

A Quarterly Performance Review of the Arizona Education Learning and Accountability System: AELAS

Submitted to the Arizona Department of Education by
WestEd and CELT

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INTRODUCTION

This report documents a quarterly performance review of the Arizona Education Learning and Accountability System (AELAS) by an independent evaluator as required by *Arizona Revised Statutes* (A.R.S.) 15-249 that was conducted October 10 through 12, 2017. WestEd, the prime contractor, and the Center for Educational Leadership and Technology (CELT), the subcontractor, were hired by the Arizona Department of Education (ADE) to serve as that independent evaluator. This quarterly monitoring report is a follow-up to the initial performance review conducted in 2013, with a report submitted on September 9, 2013. This report follows and builds on all previous quarterly monitoring reports, updating commendations and recommendations.

This report focuses on the degree to which the ADE is meeting the requirements of A.R.S. 15-249. This legislation is contained in the Appendix of this report. The ADE hired WestEd and CELT to conduct quarterly performance reviews with the primary intent to determine whether the activities of the Department were properly executed and targeted towards the objectives as stated in ARS 15-249. This legislation also includes ARS Title 15 Chapter 9 Article 8 in its scope.

There is one change to this report that differentiates it from previous ones. At the request of ADE, the monitoring team began interviewing individuals from districts to begin to gather information about their perceptions of AELAS and the impact the system is having on district and school practice and processes. Findings from these interviews are integrated with the typical interviews carried out by the monitoring team.

FINDINGS

The main findings from this monitoring visit include:

1. **35% Cap on Contractor Markup:** Recent legislation placed a cap on the total markup on contracted staff of 35%. The expectation was that such a cap was not to affect the salaries and benefits of the contractors themselves. For ADE, this expectation has not played out. They are experiencing the loss of contractors due to their salaries and/or benefits being reduced or because their vendors prefer to serve other non-government customers where the cap does not apply. Such a loss of contractor resources creates difficulties for the ADE to meet commitments.

Also, currently the ADE IT department is comprised of approximately 60 to 65% contractors and 35 to 40% full-time employees (FTEs). While this is an acceptable practice and percentage during periods of extensive new development work (such as ADE has just experienced), it is not a good and viable long-term staffing structure.

2. **Fiscal Year 2018 Sustainability Funding:** The FY2018 budget is still in non-recurring funds. The concern for sustained funding for the build out and maintenance funding for AELAS has been well documented in almost all preceding reports and continues to be a serious threat to the future of the system. AELAS appears to be falling into the same pattern as its predecessor, SAIS. This pattern is:

- i. The SAIS system was developed and became operational;
- ii. As the system moved from development to operation, funding was reduced to include only maintenance;
- iii. As budget deliberations each year became difficult, IT dollars were seen as more politically “safe” to reduce;
- iv. SAIS funding was reduced over time such that the system was kept as-is, rather than continuously upgraded and enhanced to keep it current and reliable;
- v. SAIS eventually fell far behind current systems designs and capabilities and became more and more difficult (and costly) to support;
- vi. Support costs began to rise, but there was no increased funding to meet the support demands;
- vii. Support demands went unmet, customer satisfaction suffered, system performance and reliability trended downward and data errors and reporting errors became issues and risks; and
- viii. Eventually, frustration and risk associated with SAIS became such a known state-wide issue that political support was mustered to correct the problem.

This repeating pattern was confirmed by interviews conducted during this October 2017 visit. In fact, every interview respondent, including the district participants, expressed extreme concern about the need for sustained funding for AELAS or it would fall into the same abyss that occurred with SAIS and other legacy systems.

3. **AELAS Use in Districts and Schools – ARS Title 15, Chapter 9, Article 8, Section 15-1044** established the Arizona e-Learning Task Force and states that the task force shall “Submit recommendations to the legislature and the state board of education for ... the coordination of a standardized data system for use by school districts that interfaces with the data warehouse system of the department of education and that provides decision support data for the school district office, school personnel, parents and pupils”.

The intent letter of this legislation was largely met to a degree by ADE with the development of AzDASH. However, conversations with school districts during the October 2017 visit indicated limited use of AELAS in the classroom for guiding instruction. Districts actually report that they do not even know what AzDash is, as noted by an undated survey on the ADE website. To some extent a degree this limited use of AzDASH is understandable

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given that the only data in AELAS that are useful for instructional planning are the state summative assessment data. Such data are relevant and useful at the start of the school year and for a limited scope of decisions, but the relevance diminishes as the year progresses, particularly for classroom practice. Data from benchmark or more specifically, formative assessments are required to have a system that can truly support classroom and instructional decisions on an ongoing basis throughout the year for “school personnel, parents and pupils”. Educators and other stakeholders need real-time, diverse, and actionable data to inform their practice.

