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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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 June 21-22, 2016. 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 all previous quarterly monitoring reports, updating commendations and recommendations.

The main findings from this monitoring visit include:

1. IP Sell Bill: The IP Sell Bill has passed legislation. The strategies to leverage the opportunities presented by the IP Sell Bill have not been identified.
2. Conversion to AzEDS: The majority of the districts are primed to convert to AzEDs on or about July 1. This monitoring trip yielded information, however, that a small number of districts are being served by ETC, a consortium run out of Northern Arizona University (NAU). These districts are small and apparently ETC is serving as a proxy to them for their technology needs, particularly as regards providing SIS services through Edupoint. As such, ETC is a quasi-competitor to the ADE SIS opt-in services. Until recently, the ETC was a holdout for converting to AzEDS, pending resolutions to their questions and technical issues with the SIS connections.
3. SIS Opt-in: The JLBC has recommended that ADE not use their funding to actively market the opt-in SIS to districts.
4. Help Desk Services: There is currently ongoing tracking and use of help desk data, but there are additional data capture and analysis opportunities that could be applied to the ADE's ongoing efforts to identify trends and proactively address data and application issues.
5. Legacy Apps: Much work remains to convert the SAIS legacy apps over to the AzEDS data structures and ODS. This work is the next big push for AzEDS, as it drives much of the ongoing federal and state reporting for ADE.
6. Data Governance: The data governance structure is still evolving within Michael Bradley's office. The two staff working most closely on governance are aware of the importance and continue to try and work within the structures of the programs and with data stewards to establish acceptable processes. The recent work in this area includes:
   a. ADE is issuing a data access policy to help establish data privacy practices.
   b. ADE IT is "fighting" to minimize data sprawl (multiple copies of the same data or renditions of the same data) in order to manage data quality and access.
   c. There are as-yet untapped opportunities through AzEDS to consolidate and reduce the data collections required from districts. These potentially include: CTE and military flag (these are in progress), Title 1, Free and Reduced Lunch, and empowerment scholarship.
   d. ADE has not published updated comprehensive policies/procedures for data submittals as regards one-off or special use cases. As a result, there are multiple procedures that districts use for submitting data in special use cases, which results in variances in data quality. There is an opportunity now to go back and address some of these. Examples include: correcting data at the source (SIS); JTEDS (vocational

schools) and how they report; MESA satellite classes for remediation and unique partnerships with other schools outside of the district. One potential source for identifying these use cases is the tier 1 help desk ticket data.

7. Strategic Planning: ESSA provides a unique opportunity for ADE to develop a comprehensive strategic plan for educational services. ADE's plan is due to the US Department of Education in July.   A logical timeline has been developed for the development and delivery of this plan. Because ESSA is laden with data requirements, the AELAS data infrastructure can play a foundational and essential role in the implementation of the plan. ADE is aggressively pursuing a comprehensive strategic plan that is to outline innovative education strategies for the future as well as lay the foundation for ADE's response to ESSA.

8. Fiscal Year 2017: The funds from JLBC ($7.3 million) will enable the ADE to continue developing AELAS over the next fiscal year.

9. Sustainability Funding: AELAS funding for sustainability has not been secured for FY 2017 and beyond. While the AELAS system components will largely be in place and operational in 2017, there remains a great deal of work to do to improve data quality, build additional reports and dashboards, and consolidate processes and legacy applications. Beyond this work, just maintaining "status quo" for a fully developed and implemented system requires talented staff to perform the following functions:

    - Maintain a call center to respond to user problems and requests.

    - Provide ongoing professional development to district end users to accommodate turnover and new employees.

    - Analyze and apply code fixes for system errors/bugs.

    - Revise business rules to accommodate new legislation.

    - Monitor and apply application changes required from system patches and new releases for underlying system software and operating systems.

    - Monitor system performance and problem solve performance issues.

    - Respond to end-user requests for system enhancements.

