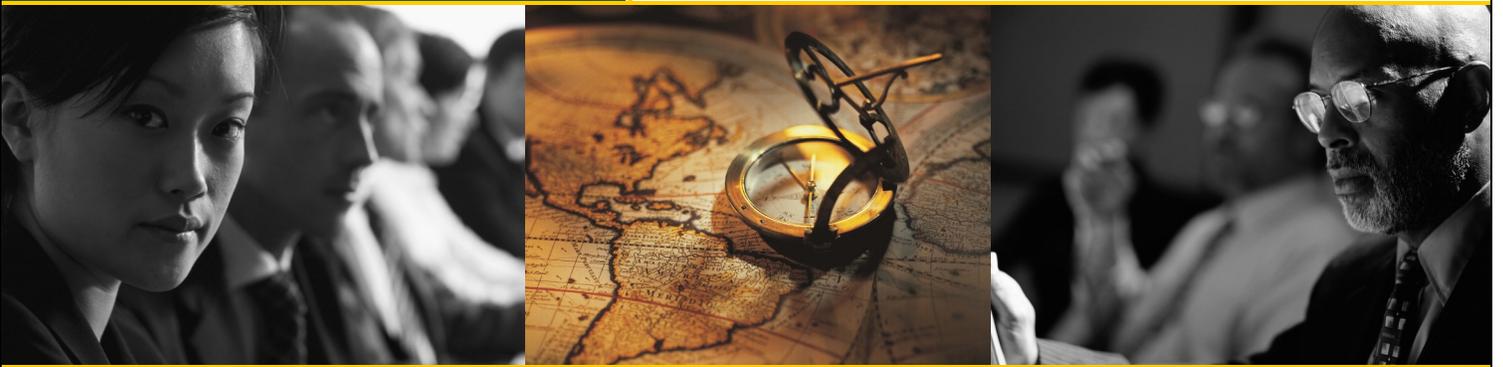


# External Evaluation of the K-20 Data Project at the Montana Office of Public Instruction

## **FINAL YEARLY WRAP-UP REPORT**



Evergreen Solutions, LLC

**February 22, 2016**

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Instruction

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YEARLY WRAP-UP REPORT**

Submitted by:



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February 22, 2016

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*Chapter 1*  
*Introduction*



# 1.0 INTRODUCTION

In September 2013, Evergreen Solutions was selected by the Montana Office of Public Instruction (OPI) to serve as the continuous improvement and data-use evaluator for the OPI's K-20 Data Project. In this Summative Evaluation Report, Evergreen provides background information on the Montana Office of Public Instruction, the K-20 Data Project, the evaluation process, and evaluation activities and outcomes during Year 2, Year 3, and the no-cost extension of project implementation.

This chapter is organized in the following sections:

- 1.1 Background on the Montana Office of Public Instruction
- 1.2 K-20 Data Project Overview
- 1.3 Overview of the Report

## 1.1 BACKGROUND ON THE MONTANA OFFICE OF PUBLIC INSTRUCTION

The Montana Office of Public Instruction (OPI) is responsible for K-12 education and operates under the leadership of an elected Superintendent of Public Instruction and a seven-member Board of Public Education appointed by the Governor and approved by the Senate. OPI works with Montana's 413 school districts (including over 824 schools) serving 144,532 K-12 students enrolled in public education.

The Montana Office of Public Instruction operates with the following mission:

*The Montana Office of Public Instruction provides vision, advocacy, support and leadership for schools and communities to ensure that all students meet today's challenges and tomorrow's opportunities.*

**Exhibit 1-1** displays a breakdown by type of the 413 public school districts served by the Montana OPI. As can be seen, the largest number (151) of Montana school districts are classified as single districts and the smallest number (2) as state-funded districts.

**Exhibit 1-1  
Districts by Type  
2014-15 School Year**

District Type	Count	Percent
State-funded Districts	2	0.5%
Non-operating Districts	5	1.2%
K-12 Districts	57	13.8%
Combined Elementary (Joint Board)	99	24.0%
Combined High School (Joint Board)	99	24.0%
Single Districts	151	36.6%
<b>Total</b>	<b>413</b>	<b>100.0%</b>

Source: Montana OPI, 2016.



**Exhibit 1-2** displays the size and student enrollment of the 824 schools served by the Montana OPI. As can be seen, 40.5 percent of schools served by the OPI have less than 50 students each. Further, only 5.8 percent of schools served by the OPI have more than 500 students. Schools with enrollment between 250 and 499 students account for the greatest percentage of total enrollment across the state, at 41.6 percent of total enrollment.

**Exhibit 1-2  
Schools and Students Served  
2014-15 School Year**

School Size	# of Schools	Percent of Schools	Student Enrollment	Percent of Enrollment
>500	48	5.8%	42,972	29.7%
250-499	165	20.0%	60,154	41.6%
100-249	163	19.8%	26,171	18.1%
50-99	114	13.8%	8,006	5.5%
<50	334	40.5%	7,229	5.0%
<b>Total</b>	<b>824</b>	<b>100.0%</b>	<b>144,532</b>	<b>100.0%</b>

Source: Montana OPI, 2016.

**Exhibit 1-3** provides schools by grade level served by the Montana OPI. As can be seen, elementary schools account for 53.3 percent of all schools served by OPI, while middle and high schools account for 26.0 percent and 20.8 percent of all schools, respectively.