In addition to the limited use of AzDASH for instructional purposes, some districts also report that some districts they have purchased data dashboards and learning management systems to provide the kind of data and functionality that AELAS that AzDash was initially understood to contain. They are seeking solutions elsewhere because ADE has not addressed the kinds of data educators need. This represents a missed opportunity that AELAS was initially promoted as fulfilling.

Districts also appeared uncertain as to the direction that AELAS is taking. The vision that was communicated in the early stages of AELAS was one that provided data and digital resources to the classroom level. Priorities from the legislature (such as current-year funding) and budget restrictions have resulted in AELAS’ scope being focused on the data collection and funding calculations (i.e. SAIS replacement) and these classroom needs have of necessity remained largely unfilled. Clearly, communication to the districts about AELASzDash and its future directions and vision as regards the use of data, and the change in focus away from real-time classroom data use should be communicated to the districts. as districts have noted a degradation of communication with them about AELAS, rit large. Overall, however, there is positive and widespread acceptance of AELAS. It is just that AzDash is largely unknown and has unfulfilled promise.

The e-Learning Task Force, as laid out in the legislation, is not currently in operation. Such classroom data use questions and directions would come under the purview of such a task force, if it were in operation. Overall, tThis report finds that the full spirit and intent of Chapter 9, Article 8 has not been fully met.

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4. **APOR/CHAR:** The report from the legislative review of the APOR/CHAR requirements has been completed. The Budget application requirements were added to this review. The current plan (tentative) is to develop a model or proof of concept and review the results with key district business managers and legislators prior to beginning the full design and development.

5. **SIS Opt-in:** The legislative stipulation that prohibits ADE from using funds to actively market the SIS Opt-in option has contributed to a limited number of new districts coming onboard with this strategy. This, together with the low margins for small districts creates a funding imbalance such that the program is anticipated to remain cash positive only until December 31, 2018. The SIS Opt-in is a good strategy for assisting especially smaller districts to get better services at lower prices for critical software such as the student information system. It is a strategy that other states have successfully applied. The ADE IT team has made improvements in the SIS Opt-in program services such that districts are more appreciative of this service. ADE needs a decision and a clear path forward for this program. Removing the program may result in higher prices for participating districts as they are forced to negotiate new contracts for their SIS.
6. **Data Governance:** A new Data Governance support person has been hired by the ADE. Data privacy has become an increasingly important area for the department to safeguard, and data governance provides the structure for this by getting data stewards actively involved in assigning access rights to data. Past reports have highlighted the need for ADE to focus efforts in this area. This individual will report to the ADE attorney who has oversight for the governance process.

Additionally, the Data Governance Commission, as legislated under ARS 15-249, has not met under the current administration.

7. **OEM Redesign:** The original design and development of the OEM system included Microsoft's CRM data structures and screens as its core components. The purpose of OEM is to track both education organizations and the relations and contacts within them. CRM is designed for the later and not for education organization tracking. To meet both needs, the data structures of CRM had to be significantly extended. This addition of fields resulted in a poorly performing system with slow response. The CRM screens also lacked sufficient validation rules resulting in bad data. A review of the CRM approach by the ADE CTO determined that the logical data model was sound, but needed a different physical data model design. A new user interface with additional validation rules was also needed. CRM programmers are expensive, so the decision was reached to drop the CRM database and screens in favor of an internally developed system.

The lessons learned from this were:

- To adhere to the adopted development methodologies for ADE and use two-week sprint demos to validate the performance with the customers involved, and
- To engage the program area and responsible business/application owner(s) in the specification, design, development and testing of their applications, and not presume to understand business owner needs in a vacuum.

8. **Legacy Applications:** Converting the legacy applications from SAIS is an important remaining step for the AELAS project. This conversion strategy has shifted slightly to embrace both data marts and APIs to directly extract the data from the ODS. The work to continue to develop the ODS is currently on the back burner to allow time to address the redesign and re-development of OEM.