    - Use the system API capabilities to continue to consolidate data collections and reduce the data submittal burden on districts.

    - Trend and proactively address district data issues.

    - Design, build, compile, test, document and communicate regular releases to ensure the system remains current and operationally efficient.

    - Monitor changes in SIS data submissions to ensure data accuracy and quality.

All of this work requires ongoing talent for system design, application development, documentation, process engineering, system support, call-center expertise, and management support. Without proper funding for these necessary skills and staff, the system will continuously degrade in performance, functionality and user satisfaction – just as did the legacy SAIS system.

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 June 2016 site visit:

1. ADE reported that pricing for SIS vendors has lowered due to the downward price pressure from the opt-in SIS.
2. ADE went through a comprehensive review of the business rules for SAIS and reduced the number of rules from over 500 to around 100 for use in AzEDS. Through this process, ADE got broad review and buy-in for the business rule changes among ADE staff and also reviewed the rules with district representatives.
3. ADE maintained a continuous effort to bring districts and vendors on board with the AzEDS approach. A recent example is the coordination with the ETC and Edupoint to help resolve their concerns and SIS technical issues to make better partners of both organizations.
4. ADE IT is to be commended for their continued attention to and pursuit of methods and practices to establish and maintain good performance for the processing of the high volume of AzEDS transmittals. They have achieved performance levels that are many times better than SAIS. Recent examples of efforts in this area include:
   a. ADE recently implemented *Always On Replication* to provide separation of reporting and to help maintain system performance.
   b. ADE's use of cloud computing expansion strategies to anticipate and accommodate increased demand for processing capacity as the system production date approaches.
5. ADE is issuing a data access policy to help establish data privacy practices.
6. The IP Sell bill has passed legislation.
7. ADE is aggressively pursuing a comprehensive strategic plan that is to outline innovative education strategies for the future as well as lay the foundation for the ADE response to ESSA.
8. ADE has developed a forward thinking perspective and strategy for improving the data literacy for educators across the state. This includes strategic partnerships with educator preparation programs.

FINDINGS BY RECOMMENDATIONS

The initial recommendations (11 total) from the first site visits have served as a baseline from which the WestEd/CELT team has been working for all subsequent site visits. Additional findings and recommendations have been added relative to the initial findings. Below is a synthesis of the team's findings and recommendations from the June 2106 visit.

1. **Stay the course as envisioned in the AELAS business case.**

Findings	*Recommendations*
SAIS to AZEDS transfer and current year funding concerns among districts are subsiding.	Continue conversion to the AzEDS data

Findings	_Recommendations_
ADE allowed the districts to use SAIS numbers for year end 2015-16 as a buffer instead of current year funding. As of the date of the site visit, 111 districts were past the date for getting onto AzEDS with 66 of these districts scheduled to convert to AzEDS on July 6.	stream for the remaining districts.
During the state legislative session in 2015, the Legislature approved moving districts from prior year funding to current-year funding starting in fiscal year 2017. While this was a major change in ADE work-scope for the rest of FY 16 and for FY 17, this work appears to be progressing as planned.	No recommendation
The FY16 planned rewrite of APOR and CHAR was previously moved to FY17 to accommodate the work for current year funding. This work will again be delayed to accommodate the conversion of the legacy apps to AzEDS. The primary concern for this legacy app work is understanding the business processes. As an interim measure, the AzEDS data will move into SAIS so the ADE can continue to use the current reports. Once the legacy apps are converted to AzEDS, the ADE will only keep SAIS for 2 years for 915 processing.	Consider a federated approach for some of the conversion work for these legacy apps. Develop a guiding framework and accompanying procedures that foster a proper mix of federated app replacement and future development.
SIS Opt-In Project: JLBC has recommended that ADE not use their funding to actively market the opt-in SIS to districts. ADE reported that pricing for the SIS vendors has lowered due to the downward price pressure from the opt-in SIS.	Honor the JLBC recommendation. Continue to monitor the SIS pricing structures to ensure that pricing does not trend upward beyond normal inflation expectations. Establish a SIS opt-in advisory committee comprised of representative district superintendents and/or business managers and ADE as the facilitator and non-voting member. Use the advisory committee to guide key aspects of the opt-in SIS service and price offerings going forward. Gain support and commitment among participating districts for the opt-in approach through their participation and guidance. Establish an opt-in SIS users group to garner