**Exhibit 1-3  
Schools by Grade Level  
2014-15 School Year**

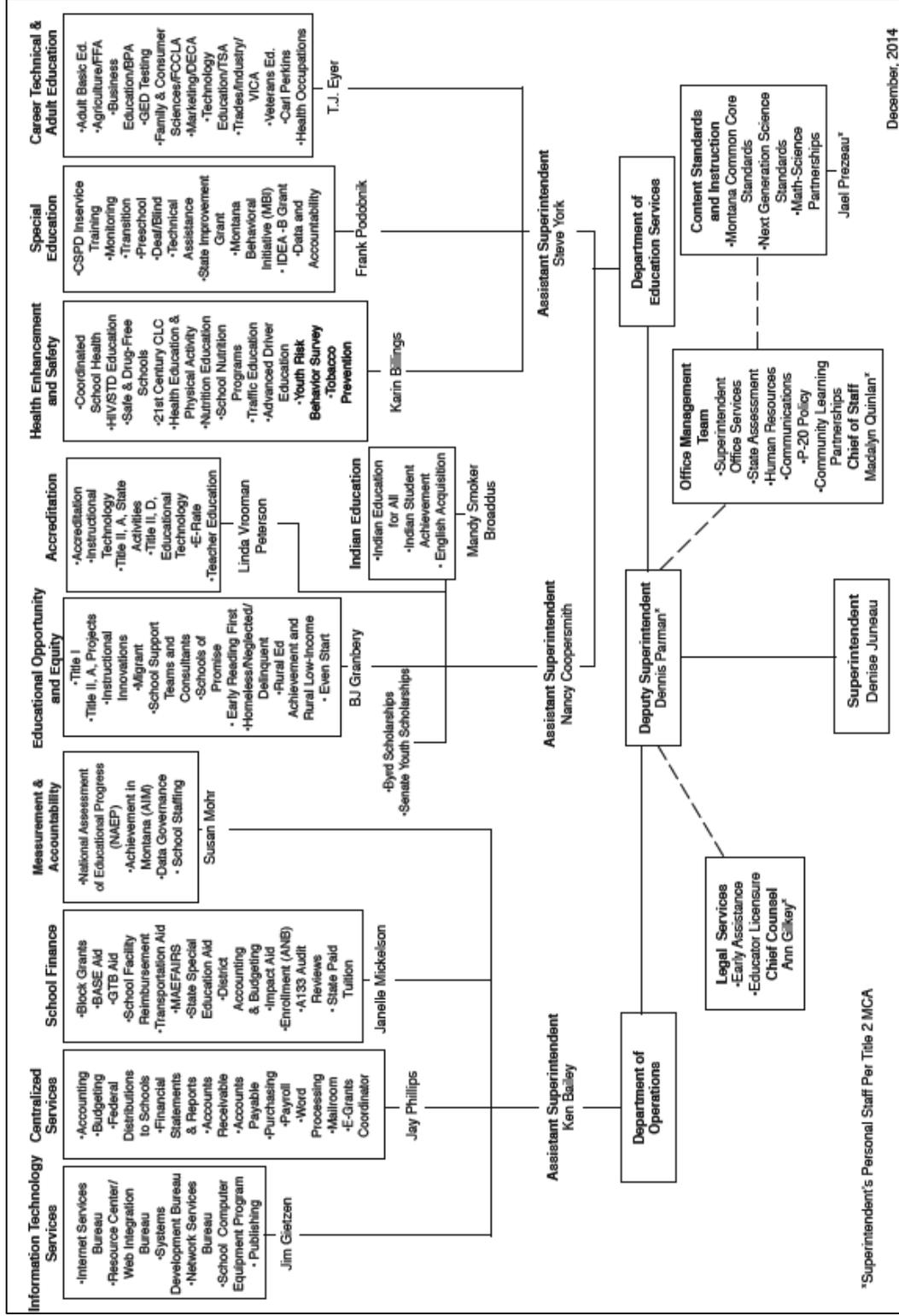
Type	Count	Percent
Elementary Schools	439	53.3%
Middle Schools	214	26.0%
High Schools	171	20.8%
<b>Total</b>	<b>824</b>	<b>100.0%</b>

Source: Montana OPI, 2016.

**Exhibit 1-4** displays the Montana OPI’s organizational chart. The K-20 Data Project is overseen jointly by the Information Technology Services Division and the Measurement and Accountability Division of the Montana OPI.



### Exhibit 1-4 Montana OPI Organizational Chart



### ***Growth and Enhancement of Montana Students (GEMS)***

According to the OPI, in 2005, the Montana Legislature passed Senate Bill 152 to define a basic system, including a procedure to assess and track student achievement in the educational programs, and appropriated funding to create a statewide student information system to serve as the foundation of a statewide longitudinal data system for K-12 education. Years later, to aid in further development of the OPI's information system, OPI applied for and received \$5.8 million in FY2009 SLDS grant funding from USDOE in 2009. In March 2012, the newly updated information system resulting from the FY2009 SLDS grant, the "Growth and Enhancement of Montana Students (GEMS)," was completed and officially went live. GEMS is accessed via the following website: <http://gems.opi.mt.gov/Pages/Default.aspx>.

GEMS allows various groups of stakeholders access to public K-20 data. Users of GEMS include parents, school administrators, analysts/researchers, teachers, and other interested stakeholders. To date, the system includes detailed online training modules, a knowledge base, and over 25 interactive dashboards and reports. GEMS online training resources include data definitions and explanations, 18 online modules explaining various components of GEMS, a 19-page user manual, FAQs, and other training resources. OPI's knowledge base also includes information on GEMS. GEMS dashboards and reports include interactive reports on course offerings, student achievement, student services such as transportation and nutrition, finance data, and student demographics. The data and tools in GEMS allow users to access school profiles and create side-by-side comparisons of these profiles.

The GEMS system acts as the central hub for data and information on school systems in Montana. GEMS has ten domains or data subjects, including:

- General School/District Information;
- Program and Course Offerings;
- School Climate;
- Student Achievement;
- Student Services;
- School Finance;
- NCLB Report Cards;
- Student Characteristics;
- Student Engagement; and
- College Readiness.

The College Readiness domain is currently the target of expansion and improvement under the K-20 Data Project.

### ***1.2 K-20 DATA PROJECT OVERVIEW***

The Montana Office of Public Instruction (OPI) requested \$3,977,861 over three years for implementation of *College and Career Ready Montana* under Priority # 3 of the *Statewide*,



*Longitudinal Data Systems (SLDS) Grant for FY 2012* to link the OPI's K-12 data warehouse (GEMS) and the Montana University System (MUS) postsecondary data warehouse. The Montana OPI was awarded grant funding through the FY2012 SLDS grant program in May 2012. The K-20 Data Project funded by the grant spans three years, from July 1, 2012 through June 30, 2015; however, a no-cost extension for the grant project was requested and approved, giving the project a revised completion date of June 30, 2016. The K-20 Data Project addresses weaknesses in access and linkages to longitudinal student transcript data to inform stakeholders regarding quality and performance of K-12 curricula with respect to college readiness.

According to the OPI's grant application for the FY2012 SLDS grant, the K-20 Data Project supports the following three key goals:

**Goal #1:** *Establish data linkages between K-12 and postsecondary partners by creating an electronic student transcript repository for K-12 education. Under its 2009 SLDS grant, the OPI is completing a K-12 data warehouse and associated tools. The next set of data that the OPI intends to collect and store is student-level transcript information, including information on courses completed and grades earned. This will facilitate the exchange of transcript information between qualified entities.*

**Goal #2:** *Create an Interagency K-20 Data Governance Council. This proposal expands on the data governance structure developed for the K-12 data warehouse. Correct and appropriate use and interpretation of data for K-20 analysis can be ensured only if both owners and users of data possess a shared understanding of the meaning and representation of the data. Key to this effort is the creation of data governance structures to guide data collection, sharing, and use. An interagency K-20 Data Governance Council will be created to lead and guide this effort.*

**Goal #3:** *Implement business intelligence and web reporting tools for users of K-20 data. Business Intelligence tools will facilitate state and federal reporting; provide more accurate, consistent data; and allow the various stakeholders to track groups of students and learn how the educational services they have received have contributed to their success. The OPI will expand OPI's K-12 warehouse to link K-12 data and establish interoperability with the MUS system, primarily through development of a standard transcript that can be compared and used by all units of the university system. These data will then be combined with postsecondary transcript information so that schools can be informed regarding the quality and performance of curricula with respect to college readiness. The K-12 data warehouse will be expanded to house the additional data and provide reports and dashboards.*

*The OPI will help the LEAs extract the data from their legacy systems, and design and implement an electronic student records and transcript exchange, with data from the LEAs and MUS flowing to the OPI. The deliverables, tied to the Priority #3 requirements, are to form a project and data governance structure, plan, and systems; provide data research analyst and business analyst positions; produce accessibility documentation; establish procedures to ensure data integrity, security, and quality; train users how to accurately enter data; establish procedures to monitor the accuracy of data entering the system; provide staffing to help validate data, ensure accuracy, and generate reports; create the exchange*



*mechanism with the MUS; collect and validate data from the K-12 districts; develop transport and validation mechanisms to move data from LEAs to the OPI; deliver K-12 transcript to universities; establish secure access; develop and provide training on the use of data tools and products; develop a professional development module for data interpretation and application; secure an outside evaluator; and establish research partnerships.*

The two main functions of the K-20 Data Project are to:

- provide a mechanism for effective data transport between districts and the OPI; and
- provide an electronic transcript service to MUS colleges.

