue to be expanded by working with the small and rural districts and charter schools on their technology readiness with a focus on sufficient technological infrastructure and bandwidth to implement AELAS and future online assessments.
10. A comprehensive, long-term approach to planning for AELAS is recommended with continued consultation with ADE stakeholders and users. Building upon the initial needs analysis and expanding opportunities for feedback into an ongoing continuous improvement process will support this. Thus, it is recommended that there be periodic and ongoing needs analyses throughout the course of the development and implementation processes. Another key long-term strategy is the prioritization of partnerships with the business community to leverage their expertise and support.

### RECOMMENDATIONS

The 10 initial recommendations served as the baseline from which the WestEd/CELT team worked during the site visit and the virtual monitoring. Below is a synthesis of the team's findings as they pertain to each recommendation.

1. It was recommended that the project stay the course. This work is ongoing and continues in a positive manner. The FY15 budget request contains a number of projects that will increase AELAS teacher, leader and student functionality in alignment with the originally envisioned system. The functionality includes: content management, learning management and teacher observation.
2. It was recommended that ADE use a business architecture. ADE is integrating AELAS practices into effective business processes and has begun the transition from AELAS as a stand alone technical project to a program led digital foundation for the execution of organizational strategies and tasks. Examples include; the program led Organization Entity Management (OEM) working group, the data analysis working group (DAWG), the SIS procurement working group and the dashboard working groups. As AELAS instructional functionality increases from annual high stakes data reporting to formative assessments and content management there will be an increasing need for formalization of the ADE business architecture. This includes the alignment of department strategic plans to and across programs area plans and associated execution activities and methodologies. FY15 projects are especially dependent upon a strong business architecture. Examples of business architecture include; coherence in taxonomy and processes that are required to maximize the usefulness of the material stored in the content management system to increase it's functionality for teachers and curriculum leaders, the teacher observation tool configuration plans with consistency across LEAs and teacher development programs to ensure inter-relater reliability and commonly agreed upon student outcomes and evidence of learning objective mastery in the learning management system. Business architecture efforts required include translating strategic plans into program operating plans, involving program staff to take advantage of increasing AELAS capabilities to positively impact their work and associated student outcomes. This transition in planning will be iterative with eventual ownership by business/program leaders of AELAS data and functions to support their specific and coordinated needs. Leadership in this process is coming from Elliott Hibbs and Dr. Jenifer Johnson. Going forward with increasing AELAS capabilities from school finance into instructional improvement areas each project should include a non-technical

development plan with a business/program lead that collaborates with IT to lead business/non-technical decisions (i.e. meta-tagging taxonomy). For each process supported by each project there should be a level of specificity that details how a particular AELAS capacity will help the particular business owner's domain.

The engagement of the education leaders will be the focus of the WestEd/CELT site visit in June. At the request of ADE, the WestEd/CELT team will work with senior ADE leadership (Elliott Hibbs and Dr. Jennifer Johnson) to discuss a strategic planning process that will facilitate engaging leaders of ADE programs to take ownership in contributing to and buying into AELAS.

3. It was recommended that ADE directly address the budgetary issues that pertain to AELAS, SAIS, and the SLDS that include detailed work plans, deliverables, and timelines. In response to this recommendation the ADE has implemented a number of organizational changes. During the monitoring period the ADE has refined the capabilities of the Program Support Office (PSO) to consolidate the monitoring and reporting of budgetary information and the communications team has developed communication pieces for key stakeholders. Additionally for FY15 CIO Mark Masterson has developed a detailed project schedule within a Gantt chart format with a detailed work breakdown structure and dependencies among tasks. The project schedule breaks down the complexity of the AELAS plan and outlines what activities need to be done and when. This plan will help the business partners understand the requirements of the project and the IT staff to translate the needs of the program staff into information system capabilities.
  