9. **API 4.0 Certification:** ADE is preparing for the release of the specs for API 4.0 to the vendors for development, testing and certification for the 2019 fiscal year. The vendor-facing specs are due by January 15, 2018 to allow vendors the time required to code to this. This API includes Ed-Fi API version 2.3 plus additional ADE extensions. The plan is to begin vendor API certification in March.

Additionally, interviews with district technical staff revealed frustrations with the design and functionality of some of the vendor APIs. Some vendor APIs resulted in work-arounds and additional work on the part of the district staff.

10. ESSA Financial Requirements: ESSA financials to track per-pupil spending at the school level is a project that is on the roadmap but the specifications/requirements have not been worked out. This is an excellent project that can be done with/through the Ed-Fi APIs. This is also a project that can be developed jointly with other Ed-Fi states and possibly as part of a grant effort.

2-11. Other Opportunities Mentioned by the Districts in the area of Finance: Training was mentioned by the districts as an opportunity. School finance started strong in this area but has not progressed beyond a basic training offering regarding use of the new finance reports. Additionally, the districts stated that ADE has school calendar information in the AELAS data structures. This data could be used to make integrity rules more specific in such areas as end-of-school-year rules.

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RECOMMENDATIONS

The WestEd/CELT team recommends the following:

1. 35% Cap on Contractor Markup - recommendations include:

This report does not have a suggested short-term remedy to the issues caused by the 35% cap. For the long term, ADE IT needs to develop a staffing strategy and plan that shifts the reliance away from contractors and includes an increasing percentage of FTEs. This report recommends that as the AELAS work is winding down, ADE should develop a staffing strategy and plan to reduce the dependence on outside contractors and bring the essential skills for maintaining AELAS inhouse as full-time employees. The first step in this plan is to

get the salary dollars for the employees required to support AELAS fully funded in a recurring budget.

2. Fiscal Year 2018 Sustainability Funding - recommendations include:

- This report recommends that the ongoing maintenance and operation portion of the budget for AELAS be placed in recurring funding accounts. This is essential to the future stability and functioning of the system.

3. AELAS Use in Districts and Schools - recommendations include:

- It is the recommendation of this report that the e-Learning Task Force be reconstituted to fulfill its original purpose but with the expanded caveat that it also focus on how to use the investment in the AELAS system and its real-time data gathering capabilities to better inform classroom planning and instruction. The focus on data use by educators in the schools and districts of Arizona is a natural objective for the AELAS work. The data system should be providing data that are actionable to educators across the state to maximize the impact of the system, realize its potential, and move beyond simply providing the required accountability and reporting data.
- [ADE needs to revisit its vision around the provision of data that can impact classrooms and instruction. Further, it is recommended that ADE begin to improve their communication with districts about the intent of AELAS, especially since the vision has apparently diverged from the original intention of the provision of real-time data for instructional use.](#)

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4. APOR/CHAR – recommendations include:

- This report recommends the proposed review for understanding and endorsement by the districts prior to design and development.

5. SIS Opt-in recommendations include:

- This report recommends that a decision as to the program’s continuance be reached quickly (before December 31, 2017) so that districts can budget for and negotiate pricing changes, should the decision be to terminate the program.
- This report further recommends that the decision-making process include feedback on the matter from all the participating SIS Opt-in districts.

6. Data Governance recommendations include:

- It is important that the new staff member for data governance become informed about the past history and the needed infrastructure to effectively deal with data privacy and

data governance. It is important that the recommendations from the April 2017 report be pursued by this new data governance person. These included:

- a. Re-engage the data stewards to continue work to solve known data issues, develop and populate a data dictionary, and consolidate data collection/reporting;
- b. Most importantly, use the data stewards to review and authorize data access to strengthen the data privacy practices of the department;
- c. Work with the Governor's office to get the Data Governance Commission appointments made and the group to begin meeting again in support of ADE data initiatives; and
- d. Finalize and publish the data governance policy.

7. OEM Redesign recommendations include:

- Building on the lessons learned from the OEM redesign, this report recommends that ADE IT continue to define, improve and ensure fidelity to the core IT processes that are important to high-quality service delivery and application maintenance. These include such processes as:
 - a. Application development processes (i.e. methodology)
 - b. QA process
 - c. Architecture design (data and architecture)
 - d. Project management
 - e. Help desk
 - f. Release management
 - g. Configuration management
 - h. Operations

8. Legacy Applications recommendation include:

- This report has no specific recommendations in this area, except to encourage the continuance of this work.