The outcomes and results of the K-20 Data Project will assist in answering the question, “Are Montana K-12 students college and career ready?” Linking K-12 education data with the data from the Montana University System (MUS) allows schools to get a complete picture of whether or not students graduating from their high schools are ready for college. Stakeholders should be able to analyze which coursework led to successful transitions from high school to higher education as well as which students were not prepared for college to focus in on solutions to help ensure student success. Benefits of the K-20 Data Project include ease of use and availability of K-20 data.

Important K-20 Data Project activities include:

- assisting LEAs in extracting data from legacy systems;
- forming a governance structure, plan, and systems;
- providing data research and business analyst positions;
- establishing procedures for data integrity, security, and quality;
- training users on accurately entering data and using data tools and products;
- establishing procedures to monitor data accuracy;
- providing staffing to validate data, ensure accuracy, and generate reports;
- creating the data exchange mechanism between the MUS and LEAs;
- establishing secure access processes;
- developing a professional development module; and
- establishing research partnerships.

As an initial step in the first year of the project, OPI developed key research questions to be addressed by the K-20 Data Project. These questions act to guide improvement and enhancement of the College Readiness domain. The six key research questions are:

1. *How do we determine college readiness and what high school factors are associated with college readiness?*
2. *Enhance the High School Feedback report to include some course results (e.g. explore the relationship between HS English/Math courses taken/grades and grades in postsecondary English/Math)*



3. *Have the state's school turnaround efforts such as the School Improvement Grant schools and Schools of Promise been effective in making their students ready for college?*
4. *Is there any significant difference in student outcomes for those that take the International Baccalaureate curriculum, AP, Digital Academy, etc.?*
5. *Does involvement in extracurricular activities at the high school level have any effect on graduates being college ready?*
6. *How does placement in remediation coursework vary among students of different backgrounds and how does placement in these courses have an effect on that student's graduation status?*

**Exhibit 1-5** displays the organizational chart for the K-20 Data Project. As can be seen from the organizational chart, the K-20 Data Project team includes a Project Manager, a Data Analyst, two Business Analysts, a Database Administrator, and a Computer Systems Analyst. Decision-making bodies involved in the K-20 Data Project, which provide direction and oversight to the project, include the K-20 Project Leadership Team and the K-20 Data Governance Council (DGC).

Established in January 2013, the Data Governance Council is charged with establishing the technical, management and communications systems to collaboratively manage, link and analyze K-20 education data. The K-20 Data Governance Council currently includes 24 representatives from the Office of Public Instruction, the Montana University System, and high schools across the state of Montana. Members of the DGC have been instrumental in making key decisions regarding K-20 data synthesis, use, and dissemination.

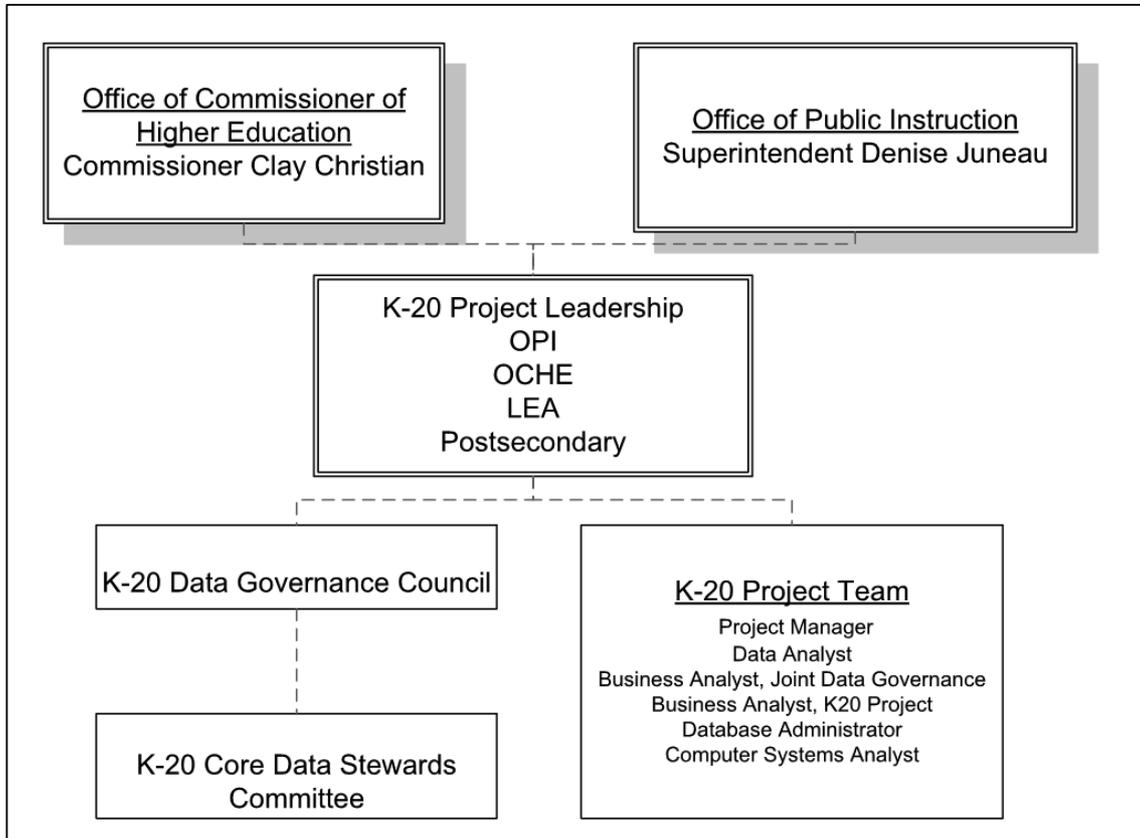
OPI partnered with the Montana University System (MUS) to complete the K-20 Data Project. The Montana University System, which includes 16 universities and colleges serving more than 46,000 students, and Board of Regents and its appointed Commissioner of Higher Education is housed in the Office of the Commissioner of Higher Education (OCHE). MUS is working with OPI to determine the types of data available and or needed to make the K-20 Data Project a success, as well as to facilitate communications regarding the project among partner institutions.