4. The WestEd/CELT team recommended that ADE improve and continue to develop a communication plan to diverse stakeholders. The WestEd/CELT team has observed that ADE has initiated effective communication strategies and continuous improvement is occurring in this recommendation area. This effort is being led by Lisa Blyler. Within the technology group's program support office the communications team has made considerable progress in creating communication strategies regarding AELAS capabilities. Within the business/program areas Elliott Hibbs and his staff are coordinating business/program ownership of organizational processes supported/required by AELAS and the associated communication efforts and working groups. These actions are essential in attaining a level of understanding from the diverse stakeholder groups within and outside of ADE about the potentials of AELAS. Communication plans must effectively convey to stakeholders what AELAS can do for them. The oversight team continues to stress that AELAS communications must not originate from an IT focus for the organization to maximize the understandability of the messaging around AELAS but instead they must increasingly originate from the program and educator leaders with messaging founded on system benefits in a manner customized to key stakeholder needs. We also suggest continuing and



expanding the practice of documenting the AELAS communication activities to support the reporting of those activities to stakeholders.

5. The WestEd/CELT team recommended the creation of a data governance process. Significant progress has been noted on this recommendation. The major contribution to the progress is the appointment of a chief of data, Dr. Rebecca Bolnic. She has taken responsibility for seeing that a data governance plan is developed and put into place and that stakeholders and business partners are informed consumers of data. Progress also is evidenced in the work toward establishing data standards, plans for training, outreach to and communication with business partners, and the work of MCESA. ADE is to be commended for establishing the data analysis working group (DAWG).
6. It was recommended that ADE reduce the redundancy among data collections. The ADE has developed a high level phased approach to consolidating data collections and the effort remains a work in progress as foundational AELAS systems (such as student data store) are completed. ADE is acutely aware of the need and is working toward the goal of coordinated data collections. MCESA commented positively on the progress being made on this activity. This work belongs to Komal Dubey. Though it should be noted by readers that there is a potential of increasing data collections in the short term if proper governance structures are not implemented to prevent the initiation of grant driven efforts that require incremental data. Therefore it is recommended that ADE assign or create a governing body to review the initiation of new activities that could potentially duplicate or increase current data collections, this can include the appointment of duties to an ADE staff point person to this responsibility. An executive leadership or IT steering committee team are typically the governing body assigned such duties with assistance from the IT team to review incremental data collection needs.
7. The WestEd/CELT team recommended the creation of a non-profit organizing structure. ADE is aware of this need and is completing preparatory activities for action on this recommendation. ADE is considering its options and hopes to have a plan shortly. There is no expectation for significant progress on this recommendation yet, however it would be beneficial to for the ADE to begin a formal discussion of how portions of AELAS will be operationalized and managed with the participation of LEAs. The ADE shared they have begun a high level review of other public entity organizations that have been formed for similar purposes that will be used as part of their plans for this recommendation.
8. The WestEd/CELT team recommended the improvement of human capacity around the use of data; that is data literacy. A great deal of discussion on improving data literacy among stakeholders occurred during the April site visit. ADE is to be commended for its awareness and the various components included in this effort. Dr. Carrie Giovannone and the research group is attempting to help stakeholders within ADE become better consumers of the

information for research and evaluation. Although this is not data literacy per se, it is essential that business partners know how to interpret and consume the outcomes of data analyses and apply that analysis to improving their work processes. Todd Petersen is developing guidelines for teacher licensure that include data literacy. He is also working with the schools of education to improve awareness. The WestEd/CELT staff will provide expertise as needed on this effort. IT staff recognize that training on data use is not just about becoming facile with the data systems, but that stakeholders must become data literate. An example is the appropriate application of high stakes student test results and teacher observation data to teacher performance management plans, professional development and evaluations. With real/near time teacher observation data planned as part of the AELAS teacher observation tools there is a need for an associated increase in leader capacity to appropriately use these data sets to help teachers continuously improve in their craft. To date, AELAS training has focused on the technology but ADE is exploring with the WestEd/CELT team their expertise for planning to improve ADE data literacy. ADE recognizes the importance of training with the business partners, ADE more generally, and in the districts. Progress is being made here. What is unknown, however, are the appropriate timelines and rate of roll out for training in a coordinated timeline aligned with increasing AELAS instructional improvement capabilities.

