

LEGISLATIVE AUDIT DIVISION

Angus Maciver, Legislative Auditor
Deborah F. Butler, Legal Counsel



Deputy Legislative Auditors:
Cindy Jorgenson
Joe Murray

MEMORANDUM

TO: Legislative Audit Committee Members
FROM: Margaret Wallace, Performance Auditor
CC: Elsie Arntzen, State Superintendent, Office of Public Instruction
Ken Bailey, Assistant Superintendent of Operations, Office of Public Instruction
DATE: January 2018
RE: Performance Audit Follow-Up (18SP-01): Senate Joint Resolution 10:
School Data Collection Systems and Processes (orig. 16P-01)
ATTACHMENTS: Original Performance Audit Summary

Introduction

In May 2016, we presented our performance audit of the *Senate Joint Resolution 10: School Data Collection Systems and Processes (16P-01)* to the Legislative Audit Committee. The audit included six recommendations to the Office of Public Instruction (OPI). We conducted follow-up work to assess implementation of the audit's recommendations. This memorandum summarizes the results of our follow-up work.

Overview

Audit work identified the need for OPI to strengthen data governance activities, comply with statutory requirements regarding a K-12 Data Task Force, and mitigate and assess risks related to student data privacy. Our performance audit contained six recommendations to OPI. Based on our work, OPI has partially implemented three recommendations, and is in the process of implementing three recommendations.

Background

Per state law, the Superintendent of Public Instruction is responsible for the general supervision and welfare of K-12 public schools and districts in Montana. The Superintendent serves as the chief executive officer and administers the affairs of OPI, which provides education-based services to school-aged children and teachers in over 400 local school districts across the state. OPI administers a wide variety of education-based services for K-12 schools and districts, including programming and technical assistance in the areas of student enrollment, school accreditation, school curriculum development, academic achievement, educator licensure, school nutrition, special education services, standardized testing, and state entitlement funding. Administering these services generally requires that OPI collect program and student data from local school districts to comply with both state and federal program requirements and enable OPI to evaluate and monitor these activities. School districts respond to nearly 200 different data collections administered by OPI, several of which include personally identifiable information (PII) on students and their families. Based on local school district concerns over burdensome data collection requirements and how OPI maintains the individual privacy of students and their

families, the 2015 Legislature passed Senate Joint Resolution (SJR) 10 requesting a performance audit of OPI school data collection systems and procedures. Our performance audit report addressing these issues was issued in May 2016. Subsequently, OPI experienced a change in administration as a result of a new Superintendent of Public Instruction being elected in November 2016.

Audit Follow-up Results

Our performance audit report contained six recommendations to OPI. As part of follow-up work, we examined OPI's updated policies, plans and data governance materials, reviewed training records pertaining to the security and confidentiality of student data, and interviewed OPI management and staff to obtain their perspective on progress OPI has made to implement the audit recommendations. The following sections summarize the progress toward implementation of the report recommendations.

RECOMMENDATION #1

We recommend the Office of Public Instruction prioritize and strengthen its current data governance structure to incorporate the periodic review of data collections for duplication, legal requirements, and potential information technology system consolidation.

Implementation Status—Partially Implemented

In response to the audit, OPI concurred with the recommendation and indicated it would strengthen its Data Governance Committee Charter to include an annual review of data collections, and institute changes in OPI leadership roles to clarify responsibility for data governance. OPI management stated they added this proposed language to the Data Governance Committee Charter, and that an annual review of data collections was underway. While follow-up work identified changes to the Charter, and some progress toward OPI's goal to strengthen the data governance structure, documents provided and interviews conducted did not offer evidence that an annual review of the entirety of collections has taken place or was underway.

Follow-up work found the Data Governance Charter has been revised to include a section that requires them to annually prepare an analysis of data collections for OPI leadership that confirms the statutory basis for all data elements; identifies any duplicate data elements collected by OPI; identifies any system consolidations that would reduce the reporting burden on schools; and includes plans to resolve any of the above items. Per the Charter, OPI management provided a Data Collections Annual Report to OPI leadership. While the annual report cited our audit work indicating OPI was collecting two data elements not statutorily required, it did not offer any details or outcomes regarding OPI's annual review process. Interviews with OPI management indicated they believe it is not necessary to go through all of the data collections, because the addition of new data elements undergoes a review by the Data Governance Committee process, which would identify any duplication. However, since only 37 data collections were reviewed for duplication and legal authority during the original audit there are approximately 150 additional data collections that may include unnecessary or unsupported data elements.

With regard to data collections, the Annual Report stated that OPI has taken steps to lessen the reporting burden on schools and districts by consolidating systems. Namely, the Special Education (SPED) collection module and the Achievement in Montana (AIM) system collection are in the process of moving a required SPED Behavior collection into AIM. This effort will remove a redundant system that has caused school districts to enter duplicative data in two places.