OPI has made significant progress with the K-20 Data Project to date. Much of the first year of the project (July 2012 - June 2013) was devoted to project planning and establishing a data governance model, and year two of the project (July 2013 – June 2014) was focused on design of the data system. In December 2013, OPI signed a contract with IBM and ConnectEDU (subcontractor to IBM) to provide data transport and transcript services. However, in April 2014, ConnectEDU announced bankruptcy, and the OPI worked diligently with IBM on identification of a suitable replacement product for the transcript system. On June 30, 2014, OPI announced Parchment as the new transcript vendor. This change presented a significant challenge for the K-20 Data Project; however, only minor project delays occurred.

**Exhibit 1-6** displays the solution overview for the data transport and transcript system; just one example of a document produced as part of the system design process.



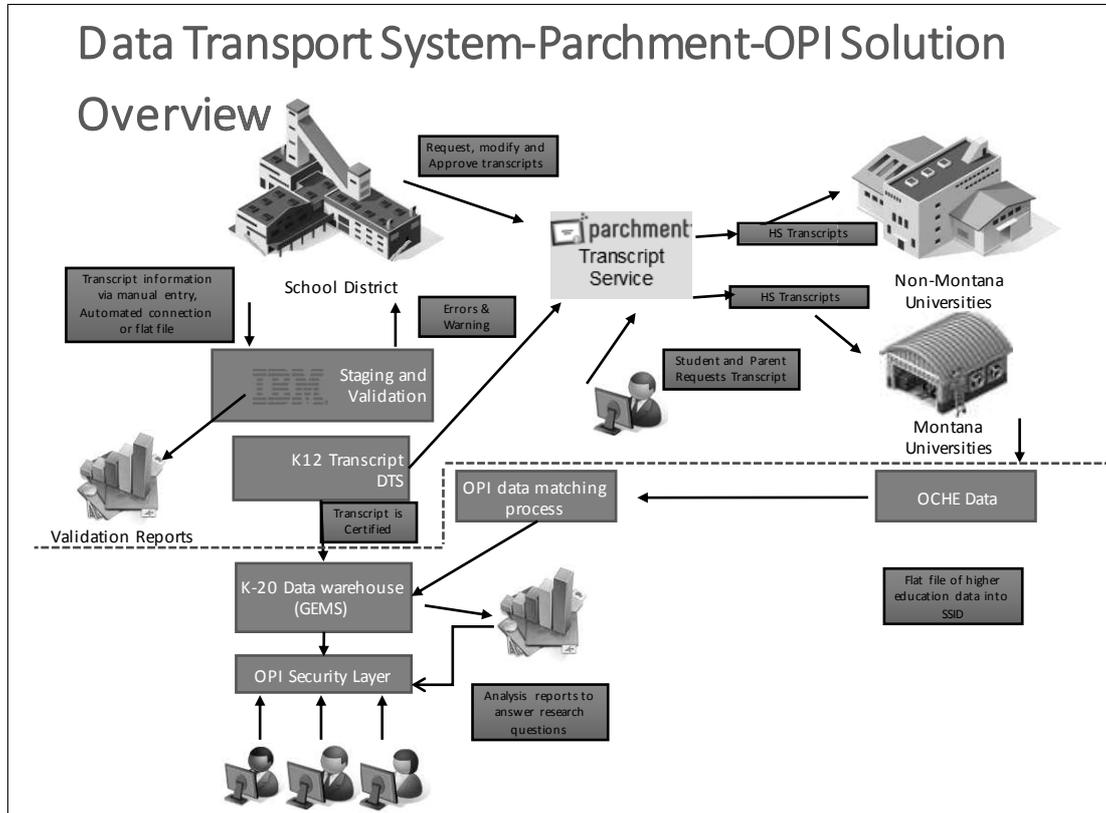
**Exhibit 1-5  
K-20 Data Project Organizational Chart**



Source: Montana OPI, 2014.



**Exhibit 1-6  
Data Transport and Transcript  
System Solution Overview**



Source: Montana OPI, 2014.

In Year 3 of the project (July 2014 – June 2015), as well as during the no-cost extension, the OPI focused its efforts on finalizing setup and implementation of the system; conducting extensive internal system testing to identify issues to be resolved; working with volunteer school systems to pilot the system; and fully implementing the system in September, 2015.

**1.3 OVERVIEW OF THE REPORT**

The Yearly Wrap-up Report consists of the following four chapters:

- Chapter 1.0: Introduction
- Chapter 2.0: Methodology and Evaluation Plan
- Chapter 3.0: Evaluation Results



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*Chapter 2*  
*Methodology and Evaluation Plan*



## ***2.0 METHODOLOGY AND EVALUATION PLAN***

This chapter of the Summative Evaluation Report contains background information on Evergreen's evaluation process and is organized into the following two sections:

- 2.1 Scope of Work
- 2.2 Evaluation Overview

### ***2.1 SCOPE OF WORK***

OPI issued a Request for Proposals (RFP) on May 31, 2013 for a Continuous Improvement and Data-Use Evaluator for the K-20 Data Project. The scope of work for the evaluation requested by the OPI included four main evaluation components. These components are:

- collect initial input from stakeholders and track project implementation;
- evaluate OPI training delivered as part of the project;
- assess the ease of use and functionality of the system for end-users; and
- measure whether end-users find the data useful, need additional data in the system, and can utilize and apply the data and reports effectively in regards to their information needs and goals.

Following is a brief description of each of these main evaluation components required by the scope of work as outlined in the RFP:

#### ***Collect Initial Input from Stakeholders and Track Implementation***

*In conjunction with the Project Leadership Team, the evaluator will collect input from stakeholders and end-users on which types of reports and analysis tools best answer their information needs. The evaluator will develop a tool for collecting this information. The OPI will help the evaluator identify end-users for this project.*

*Evaluation deliverables for this component include:*

- *a preliminary input collection tool for stakeholders and end-users; and*
- *a project plan and schedule for collecting this initial input.*

#### ***Evaluation of Training***

*The evaluator will assess the effectiveness of the training modules and training tools for the entire K-20 Data Project (which includes not only the reports and dashboards, but data transport and an electronic transcript). Trainings include face-to-face trainings, online resources such as FAQs, computer-based training, and online real-time training to train end-*



*users both on the use of the system and the use of the data. The evaluation tools designed will ensure that mechanisms are in place to allow for an effective, participatory, continuous improvement evaluation model for all the training modules for the K-20 Data Project, including the face-to-face trainings as well as the electronic based learning systems.*

*Evaluation deliverables for this component include:*

- *a feedback system for assessing the effectiveness of training modules for end-users, including feedback collection and post-training tests;*
- *a reporting tool for the Project Leadership Team to document its response to end-user feedback; and*
- *tools/methods to assess the effectiveness of the Project Leadership Team's response to end-user feedback.*

### ***Evaluation of Functionality/Ease of Use***

*The evaluator will assess the ease of use of the system for end-users. The evaluator will design and implement evaluation tools for key elements of the system including, but not limited to, dashboards, navigation, reports, intuitive interface, etc.*

*Evaluation deliverables for this component include:*

- *a feedback system for assessing the ease of use for end-users of the K-20 data warehouse;*
- *a reporting tool for the Project Leadership Team to document its response to end-user feedback; and*
- *tools/methods to assess the effectiveness of the Project Leadership Team's response to end-user feedback.*

### ***Evaluation of the Utility of System Data and Reports***

*The K-20 website will include a module dedicated to helping end-users interpret and apply data. The evaluator will develop a tool to measure whether end-users a) found the data useful; b) need additional data in the system; c) can utilize and apply the data and reports effectively in regards to their information needs and goals.*

*Evaluation deliverables for this component include:*

- *tools to determine whether end-users find the data useful, need additional data in the system, and can utilize and apply the data and reports effectively in regards to their information needs and goals;*



- *a reporting tool for the Project Leadership Team to document its response to end-user feedback; and*
- *tools/methods to assess the effectiveness of the Project Team's response to end-user feedback.*

This Summative Evaluation Report represents the final deliverable for this evaluation, and is a culmination of information and data from Evergreen's evaluation activities.