Findings	_Recommendations_
	user feedback, provide professional development, share best practices, and solicit input services and products.
Extra time and effort is spent tracking down supplemental services such as training, integrations, etc. and calling to determine why these services have not been rendered after they were paid for. The contract with Edupoint expires on July 11. The modifications are very few, but will include supplemental services paid after services rendered.	No additional recommendations regarding this finding.
There is currently ongoing tracking and use of help desk data, but there are additional data capture and analysis opportunities that could be applied to the ADE's ongoing efforts to identify trends and proactively address data and application issues.	Identify the types of data gaps in the help-desk process and implement policies, guidelines and practices to close these gaps. For example, <u>all</u> help desk calls should be logged and routed as tickets and the resolution should be documented, including those calls that were quickly resolved at tier 1, and all tier 2 and 3 tickets, even those routed outside of IT. The tickets can then be placed into categories and the categories analyzed for frequency, timing, overall cost to resolve and relative impact to the customer. This data can be used to prioritize proactive triage efforts and predict future peak occurrences of similar problems.

2. **Utilize business architecture concepts, aligning department strategic plans to and across program area plans and associated execution activities and methodologies**.

Findings	_Recommendations_
ADE is aggressively pursuing a comprehensive strategic plan that is to outline innovative education strategies for the future as well as lay the foundation for the ADE response to ESSA.	AELAS lays a solid foundation for a future vision of digital enhanced teaching and learning. Research the leading practices in such areas as personalized learning, competency-based progression, blended learning and digital curriculum management and create the path forward for the next phase of an AELAS build-out for Arizona schools.

3. **Directly address the budgetary issues that pertain to AELAS, SAIS, and the SLDS that include detailed work plans, deliverables, and timelines.**

Findings	_Recommendations_
ADE has secured funding for FY 2017. AELAS funding for sustainability has not been secured for FY 2017 and beyond. While the AELAS system components will largely be in place and operational in 2017, there remains a great deal of work to do to improve data quality, build additional reports and dashboards, and consolidate processes and legacy applications. Beyond this work, just maintaining "status quo" for a fully developed and implemented system requires talented staff to perform the following functions: - Maintain a call center to respond to user problems and requests. - Provide ongoing professional development to district end users to accommodate turnover and new employees. - Analyze ad apply code fixes for system errors/bugs. - Revise business rules to accommodate new legislation. - Monitor and apply application changes required from system patches and new releases for underlying system software and operating systems. - Monitor system performance and problem solve performance issues. - Respond to end-user requests for system enhancements. - Use the system API capabilities to continue to consolidate regular releases and reduce the data submittal burden on districts. - Trend and proactively address district	Continue to brief legislators and JLBC about the potential consequences of decreased or lost funding. Help them to understand the importance of AzEDS in identifying the data discrepancies, verifying that the investment in the system heretofore has been sound. Begin to address the issues noted in the findings column. Allocate the proper funding on a recurring annual basis to properly support AELAS.

Findings	Recommendations
data issues. • Design, build, compile, test, document, and communicate regular releases to ensure the system remains current and operationally efficient. • Monitor changes in SIS data submissions to ensure data accuracy and quality.	

4. **Improve and continue to develop a communication plan to diverse stakeholders.**

Findings	Recommendations
No findings.	No recommendations.

5. **Creation of a data governance process**.