9. API 4.0 Certification recommendations include:

- This report recommends that ADE IT interview key district IT staff and get lessons learned and ideas for improved certification testing and SIS API design. Include this in the certification process for API 4.0. Continue to work with SIS vendors to improve their API processing and reduce district frustration with the data movement process. While such work is well outside the scope of normal ADE responsibility, it is

essential that ADE take all measures possible to reduce the frustration and inefficiencies in the district-to-state data movement process, regardless of the source.

10. ESSA Financial Requirements recommendation include:

- This report recommends that ADE look for an opportunity to jointly pursue with other states/organizations an effort to secure grant dollars to leverage Ed-Fi as a central component to meet the financial data gathering requirements of ESSA reporting. WestEd/CELT may be a resource for facilitating such discussions with other states and organizations.

11. Other Opportunities Mentioned by the Districts in the area of Finance- recommendation include:

- Look into partnering with school finance to review areas where data in AELAS can be used to make the integrity rules more adaptable to each district. Also, consider developing additional training with school finance on the reports that are available to the districts.

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 the following commendations from observations during the October 2017 site visit:

- 1. CIO Transition:** ADE appears to have made an orderly transition to a new CIO and a few additional staffing adjustments. The ADE IT team seems to have made the transition while maintaining the vision and momentum around AELAS.
- 2. Assessment Data:** Assessment data and assessment reports (including school report cards) are being shifted to AELAS as the system of record, reducing redundant data stores.
- 3. Program-Area Use of AELAS Ecosystem:** ADE IT is continuing to search for ways to maximize the benefits of the investment in the AELAS ecosystem. A recent example is in the Health and Nutrition program area where they have done some recent work to build functionality on top of the ODS for this. ESS and transportation are other areas of opportunity.

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4. **ODS Architecture Principle:** ADE IT has established an architecture principle that the ODS will be the single source of data dissemination. Additional accountability and strategies for how to enact this architecture principle are to be developed.

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5. **District acceptance of AELAS** – Districts that were interviewed reported that overall the acceptance of AELAS is good. It has much better system up-time and availability for data submittal, is more user friendly and provides reports much quicker than the old SAIS system. The integrity rules continue to improve and districts reported that they are working better than last year. ADE has been very helpful in providing frequent updates to the districts about changes to the system, although there have been some recent missed opportunities to communicate things such as integrity rule changes. The systems that have not been updated (i.e. APOR/CHAR) remain as challenges for the districts and need to be prioritized for replacement.

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APPENDIX:

ARS 15-249

ARS 15-249

In 2010, the Arizona Legislature approved HB 2733 with bipartisan support, now classified as ARS 15-249 and ARS 15-249.01, which led to the creation of the AELAS and a data governance commission. ARS 15-249 required the data governance commission to:

develop and implement the education learning and accountability system to collect, compile, maintain and report student level data for students attending public, educational institutions that provide instruction to pupils in preschool programs, kindergarten programs, grade one through twelve and postsecondary educational programs in [Arizona].¹

The Statute required the system to accomplish three main goals:

1. Maintain longitudinal, student level data, including student demographic, grade level, assessment, teacher assignment and other data required to meet state and federal reporting requirements.
2. Incorporate the student accountability information system prescribed in chapter 9, article 8 of [the] title.
3. Be accessible through commonly used internet web browsers to carry out the data collection, compilation and reporting duties prescribed in this title.²

The student accountability information system prescribed in chapter 9, article 8 is divided into five sections:

1. Student accountability information system
2. Timeline: student level data; definition
3. Student level data: confidentiality
4. Arizona e-learning task force; duties
5. Education database; pupil privacy³

Although ARS 15-249 offers general guidance and requirements for the creation of a learning and accountability system, it leaves most of the details up to the system's architects. The contents of ARS 15-249 follow:

¹ <http://www.azleg.gov/legtext/49leg/2r/bills/hb2733h.htm>

² <http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/15/00249.htm&Title=15&DocType=ARS>

³ <http://www.azleg.gov/arizonarevisedstatutes.asp?title=15>

15-249. Department of education; education learning and accountability system; reports; reviews

A. Subject to appropriation of state monies, or receipt of federal monies, private donations or grants from any lawful public or private source for this purpose, the department of education, in coordination with the data governance commission established by section 15-249.01, shall develop and implement the education learning and accountability system to collect, compile, maintain and report student level data for students attending public educational institutions that provide instruction to pupils in preschool programs, kindergarten programs, grades one through twelve and postsecondary educational programs in this state.