9. It was recommended that ADE attend closely to the needs of the most rural districts. It is clear that many districts do not have the infrastructure to maximize the use of AELAS capabilities. The ADE is actively addressing some of these infrastructure issues with plans for a RFP out for wireless and another RFP for statewide high speed communications network. The WestEd/CELT team suggests that coordination of these infrastructure efforts with other state agencies could benefit the ADE. This coordination may be part of the current State of Arizona vision but details of the infrastructure plan were not investigated by the oversight team.
10. The WestEd/CELT team recommended development of a comprehensive long term plan and continued outreach to stakeholders in the form of periodic needs analyses as a process by which to monitor changing needs of the stakeholder groups. The action plans for this recommendation provide an opportunity for ADE to transition AELAS process and operational planning work from IT to the stakeholders and business partners to understand, lead and implement AELAS functions that support their organizational role and associated work processes. These efforts should be completed within a context that the objective for AELAS is to improve the teaching and learning process, not simply to satisfy compliance or financial requirements. Work in this area is expected to be ongoing and continuous. In support of this recommendation the ADE technology group has developed a comprehensive AELAS project schedule with a work break down for each project in FY15. As AELAS is operationalized and continues to increase its functionality into instructional improvement the tasks associated to this recommendation will not only run the course through the

timeline for AELAS technical development but continue through the system rollout and implementation efforts by the ADE and LEAs.

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## COMMENDATIONS

Commendations pertain to activities that ADE is doing especially well and are highlighted as examples of superlative performance. The WestEd/CELT team has noted eight commendations observed during the April site visit and the virtual monitoring.

1. *Communications.* The ADE communications team has created an infrastructure for clear and consistent messaging through developing; a presentation library, an email campaign tracking process and communication materials to legislative and teaching stakeholder groups. They also have a plan to capture web analytic data to evaluate communication effectiveness. The team leader clearly articulates an understanding of the importance of effective communication efforts to facilitate AELAS development and adoption activities.
2. *Program Leadership.* ADE program leaders have taken an active role in three key projects, the Organizational Entity Management project, the Student Information System Opt-In project and data governance efforts (data analysis working group). Within these projects program leaders have led the operational decision making process for AELAS work (examples of developing the business architecture) with non-technical staff from multiple program areas and in the case of the SIS project also representation from the LEAs. These are examples of AELAS business owners driving how they work together to create a common vision for how the organization will operate (business architecture) in a technology supported environment.
3. *Program Support Office.* The ADE Program Support office has developed a consistent set of organizational norms for project management including; a project audit process, a Microsoft SharePoint based project reporting and document management site to house project documents and a training program for project managers. This new PSO methodology will facilitate the PSO creating consistent project management methodologies across their projects, project phase gate processes and maintenance of project management documentation quality.
4. *ADEConnect Roll-out.* The ADEConnect team has a well planned deployment plan which includes the tracking of key work stages and a customer follow-up plan post-implementation. The domain leader also has a clear plan to transition the team from spreadsheet based activity tracking to a Customer Relationship Management environment that can be scaled to other projects and programs.
5. *SIS Opt-In Plan Comprehensiveness.* While a limited amount of information could be shared due to the privacy of the procurement process, the SIS Opt-In requirements and procurement process appear very comprehensive and have involved LEA representatives.
6. *Plan to Reduce Redundant Data Collections.* The ADE has developed a comprehensive and phased approach to reduce redundant data collections that is aligned to incremental Ed-Fi domain deployments.

7. *Data Governance.* The ADE has hired a full time data governance officer who is actively planning and implementing a data governance structure and associated management and training plan. These activities are critical for the consistent collection and reporting of information in and out of AELAS.
8. *Content Meta-Tagging.* The ADE is developing a comprehensive content meta-tagging plan as part of the Content Management System project. The team is working with and utilizing the work of content standards bodies including the EIMAC meta-tagging team and IMS Global Learning Consortium standards.

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## CHALLENGES

The WestEd/CELT team has noted some challenges that pertain to the ongoing work. These challenges are not to be construed as negatives, but to be taken as constructive issues that staff identified about which ADE should actively monitor and proactively manage when appropriate and feasible.