Findings	Recommendations
The data governance process is no longer under the egis of IT. Rather, it now resides in the office of Chief of Staff. ADE is issuing a data access policy to help establish data privacy practices. The processes and internal controls for the approval and review of ADE staff access to databases and sources appear to be owned in IT, placing IT fully responsible for data quality and data access. ADE IT is fighting to minimize data sprawl (multiple copies of the same data or renditions of the same data) in order to manage or reduce the sprawl. ADE has not published comprehensive policies/procedures for AzEDS data submittals as regards one-off or special use cases. As a	Continue to engage data stewards and owners in the approval and review of ADE staff access to databases and sources. Shift the responsibility for this review and approval out of IT to the assigned data stewards. Add a section to the policy on how to manage teacher access to student data. Vet the data policy with the ADE data stewards. There is an opportunity to engage the data stewards and data governance to help manage data sprawl. Trend the tier 1 tickets and identify use cases that can be addressed by policy or guidelines. Do this as a data governance exercise.

Findings	Recommendations
result, there are multiple procedures that districts use for submitting data in special use cases, which results in variances in data quality. There is an opportunity now to go back and address some of these. Examples include: correcting data at the source (SIS); JTEDS (vocational schools) and how they report; MESA satellite classes for remediation and unique partnerships with other schools outside of the district. One potential source for identifying these use cases is the tier 1 help desk ticket data	

6. **Reduce the redundancy among data collections**.

Findings	Recommendations
There are as-yet untapped opportunities through AzEDS to consolidate and reduce the data collections required from districts. These potentially include CTE and military flag (these are in progress), Title 1, free and reduced lunch, and empowerment scholarship.	Review the list of data collections and identify and prioritize opportunities to consolidate and reduce data collections.

7. **Creation of a non-profit organizing structure.**

Findings	Recommendations
An "IP sell bill" has passed legislation. The bill allows state-owned intellectual property (IP) to be sold, with the proceeds split 40% to ADE for ongoing development and support of the IP and 60% going to the state's general fund. The organization and product support structure for selling and supporting components of AELAS are as yet undetermined.	Recommendation from previous visit: There is much to be learned from technology product vendors regarding the best practices and lessons learned around product marketing, pricing, sales, implementation support and ongoing help desk and release management. We recommend researching these areas to understand the nuances of "product" versus "services" organizations as a pre-cursor to establishing the support structure for IP sales to other states. Develop a comprehensive business plan that defines the services and product offerings that come under this bill. The business plan should

Findings	Recommendations
	also address the organizational structure of the supporting entity, market potential, pricing, financial model, and revenue/cost projections for the first three to five years of operation. Vet the plan through the data governance committee.

8. **Improvement of human capacity around the use of data (e.g., data literacy).**

Findings	Recommendations
Although this topic falls outside the current scope of monitoring, ADE continues to make progress in this area. ADE has developed a rubric of data literacy skills and is working with schools of education to integrate data literacy with the preparation of teachers and administrators. This continues to be an exemplar for other states as few states have their leading universities including courses on data use. Both the University of Arizona and Arizona State University are tackling this challenging topic.

There are efforts within ADE to improve the capacity of program staff to understand simple statistics and measurement topics to help them understand data better. Podcasts have been developed. | Continue the effort to build data literacy within ADE, the LEAs, and teacher preparation programs.

Recognize that data literacy is role-based, particularly within LEAs. Everyone who touches data needs to have at least a basic understanding of responsible data use, data security, data quality, and their role in the process. This includes staff from the school data clerks to the superintendents.

The human capacity issue is even more salient with the introduction of the Menu of Assessments that could potentially create a plethora of student achievement data into the landscape. Educators must understand the implications of how these data will be used and interpreted.

The human capacity issue also should relate directly to the ESSA strategic planning where SEA staff, educators, stakeholders, and parents are expected to have some level of understanding of data and evidence. ADE should continue to capitalize on its work to spread knowledge about data literacy. |

9. **Attend closely to the needs of the most rural districts.**

Findings	_Recommendations_
A state-wide initiative is being pursued to address the limited bandwidth issues among many districts in Arizona. This will be especially beneficial to the more rural districts. No further findings on this recommendation were discussed in this monitoring visit.	Continue this effort to close the gap in technology for the more rural districts in Arizona.