## **2.2 EVALUATION OVERVIEW**

In response to Montana Office of Public Instruction's Request for Proposals for program evaluators, Evergreen Solutions, LLC issued a proposal to provide the specified evaluation services on July 8, 2013. OPI formally selected Evergreen to conduct a comprehensive evaluation of the K-20 Data Project on September 9, 2013.

Year 1 of the evaluation was from September 9, 2013 through June 30, 2014 and Year 2 of the evaluation was from July 1, 2014 through March 1, 2016 as a result of the no-cost extension to the project. However, it should be noted that Year 1 of the K-20 Data Project was from July 1, 2012 through June 30, 2013, so evaluation years do not align to project years. Therefore, Year 1 of the evaluation is actually focused on K-20 Data Project activity for Years 1 and 2 of the project, and Year 2 of the evaluation is focused on K-20 Data Project activity for Year 3 of the project.

Using our understanding of the project scope provided in the RFP as a guideline, Evergreen prepared a work plan to complete the required objectives. Evergreen's evaluation work plan subdivides project work, including deliverables, into smaller and thus more manageable components. The evaluation work plan is driven by deliverables, and represents a hierarchical decomposition of the work to be executed by the Evaluation Team to accomplish the project objectives and create the required deliverables. The work task and associated task activities essentially provide an increasingly detailed definition of the evaluation work to be performed. This intricate breakdown of work tasks and corresponding task activities allows evaluators to better schedule, monitor, and control the evaluation process, as well as remain transparent to external stakeholders. The evaluation work plan also acts as a reference or starting point for the change process. That is, in the event an evaluation activity needs to be revised, the Evaluation Team uses the work plan as a starting point to outline necessary changes.

The evaluation work plan contains a number of defined measurements, processes, tools, approaches, monitoring procedures, and reporting requirements that the Evaluation Team is using to assess continuous improvement of OPI's K-20 Data Project. The evaluation work plan is not static. Fluid evaluation tools that allow for adaptation to changing activities are key to a successful and comprehensive evaluation. For every change that occurs in the State's scope of work, the evaluator's tools are adjusted to embrace and assess new dimensions of activity.

Evergreen's work plan for the multi-year evaluation of OPI's K-20 Data Project consists of the following three phases and six work tasks:



- Phase I – Project Initiation (Task 1)
- Phase II – Conduct Evaluation (Tasks 2-5)
- Phase III - Monitoring and Reporting (Task 6)

Evergreen outlined the following six tasks to assess success of the OPI’s K-20 Data Project:

- **Task 1.0:** Initiate Project
- **Task 2.0:** Collect Initial Input from Stakeholders and Track Implementation
- **Task 3.0:** Evaluate Training Activities
- **Task 4.0:** Evaluate Functionality and Ease of Use
- **Task 5.0:** Evaluate Utility of System Data and Reports
- **Task 6.0:** Prepare Evaluation Reports

Evergreen’s work plan for the evaluation of the K-20 Data Project is displayed in **Exhibit 2-1**. As can be seen, each task includes goals, activities, deliverables, and acceptance criteria so the evaluation could be easily tracked. Throughout execution of the work plan, the following evaluation tools and methods were used to manage the evaluation project and collect evaluation data:

- Project Management
- Evaluation Kick-off Meeting and Monthly Meetings
- Stakeholder Interviews
- Focus Groups
- Surveys
- Observations
- Documents and Data Review
- Training Evaluations
- Reports

A brief overview of each of these evaluation tools and methods follows.

### ***Project Management***

Based on Evergreen’s accepted evaluation proposal, a statement of work, comprehensive evaluation work plan, and work breakdown structure was prepared for the evaluation. This information was shared with the OPI for approval and was used to track evaluation activities and monitor completion. Evergreen’s detailed work breakdown structure for the evaluation contained 46 unique tasks and milestones, and mirrors closely OPI’s timeline for the K-20 Data Project.

Project management information, as well as other pertinent documents, were stored in Evergreen’s online workspace, which was setup at the beginning of the evaluation. The work space was created using Microsoft SharePoint, and was accessible by the OPI. All deliverables and supporting documents are housed on this site, which will effectively archive evaluation artifacts well beyond the conclusion of Evergreen’s multi-year evaluation.



**Exhibit 2-1  
K-20 Data Project Evaluation Work Plan**

Task Goals	Task Activities	Deliverables	Acceptance Criteria	
<b>TASK 1.0 – INITIATE PROJECT</b>				
<ul style="list-style-type: none"> <li>Review and finalize project work plan, schedule, and deliverables that will lead to the successful accomplishment of all evaluation objectives.</li> <li>Establish working relationships with OPI’s Business Analyst and OPI senior leaders.</li> <li>Finalize contract.</li> <li>Identify potential stakeholders whose input will be solicited throughout the study.</li> <li>Conduct initial meeting of Evaluation Team and OPI staff.</li> <li>Collect background data and information on K-12 data warehouse.</li> <li>Initiate project communications for the evaluation.</li> </ul>	1.1 Conduct kick-off meeting with OPI’s Business Analyst and OPI senior leaders to discuss project protocols and schedule.	1. Signed contract	Contract signed by OPI and Evergreen Solutions	
	1.2 Obtain project background materials, including overview of K-12 data warehouse, project progress, key points of contact, risks and issues.	2. Summary of initial meeting	Submission of meeting minutes to OPI K20 Business Analyst	
	1.3 Finalize contractual and working arrangements.	3. Master list of deliverables with corresponding timelines	Scope of Work and WBS reviewed and approved by OPI	
	1.4 Implement Evergreen’s Evaluation Communications Plan.	4. Background materials	Background materials requested by Evergreen and provided by OPI; uploaded to SharePoint	
		5. Communications Plan	Communications plan posted on SharePoint site	
<b>TASK 2.0 – COLLECT INITIAL INPUT FROM STAKEHOLDERS AND TRACK IMPLEMENTATION</b>				
<ul style="list-style-type: none"> <li>Develop a comprehensive list of end-users of the OPI K-12 data warehouse.</li> <li>Develop and finalize instrument(s) to collect feedback from end-users on which types of reports and analysis tools would best answer their information needs.</li> <li>Disseminate the instrument(s) to identified end-users.</li> <li>Summarize feedback collected to determine end-user requirements for the types of reports and analysis tools needed to answer information needs.</li> </ul>	2.1 Develop a list of end-users of the OPI K-12 data warehouse.	6. Instruments to gather end-user requirements	Three tools reviewed and approved by OPI	
	2.2 Develop an end-user matrix.	7. Comprehensive project plan and schedule for collecting initial input from stakeholders and end-users	Agreed upon approach and dates for survey implementation and onsite visit	
	2.3 Review end-user matrix with OPI PLT, making revisions as necessary.	8. End-user profiles	Profile for each end-user group (identified in task 2.3) reviewed and approved by OPI	
	2.4 Based on the final matrix, develop profiles for each end-user type outlining the preliminary anticipated data needs for each group.	9. Bi-monthly reports on OPI K20 Project implementation and progress	Bi-monthly reports reviewed and approved by OPI	