OPI has taken some steps to prioritize and strengthen its current data governance structure, and staff interviews indicated the importance of data governance has been heightened within the organization. However, since OPI has not incorporated a periodic review of the entirety of data

collections for duplication, legal requirements, and potential system consolidation, questions remain if data elements are being collected unnecessarily and creating an undue reporting burden on district staff.

RECOMMENDATION #2

We recommend the Office of Public Instruction:

- A. Update agency policies and procedures for data governance requirements,**
- B. Clarify the roles responsibilities of program and information technology staff regarding the current data governance request review process, and**
- C. Provide training to staff on data governance requirements.**

Implementation Status—Being Implemented

Audit work found data governance within OPI was not clearly defined or understood by staff. In response to the audit, OPI indicated it would determine which policies and procedures should be changed or created to provide clear roles and definitions for program and information technology staff. Follow-up work found that a Data Governance Policy has been drafted, but not adopted. Interviews with OPI staff indicated the policy has been finalized and submitted to leadership for review and implementation.

The Data Governance Policy is purported to be part of an overall system designed to manage and oversee data systems within OPI, and indicates OPI is charged with maintaining a data governance system that enforces consistency and quality standards in the business processes pertaining to data collection and maintenance. Similar to the Data Governance Charter, the policy includes a component for an annual analysis of data collections, which follow-up work determined has not taken place. The policy also indicates the Charter provides a delineation of roles and responsibilities, outlines the Data Governance Committee's membership and objectives, and identifies the members and their authority.

In addition to policy changes, OPI conducted data governance training for all divisions. The trainings entailed one-on-one meetings with the data governance facilitator, a general review of the topic of data governance, and a review of the difference responsibilities of various OPI staff involved in data governance. According to OPI staff, the training helped to clarify roles and responsibilities within data governance, and the overall process. Staff indicated that since the audit there has been more agency communication regarding data governance, as well as improved outreach and communication to school districts.

Additionally, OPI has implemented a software solution tool to track and document the status of internal projects, including data governance. Per OPI management and staff, this tool has improved tracking, helped to eliminate redundancies and assign responsibility, as well as improve follow-up and accountability for project deadlines. Overall, follow-up work found that OPI has taken substantive steps to implement policy changes, and clarify the roles and responsibilities of program and information technology staff through training and the utilization of new tracking software.

RECOMMENDATION #3

We recommend the Office of Public Instruction strengthen its current data governance structure by including structured input from key stakeholders such as school districts and developing a sustainability plan for maintaining data governance beyond federal resources.

Implementation Status—Partially Implemented

Through a review of data governance activities in other states, the audit identified structured input from key stakeholders as a best practice in data governance structures. In response to the audit, OPI indicated it would create a data governance structure that formalizes the regular input of stakeholders to data governance management. OPI also stated the sustainability of data governance was not in question. Follow-up work included reviewing the updated data governance request form, interviewing OPI staff and management, and interviews with school district staff.

A review of OPI's data governance request form demonstrated that structured input from key stakeholders is being sought on a situational basis. There has been one data governance request since the audit that resulted in stakeholder input. In this case six school district staff were included as part of an ad hoc group throughout the data governance process. OPI management convened the district ad hoc group to gather feedback regarding the most efficient way to collect the data element at the district level. Interviews with other district staff who were not part of the group indicated their input had not been sought for any specific or general purpose since the time of the audit.

Follow-up work found that OPI does not have a formal sustainability plan in place for maintaining data governance beyond federal resources. Interviews with staff indicated that data governance is not dependent on grant or other funding, and the sustainability of data governance is being written into agency policy. OPI management referred to the changes in policy and procedures, employee training offered, increased buy-in from the administration, as well as the increase in frequency of data governance meetings as evidence of its sustainability. Follow-up work found that OPI is seeking district input on a situational basis, and intends to sustain their data governance structure beyond federal resources; however, there are no details or documents associated with a formal data governance sustainability plan.

Recommendation #4:

We recommend the Office of Public Instruction prioritize and continually work in consultation with the K-12 data task force to analyze statewide school data collections, including addressing and resolving school district concerns regarding data entry repetition, redundancy, and duplication.

Implementation Status—Being Implemented

Audit work found there was a general lack of understanding at OPI regarding the purpose of the K-12 data task force. OPI indicated it would reconvene the K-12 data task force meeting, and stated it would request an appropriation from the legislature to support this activity. Follow-up work included a review of the minutes of the K-12 data task force meetings held in November 2016 and December 2017, and interviews with OPI management and meeting participants. The November meeting was held with the outgoing superintendent, and meeting participants commented that the meeting was mainly devoted to educating the legislators and stakeholders involved, and addressed topics related to reducing the reporting burden of districts. According to OPI management, the previous administration submitted a request for additional K-12 data task force funding through the executive planning process last year. When the executive budget was released in November 2016, the funding was not part of its budget.