10. **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**.

Findings	_Recommendations_
Leading states and school districts across the nation are pursuing such 21st Century initiatives as blended learning, personalized learning and digital learning. Blended learning environments are taking hold in pockets of schools across the state and there are significant technologies to support such efforts. AELAS can and should be a part of such technology-enhanced learning environments to further such a strategic vision for education in Arizona. A successful election on Prop 123 will divert over $3.2 billion over 10 years to schools. Given this, together with the changes required for ESSA and the availability of AELAS as an excellent foundation upon which to support an education reform agenda, the ADE should consider developing a comprehensive and forward visioning strategic plan for education. ADE is aggressively pursuing a comprehensive strategic plan that is to outline innovative education strategies for the future as well as lay the foundation for the ADE response to ESSA.	The ESSA plan should use the capacities provided by AELAS as a foundation for the provision for desired data laid out in the ESSA strategic plan. AELAS lays a solid foundation for a future vision of digital teaching and learning. Research the leading practices in such areas as personalized learning and digital curriculum management and create the path forward for the next phase of an AELAS build-out for Arizona schools.

11. **Engage program areas and policymakers in supporting the work of AELAS.**

Findings	Recommendations
The associate superintendents and other high-level administrators continue to be engaged in working with IT to ensure that the technologies meet their needs and incorporate appropriate data. The work of the Education Transformation group facilitates this work. ADE is in the process of developing and delivering a strategic plan to the U.S. Department of Education in response to ESSA.	Continue to educate the associate superintendents and other relevant high-level staff about the processes and timelines involved in working with AzEDS, including the implications of adding new data elements and the expected timeframe for implementation. Begin to ensure that the importance of the work on AELAS trickles down to all programmatic staff. Because of the ESSA strategic planning, the time is ripe to incorporate the power of AzEDS into that plan. The data that reside in AzEDS will be foundational to ESSA work. ADE can make use of the emerging data infrastructure to support its work in relation to ESSA.

CHALLENGES

The most pressing challenges for the ADE from our visit appear to be:
1. Securing sustainability funding for AzEDS going forward.
2. Getting the remaining districts to sign on to AzEDS.
3. Incorporating the diverse data that will result from the Menu of Assessments.
4. The sustainability and continuity of commitment to the AELAS work across all levels of government in Arizona.

CONCLUSION AND NEXT STEPS

AELAS continues to form a good foundation for Arizona to begin the journey into the world of sound educational decision making, data-informed instruction, and ultimately digital learning. With the passage of ESSA, ADE has a unique opportunity to integrate how AELAS will form the foundation for the agency's strategic plan for its ESSA response. This response should consider the broad impact that the technologies and their data can provide to educators, stakeholders, and parents across the state of Arizona. AELAS perhaps positions Arizona in ways unlike other states, to provide real-time and relevant data to address the objectives of ESSA and those of ADE more broadly construed. However, without a clear vision for such a direction and funding to build upon this foundation, the momentum gained by the AELAS effort could be lost. The strategic planning process provides ADE with the opportunity to consider the development of that vision. Arizona remains in the top tier of state education departments with regard to data collection and potential for data-informed instruction supported by state systems. This progress will be quickly lost without proper vision and support. It is essential to secure long-term sustainability commitments from JLBC to maintain and even enhance ADE's data capacity. We strongly urge ADE to work with external advisors to develop and implement a sustainability plan for the technology and a training plan to build and maintain the human capacity to use the data effectively and responsibly. ADE should consider issuing an RFP to secure a consulting firm to facilitate the process and bring to the engagement subject-matter expertise in the emerging trends in education around personalized learning and competency-based progression.