1. Ed-Fi. Publication of the Ed-Fi REST API specifications and ODS database schema is significantly behind schedule which directly impacts the Student Data Store project. This issue will most likely negatively impact the timelines of data collection reduction plans. The ADE technical team is managing this challenge by actively monitoring (and where appropriate providing insight and assistance) the vendor developing the API standards. While the oversight team agrees with the adherence to standards in the development of AELAS it also notes this creates a dependency upon the standards body that impacts the AELAS timeline.
2. Vendor ADEConnect implementation. Two SIS vendors did not deploy the ADEConnect plug-in on the timeline originally developed by the ADE. This has negatively impacted the ADEConnect deployment and associated deployment of AZDash. The ADE technical team actively managed this challenge. The vendors are currently completing this work which will facilitate the continued deployment of ADEConnect in FY15. The ADE team appears to be aggressively managing vendor capabilities needed for AELAS, but stakeholders should be aware of the vendor dependencies as part of the AELAS plan.
3. Procurement timelines. The procurement process has delayed the SIS Opt-In project, most likely pushing back the project by at least one year. A statewide procurement of this complexity is difficult to expeditiously execute, the original timelines for this project may have been aggressive. Another procurement project similar in scope to the SIS Opt-In may not reoccur in the near term, but the extended timeline of this project may be a source of lessons learned for future projects, particularly regarding the establishment and negotiation of achievable procurement timelines.
4. Data quality. Current LEA data submitted to the ADE are reported to be of poor quality (errors and inconsistencies) and though it was adequate enough to support legacy systems (with manual manipulation) it will not be sufficient to support real time data reporting requirements as needed for AELAS Instructional Improvement System functions. AELAS is

an excellent tool to expose LEA teams to the importance of their data quality and its impact on systems supporting instructional outcomes but it also puts at risk the adoption of the system if poor data quality leads users to feel it is not populated with accurate information. Until the REST API is implemented the data quality in source systems will not be visible to the ADE, so this challenge cannot be directly addressed at this time outside of the data governance work currently underway but the data quality in source systems is an AELAS challenge.

5. Program leadership. As AELAS becomes more capable of informing instructional practice (through the instructional improvement applications) program leaders and LEA instructional leaders will need to increase the role they play in defining system business requirements and configurations. Now is a good time in the AELAS project for program leaders to increase their capacity to utilize data to inform instruction and teaching and their efforts in communicating AELAS current and planned capabilities to teachers and leaders and how they can apply those capabilities to their work practices.
6. Data literacy. AELAS is actively producing dashboards for teachers and leaders, but the skills and knowledge of those consuming the information available via the dashboards may not be of an adequate level to use the information effectively. As the AELAS project deploys incremental online digital assessment capabilities (e.g. formative and benchmark) and digital resources (content) systems users will need increased competency in the interpretation and application of data to the improvement of the appropriate work process and professional development activities. Examples include the use of formative assessments to create student instructional groups and the use of benchmark assessments to improve curriculum or professional development.
7. High frequency assessments to support system adoption. Currently the information available in AELAS is high stakes annual assessment data which is populated into AELAS after the instructional year has ended. To provide teachers with information they can use to inform instruction the deployment of formative and benchmark assessment tools is needed. Formative assessments were within the original AELAS business case and this challenge has been addressed in the FY15 plan with the funding of IIS systems.
8. Inconsistency in how the program areas do their work (business architecture). As AELAS increases in capabilities there will be an increasing need for formalized establishment and arbitration of how instructional programs work together in a coherent manner through the standardization and integration of work processes. An example is the CMS meta-tagging process. Each program area must agree to a common methodology and taxonomy to tag content in a manner that supports every program's work functions, and allows the association of formative assessment results to appropriate instructional resources. Another example is the existence of two state contracts for teacher observation systems (True North Logic and TeachScape). These applications should be configured as similarly as possible in how they operate and provide information to teachers and leaders to facilitate system adoption and integration into LEA and ADE work efforts.
9. Governance structure to manage future data collection requests, and grants with IT or data collection impacts. The AELAS project has a clearly defined goal of reducing the district work created by the submission of redundant data in a high frequency, uncoordinated

manner. That currently planned reduction in data collections within AELAS could be offset by incremental data requests from new instructional initiatives without developing a formalized methodology to manage data collection needs from future initiatives (including grant based initiatives).

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## **CONCLUSION AND NEXT STEPS**

The immediate next step is to schedule a meeting with Jennifer Johnson to discuss the team's work to engage the programs in the AELAS work. This step is a logical extension from the team's findings and discussions during the April monitoring visit.

The team, in conjunction with ADE, is scoping out three components of work for the FY15. First, the WestEd/CELT team will continue its monitoring work and provide ADE and the AELAS team with the quarterly reports. Second, the team will work with ADE to help engage the programs as business partners in the continuing development and implementation of AELAS. Third, the team will assist ADE with their work to help build data literacy within the agency and for its districts.