B. The education learning and accountability system shall:

1. Maintain longitudinal, student level data, including student demographic, grade level, assessment, teacher assignment and other data required to meet state and federal reporting requirements.
2. Incorporate the student accountability information system prescribed in chapter 9, article 8 of this title.
3. Be accessible through commonly used internet web browsers to carry out the data collection, compilation and reporting duties prescribed in this title.

C. The department of education may contract with a third party to carry out the purposes of this section.

D. The department of education, in coordination with the data governance commission, shall develop a detailed plan to develop and implement the education learning and accountability system.

E. The department of education shall present the plan developed pursuant to subsection D of this section to the state board of education for review and approval. The department of education shall continue to provide quarterly reports to the state board of education, or on request, for review and approval of the state board of education, on the development and implementation of the education learning and accountability system. All reports provided shall include progress and expenditures to date, timelines and cost estimates for completion.

F. Any contract awarded pursuant to subsection C of this section shall allow the superintendent of public instruction to renew the contracts for two subsequent periods of not more than three years each and shall prescribe the circumstances under which the superintendent of public instruction may terminate the contracts. The contracts shall allow this state to cancel any contract at any time after the first year of operation, without penalty to this state, on ninety days' written notice and shall require the contractor to be in compliance at all times with state and federal law.

G. Any contract awarded pursuant to subsection C of this section may provide for annual contract price or cost adjustments, except that any adjustments may be made only once each year effective on the anniversary of the contract's effective date. Any adjustment made pursuant to the terms of the contract must be applied to the total payments made to the contractor for the previous contract year and shall not exceed the percentage change in the average consumer price index as published by the United States department of labor, bureau of labor statistics between that figure for the latest calendar year and the next previous calendar year. Any price or cost adjustments that are different than those authorized in this subsection

may be made only if the legislature specifically authorizes the adjustments and appropriates monies for that purpose, if required.

H. The superintendent of public instruction shall not award a contract pursuant to this section unless:

1. The superintendent of public instruction receives an acceptable proposal pursuant to any request for proposals. For the purposes of this paragraph, "acceptable proposal" means a proposal that substantially meets all of the requirements or conditions prescribed in this section and in the request for proposals.

2. The proposal offers a level and quality of services that equal or exceed the services that would be provided by this state.

3. The contractor provides audited financial statements for the previous five years, or for each year that the contractor has been in operation if fewer than five years, and provides other financial information as requested.

I. The sovereign immunity of this state does not apply to any contractor who is a party to any contract pursuant to this section. The contractor or any agent of the contractor may not plead the defense of sovereign immunity in any action arising out of the performance of the contract.

J. The terms of any contract pursuant to this section are subject to review by the joint legislative budget committee before placement of any advertisement that solicits a response to a request for proposals. Any proposed modification or amendment to the contract is subject to prior review by the joint legislative budget committee.

K. During the first year of operation under a contract executed pursuant to this section, the contracting entity shall submit monthly reports to the department of education as prescribed by the department. After the first year of operation under the contract, the contracting entity shall submit quarterly reports to the department as prescribed by the department.

L. At the end of the second year of a contract executed pursuant to this section, an independent evaluator selected by the superintendent of public instruction shall conduct and complete a performance review to determine if the contracting entity has met the goals specified in the contract. The independent evaluator shall submit a report of the independent evaluator's findings to the governor, the president of the senate and the speaker of the house of representatives on or before May 1, and shall provide a copy of this report to the secretary of state.

A.R.S. Title 15, Chapter 9, Article 8, Section 15-1044 established the Arizona e-Learning Task Force and states that the task force shall:

1. Examine e-learning programs in other states.
2. Analyze potential methods to implement e-learning programs in this state.
3. Develop innovative e-learning solutions.
4. Submit recommendations to the legislature and the state board of education on the following:

(a) The transformation of traditional instruction programs to e-learning programs.

(b) Options to equip teachers with the most effective technology and training.
(c) Revisions to the current system of school funding as it applies to e-learning programs.

(d) The coordination of a standardized data system for use by school districts that interfaces with the data warehouse system of the department of education and that provides decision support data for the school district office, school personnel, parents and pupils.

(e) The enhancement and expansion of the integrated data to enhance Arizona's learning web portal system within the department of education to best serve the entire educational system in this state.

5. Collaborate with the department of administration and other public and private entities to express the technology needs of schools in this state.

6. Annually report to the legislature regarding e-learning programs and solutions.