**Exhibit 2-1 (Continued)  
K-20 Data Project Evaluation Work Plan**

Task Goals	Task Activities	Deliverables	Acceptance Criteria
<p><b>TASK 2.0 – COLLECT INITIAL INPUT FROM STAKEHOLDERS AND TRACK IMPLEMENTATION (Continued)</b></p> <ul style="list-style-type: none"> <li>Track implementation of K-20 Data Project as it relates to stakeholder feedback received.</li> </ul>	<p>2.5 Develop online survey tool, focus group guide, and interview guide for use in collecting end-user requirements and needs.</p> <p>2.6 Finalize project plan and schedule for collecting initial input.</p> <p>2.7 Conduct online survey, focus groups, and interviews of end-users.</p> <p>2.8 Aggregate and analyze feedback collected through online survey, interviews, and focus groups.</p> <p>2.9 Update profiles for each end-user type with feedback received, including user requirements and needs from the K-12 data warehouse.</p> <p>2.10 Review end-user profiles with Project Leadership Team and system developers to ensure a unified understanding of user needs is reached and that feedback is organized to facilitate an actionable response.</p> <p>2.11 Determine and report on how the OPI has addressed needs of users in implementation of K-20 Data Project.</p>	<p>10. Report on how OPI addressed needs of end-users in implementation efforts and outcomes</p>	<p>Draft and final yearend report reviewed and approved by OPI</p>
<p><b>TASK 3.0 – EVALUATE TRAINING ACTIVITIES</b></p> <ul style="list-style-type: none"> <li>Design and implement evaluation tools that ensure mechanisms are in place to allow for an effective, participatory, continuous improvement evaluation model for all the training.</li> <li>Develop a reporting tool for the Project Leadership Team as to how end-user feedback was integrated back into the system and a tool to measure the integrated input against future feedback.</li> </ul>	<p>3.1 Develop comprehensive listing of all trainings.</p> <p>3.2 Develop test items to be used to determine effectiveness of trainings, including test items or simulation environments aimed at determining user competency levels exiting training events.</p> <p>3.3 Draft feedback instruments for face-to-face trainings.</p>	<p>11. List and description of all trainings</p> <p>12. Draft and final test items or simulations for assessing user competency level following training, including grading methodology</p> <p>13. Draft and final feedback instruments for trainings.</p>	<p>Trainings matrix reviewed and approved by OPI</p> <p>Draft and final test items or simulations reviewed and approved by OPI</p> <p>Draft and final feedback instruments for trainings reviewed and approved by OPI.</p>



**Exhibit 2-1 (Continued)  
K-20 Data Project Evaluation Work Plan**

Task Goals	Task Activities	Deliverables	Acceptance Criteria
<p><b>TASK 3.0 – EVALUATE TRAINING ACTIVITIES (Continued)</b></p> <ul style="list-style-type: none"> <li>Assess the effectiveness of training modules and tools for the K-20 Data Project.</li> </ul>	3.4 Draft feedback instruments for online resources.	14. Draft and final annual user satisfaction survey	Draft and final annual user satisfaction survey reviewed and approved by OPI
	3.5 Draft feedback instruments for computer-based training and online real-time training.	15. Reporting tool for aggregating and addressing feedback received	Reporting tool for aggregating and addressing feedback received reviewed and approved by OPI
	3.6 Draft survey instrument for assessing annually the perceptions of data warehouse users.	16. Findings on the effectiveness of training modules and tools for the K-20 Data Project	Monthly reports reviewed and approved by OPI. Year 2 annual report reviewed and approved by OPI
	3.7 Develop a tool and methodology for aggregating and reporting feedback received from all sources by training type, aimed at identifying trends in feedback.	17. Communications and distribution methodology for reporting tool	Agreed upon approach for communications and distribution methodology for reporting tool
	3.8 Using the tests, tools, and reporting template developed, assess the effectiveness of training modules and tools for the K-20 Data Project.		
<p><b>TASK 4.0 – EVALUATE FUNCTIONALITY AND EASE OF USE</b></p> <ul style="list-style-type: none"> <li>Determine the elements to be evaluated (dashboards, navigation, reports, intuitive interface, etc.) during the development and implementation phase of the K-12 data warehouse project.</li> <li>Develop evaluation tools to evaluate the functionality and ease of use of the K-12 data warehouse.</li> <li>Assess the functionality and ease of use of the system for end-users.</li> </ul>	4.1 Meet with the OPI Business Analyst to determine components of the K-12 data warehouse to be evaluated.	18. Final components to be evaluated, including measures and elements	List of final components to be evaluation reviewed and approved by OPI
	4.2 Define elements and/or measures to assess each component.	19. Draft and final feedback tools (ongoing and annual) for collecting user feedback on functionality and ease of use	Draft and final feedback tools reviewed and approved by OPI
	4.3 Develop feedback tool for collecting ongoing feedback from users on K-20 data warehouse, as well as an annual survey instrument to collect feedback from end-users on K-20 Data Project.	20. Findings on the functionality and ease of use of the K-20 Data Project	Monthly reports reviewed and approved by OPI Year 2 annual report reviewed and approved by OPI