In January 2017, when the legislature convened, a newly elected superintendent had assumed administration of the office. According to interviews, after substantial cuts to the agency budget during the 2017 Legislative Session, OPI management does not see funding for the K-12 data task force being provided in the foreseeable future. Since January, several meetings have taken place between OPI management and the current superintendent to discuss how to move forward with the task force. In order to keep expenses to a minimum, a phone meeting of the task force was

held in December 2017. Items discussed at the meeting included the 2018 outlook for the K-12 task force, as well as new data collection requirements and consolidation efforts. While OPI has convened the K-12 task force in response to the audit, meeting materials reviewed and interviews conducted do not make it clear how the agency plans to prioritize and continually work in consultation with the K-12 data task force to analyze statewide school data collections going forward, as required by state law.

Recommendation #5:

We recommend the Office of Public Instruction monitor and evaluate employee compliance with its Student Record's Confidentiality Policy and implement procedures to mitigate data security risk factors in the following areas:

- A. Generic access accounts issued to districts for State Edition of the Achievement in Montana System,**
- B. Emailing student personally identifiable information,**
- C. Confidential documents left unsecure in workspaces,**
- D. Requirements for annual information security awareness training,**
- E. Unmanaged personal devices accessing the state network, and**
- F. Requirements for Institutional Review Board approval for applicable research agreements from universities.**

Implementation Status—Partially Implemented

Initial audit work identified several security risks to OPI student data, and the need for additional training and education for OPI staff regarding how to ensure student data privacy. In response to the audit, OPI indicated it concurred with all of the recommendations. Follow-up work established that the following progress has been made with respect to the six part recommendation:

- A. Audit work found that the existence of generic accounts within the State Edition of the AIM system posed a security risk to student data. According to lists provided by staff and interviews conducted, all generic user accounts have been eliminated in the State Edition of the AIM system.
- B. The transfer of sensitive student information via electronic mail, as well as the fact that sensitive information was not properly secured on OPI premises indicated that policies around PII needed to be updated. OPI updated the Student Record Policy which now includes a section to permanently delete any email received containing unencrypted personally identifiable information and reply to the sender with instructions on acceptable methods for transmitting PII.
- C. In response to the audit finding that confidential documents were left unsecure in workspaces, OPI counseled the employees who violated the policy, and provided confidentiality and security awareness training to all employees.
- D. The issues identified above highlighted the need for additional training and education for OPI staff around student data privacy. At the time of the follow-up, OPI reported a 94 percent annual security awareness training completion rate.
- E. Audit work identified risks involved with allowing unmanaged devices to access state resources. A list provided by OPI indicated there were no remaining unmanaged personal devices with authority to access the state network. In our review, individuals with access to the network now have mobile device management agreements in place.
- F. A review of research agreements during the audit concluded that OPI could improve its ability to assess and monitor student data used for research purposes. Follow-up work found that OPI amended an existing research agreement that required review by the Institutional Review Board (IRB) as necessary to add researchers to projects. OPI staff

also communicated they would request an IRB as necessary with future applicable research agreements.

Interviews with OPI management and staff indicated the confidentiality training has improved office awareness of and compliance with confidentiality policies and procedures, and there is informal management oversight of staff compliance. Some staff also shared they have taken additional measures to ensure compliance within their own units, including the daily locking of file cabinets and work spaces. While OPI has implemented staff training and education to protect student data privacy and updated agency policy, OPI management reported they do not actively monitor staff adherence to confidentiality policies.

Recommendation #6:

We recommend the Office of Public Instruction prioritize and implement measures to assess and document risks and potential threats to student data security on a regular basis.

Implementation Status—Being Implemented

In response to the audit, OPI indicated it concurred with all of the recommendations and that it was following the National Institute of Standards and Technology (NIST) methodology for assessing security risk. Follow-up work included a review of OPI's security plan and interviews with agency management and revealed OPI has acted to prioritize and implement measures to assess and document risks and potential threats to student data security through the development of a security plan. According to management, the security plan is in line with the State Information Technology Services Division (SITSD) recommendations and they are about two years into a three-to five-year project timeline for implementation. Part of the progress made by OPI includes conducting a risk assessment for the state financial and information reporting system. Risks have been identified for the system and are in the process of being reviewed by OPI administration as needed for possible policy changes and exceptions from SITSD. The risk assessment questionnaire that was created and completed by OPI staff for the state financial and information reporting system will be conducted for all of OPI's remaining systems.

Additional progress made by OPI to mitigate risks and potential threats to student data security includes updating OPI common login to comply with requirements in Information Security Policy; conducting a vulnerability scan of all systems; implementing a security form template for all systems; and completing an inventory for all servers. As the result of a statewide directive, OPI has also implemented data loss prevention software, an email scanning feature that blocks sensitive information and is monitored by the OPI security office. OPI has made progress toward prioritizing and implementing measures to assess and document risks and potential threats to student data security, but follow-up work revealed that OPI has only partially implemented measures to assess and document risks to student data.