**Exhibit 2-1 (Continued)  
K-20 Data Project Evaluation Work Plan**

Task Goals	Task Activities	Deliverables	Acceptance Criteria
<p><b>TASK 4.0 – EVALUATE FUNCTIONALITY AND EASE OF USE (Continued)</b></p> <ul style="list-style-type: none"> <li>Develop a report for the Project Leadership Team as to how feedback was integrated into the system and a tool to measure the integrated input against future feedback.</li> </ul>	<p>4.4 Integrate aggregated results from tools developed and deployed into report developed in Task 3.7, providing a comprehensive report on user feedback received, and actions taken by OPI to address user feedback on functionality and usability.</p> <p>4.5 Using the instruments and reporting template developed, assess the functionality and ease of use of the K-20 Data Project. Results will be discussed with the OPI Business Analyst so that this process can be emulated in the future (annually) by OPI.</p>		
<p><b>TASK 5.0 – EVALUATE UTILITY OF SYSTEM DATA AND REPORTS</b></p> <ul style="list-style-type: none"> <li>Develop evaluation tool to evaluate utility of system data and reports.</li> <li>Assess the utility of system data and reports.</li> <li>Develop a report for the Project Leadership Team as to how feedback was integrated into the system and a tool to measure the integrated input against future feedback.</li> </ul>	<p>5.1 Define elements and/or measures to assess: data usefulness; user needs; and user utilization of data and reports for information needs and goals.</p> <p>5.2 Develop feedback tool for collecting ongoing feedback from users on K-20 Data Project, as well as an annual survey instrument to collect feedback from end-users on K-20 Data Project.</p> <p>5.3 Work with the OPI Business Analyst to secure contact information for target stakeholders of the annual K-20 Data Project evaluation survey.</p> <p>5.4 Conduct annual survey.</p> <p>5.5 Integrate aggregated results from tools developed and deployed into report developed in Task 3.7, providing a comprehensive report on user feedback received, and actions taken by OPI to address user feedback on utility of system data and reports.</p> <p>5.6 Using the instruments and reporting template developed, assess the utility of system data and reports of the K-20 Data Project.</p>	<p>21. Final components to be evaluated, including measures and elements</p> <p>22. Draft and final feedback tools (ongoing and annual) for collecting user feedback on functionality and ease of use</p> <p>23. Survey target contact information</p> <p>24. Findings on the utility of system data and reports of the K-20 Data Project</p>	<p>List of final components to be evaluation reviewed and approved by OPI</p> <p>Draft and final feedback tools reviewed and approved by OPI</p> <p>Survey contact information uploaded to SharePoint</p> <p>Monthly reports reviewed and approved by OPI. Year 2 annual report reviewed and approved by OPI</p>



**Exhibit 2-1 (Continued)  
K-20 Data Project Evaluation Work Plan**

Task Goals	Task Activities	Deliverables	Acceptance Criteria
<p><b>TASK 6.0 – PREPARE EVALUATION REPORTS</b></p> <ul style="list-style-type: none"> <li>Develop bi-monthly status reports in Year 1 capturing the progress on collection of stakeholder input and the progress of system development and implementation.</li> <li>Develop monthly reports in Year 2 that address the status of deliverables; whether deliverables are meeting success criteria; whether the project is on schedule; and any related trouble-shooting in regards to unmet goals and timelines.</li> <li>Present bi-monthly reports and monthly reports to OPI Business Analyst.</li> <li>Prepare yearly wrap-up reports.</li> </ul>	<p>6.1 Draft bi-monthly status reports (Year 1) describing evaluation activities completed over the prior two-week period, planned for the next two-week period, and the progress on collection of stakeholder input and the progress of system development and implementation.</p> <p>6.2 Draft monthly status reports (Year 2) that address the status of deliverables; whether deliverables are meeting success criteria; whether the project is on schedule; and any related trouble-shooting in regards to unmet goals and timelines.</p> <p>6.3 Meet with OPI Business Analyst one day after submittal of bi-monthly (Year 1) and monthly (Year 2) status reports to discuss report content.</p> <p>6.4 Meet with OPI Business Analyst one day after submittal of bi-monthly (Year 1) and monthly (Year 2) status reports to discuss report content.</p> <p>6.5 Draft annual Year 1 and Year 2 wrap up report. Reports will include overview of evaluation methodology; findings, commendations, and recommendations; narrative on progress made to date; and outcomes for each objective.</p> <p>6.6 Meet with OPI Business Analyst to review the draft report and to verify the accuracy of the findings. Necessary revisions will be made at this time.</p> <p>6.7 Prepare Final Reports.</p> <p>6.8 Submit hard copies and an electronic version of the Yearly wrap up reports and obtain sign-off from OPI.</p>	<p>25. Bi-monthly (Year 1) and monthly (Year 2) status reports</p> <p>26. Draft Yearly Wrap Up Reports (2)</p> <p>27. Final Yearly Wrap Up Reports (2)</p>	<p>Reports reviewed and approved by OPI</p> <p>Report reviewed and approved by OPI</p> <p>Report reviewed and approved by OPI</p>

Source: Evergreen Solutions, 2016.



### ***Evaluation Kick-Off Meeting and Monthly Meetings***

A preliminary evaluation meeting was conducted by phone on October 11, 2013, and aimed at planning and scheduling the initial on-site meeting. Evergreen conducted the first evaluation on-site visit during the week of November 11, 2013. Specifically, Evergreen met with the K-20 Data Project Leadership Team to kick-off the evaluation on November 13, 2014.

This meeting focused on reviewing and revising the evaluation plan, discussing a more detailed timeline for evaluation activities, finalizing evaluation reporting formats, and preparing for stakeholder focus groups.

Critical evaluation documents and data were requested by Evergreen during this initial visit, which included, but were not limited to:

- telephone/E-mail directory for K-20 project staff and other key stakeholders (OPI, MUS, Office of the Commissioner of Higher Ed, K20 Council Members);
- K-20 Data Governance Council member list;
- project management plan, work breakdown structure, and timeline for rollout of the K-20 Data Project;
- list of all dashboards and reports currently in GEMS;
- annual surveys conducted for GEMS by OPI and results;
- previous GEMS requirements collection tools;
- sample high school transcript data;
- dates of OPI conferences and presentations related to GEMS;
- names of vendors and contracts for the K-20 Data Project; and
- additional background data as agreed upon by the K-20 Data Project Manager and the Evergreen Project Director, including such documents as the FY2012 SLDS grant application and project team organizational structure.

Updates to these data were requested regularly throughout the duration of the multi-year evaluation.

### ***Stakeholder Interviews***

Evergreen also interviewed key stakeholders during the week of November 11, 2013. Specifically, from November 13-14, Evergreen interviewed 17 stakeholders. The intent of the stakeholder interviews was to garner feedback on baseline perceptions regarding the K-20 Data Project. Stakeholders interviewed during the on-site visit included:



- Superintendent, OPI
- Deputy Superintendent, OPI
- Chief of Staff, OPI
- Information Technology Division Administrator, OPI
- Measurement & Assessment Division Administrator, OPI
- Content Standards & Instruction Division Administrator, OPI
- K-20 Data Project Manager, OPI
- K-20 Data Project Business Analyst, OPI
- K-20 Data Project Data Research Analyst, OPI
- Computer Systems Analyst, OPI
- GEMS Business Analyst, OPI
- Database Administrator, OPI
- Associate Commissioner for Planning & Analysis, Montana Office of Higher Education
- Associate Vice President of Planning Budget & Analysis, University of Montana
- Registrar, University of Montana
- Board Member, Montana Board of Public Education
- Superintendent, Plevna School District
- Deputy Superintendent of Instruction, Bozeman Public Schools

Evergreen prepared and used a guide for these interviews, which acted as a tool to collect uniform evaluation data across all interviews. Evergreen's interview guide is displayed in **Exhibit 2-2**. Interview feedback was summarized and shared with OPI, and is referenced in **Chapter 3** to support evaluation findings.

### ***Focus Groups***

In order to solicit additional feedback from stakeholders regarding the K-20 Data Project, Evergreen also planned (in coordination with the OPI) and conducted a focus group at the 2014 Assessment and Data Conference in Helena, Montana held on January 16-17, 2014 as well as two focus groups at the 2016 Assessment and Data Conference in Billings, Montana held on January 21-22, 2016. Evergreen prepared a focus group guide designed to collect participant feedback on the targeted components of the evaluation. Evergreen's 2014 and 2016 focus group guides are displayed in **Exhibit 2-3**. Focus group results are contained in **Chapter 3** to support evaluation findings.

There were a total of ten participants in the 2014 focus group, and a total of 65 participants during the 2016 focus groups. Each of the focus groups were held following a session by OPI staff on GEMS and lasted approximately 30 minutes each. Several OPI staff members were also in attendance at each focus group and they provided insight into technical questions from stakeholders regarding GEMS that the focus group facilitator could not answer.



**Exhibit 2-2**  
**Evergreen’s Evaluation Interview Guide**  
**K-20 Data Project**

Interviewee’s Name:

Title:

Evergreen Interviewer:

Date:

*Introduction and Purpose*

1. What are your K-20 Project roles and responsibilities?
2. What K-20 Project task(s) are you currently assigned to, working on, involved with, or concerned with?
3. How is K-20 Project communication managed?
4. Are you aware of any best practice models for K-20 data reporting/dashboards used in other states?
5. Who are the top-three most likely users of the K-20 data and reports? Others?
6. How would these groups/individuals most likely use K-20 data (daily, weekly, monthly, annually? For what purpose?)
7. What goals will users have in accessing K-20 data?
8. What K-20 indicators would be useful to you, or the user groups discussed?
9. What is the most efficient and effective way to solicit user requirements from user groups?
10. Regarding our survey/focus groups for collecting user requirements on K-20 data and dashboards, what question(s) would provide you with the information you need regarding user needs?
11. If there were no constraints on this project – time, budget, approval, etc. – how would you like this project to work and what would you like to see in it?
12. Regarding Evergreen bi-monthly reports, what information on K-20 Project implementation, progress, or tracking can we provide you that would help you monitor and move the project forward? (**ask only if interviewee is involved in project management/guidance, such as Data Governance Committee Members or OPI leaders**):
13. Would pre- or post- data be useful?
14. Is there anything you’d like to add or emphasize?

Source: Created by Evergreen Solutions, 2014.



**Exhibit 2-3  
2014 Evaluation Focus Group Guide  
K-20 Data Project**

Number of Participants \_\_\_\_\_  
Group Types Represented \_\_\_\_\_  
Grade Levels Served \_\_\_\_\_  
District/School Name \_\_\_\_\_

1. What do you like about GEMS? What do you not like about GEMS?
2. How frequently do you use GEMS?
3. What do you use GEMS for? Why? How Often?
4. Who are the top three users of GEMS in your school district?
5. What limitations or barriers exist in GEMS?
6. How has information from GEMS impacted your school district?
7. In GEMS, what could be adjusted, refined, or added to better meet your needs?
8. What areas of GEMS are exceptional and should not be changed?
9. Does your school district have a similar tool to GEMS? Are you planning to switch to GEMS? If not, why?
10. Does your school district currently use an electronic transcript?
11. What are the dashboards and reports you would like to see for K20 data?
12. Are you aware of any models for K20 data dashboards and reports?
13. What questions can be answered with GEMS data? Cannot be answered?
14. Are you satisfied with communications about GEMS from OPI?
15. What is needed to increase your frequency of GEMS use?
16. What GEMS training formats do you prefer?
17. Would anyone like to volunteer for a follow-up phone interview to share more on their experience with GEMS?

*Source: Created by Evergreen Solutions, 2014.*



**Exhibit 2-3 (Continued)**  
**2016 Evaluation Focus Group Guide**  
**K-20 Data Project**

Number of Participants \_\_\_\_\_  
Group Types Represented \_\_\_\_\_  
Grade Levels Served \_\_\_\_\_  
District/School Name \_\_\_\_\_

1. What do you like about GEMS? What do you not like about GEMS?
2. What do you use GEMS for? Why? How Often?
3. Who are the top three users of GEMS in your school district?
4. What types of training or materials would allow you to access GEMS more?
5. Would additional online training or regional training workshops would be useful for your school/district/postsecondary institution?
6. How has GEMS positively impacted your school, district or postsecondary institution?
7. When you access data in GEMS, what types of additional analysis may be required to get to your ideal conclusion?
8. What questions can be answered with GEMS data? Cannot be answered?
9. How can the OPI improve communication about GEMS to improve your user experience?
10. How could GEMS be improved to make the website easier to navigate?
11. What GEMS training formats do you prefer?
12. How can GEMS be improved?

Source: Created by Evergreen Solutions, 2015.

**Survey**

In Year 1 of the evaluation, during the month of December 2013, Evergreen worked with the OPI to develop and finalize the Year 1 GEMS Annual Evaluation Survey. The survey focused on establishing a baseline regarding perceptions of stakeholders on GEMS, including which features would be most useful in the future, or those that are currently most useful to respondents. The survey included sections on each of the core components being evaluated by Evergreen, and was designed to collect feedback from all types of K-20 Data Project stakeholders, including OPI staff, district staff, and representatives serving organizations related to the Montana University System. The draft survey was submitted to the OPI for review on



December 17, 2013 and discussion began shortly after on survey administration. The final Year 1 survey included 48 multi-type questions, such as Likert scale questions (agree/disagree), multiple choice questions, ranking questions, and free response questions.

The specific stakeholder groups targeted by the Year 1 GEMS Annual Evaluation Survey are displayed in **Exhibit 2-4**. As can be seen, a total of 19 different survey groups were targeted, and an additional “other” option was also included for stakeholders not fitting into any of the predefined group types listed.

**Exhibit 2-4**  
**Year 1 GEMS Annual Evaluation Survey**  
**Targeted Stakeholder Groups**

K-12 Survey Groups	Higher Education Survey Groups
Assessment Coordinator	Academic Advisor
Counselor	Administrator
CTE Director	Admissions Officer/Specialist
Curriculum Director	Professor
Data Coach/Specialist	Recruiter
District Administrator	Registrar
Instructional Coach	Researcher
Instructional Technology Specialist	Other
MIS Director/CIO	
School Administrator	
Superintendent	
Teacher	
Other	

Source: Created by Evergreen Solutions, 2014.

Initial Year 1 survey administration occurred on January 24, 2014, and was conducted as a pilot to two volunteer school districts (Kalispell Public Schools and Plevna School District) with a due date of February 1, 2014. The pilot was conducted to test the survey distribution process, and yielded no issues to address before full administration of the survey. Full administration of the survey took place on February 25, 2014 with a final due date of March 21, 2014 (extended from the original due date of March 11 to solicit additional responses). A survey reminder email was sent on March 17, 2014. The launch date of the survey was moved from February 4, 2014 to February 25 as a result of other OPI data collection efforts occurring during the month of February. Specifically, the OPI’s TEAMS system was open for collection of school employment information and accreditation data, and was due on February 21, 2014.

Survey invitations were sent via email to Authorized Representatives (AR) at each targeted organization. Authorized Representatives are the official points of contact for OPI, and are present in each school district or partner organization. ARs are defined by the Montana OPI as (OPI Authorized Representative Change Form - March 2012):

*Authorized Representative (AR) of a School District - The Board of Trustees has the authority to act on behalf of the school district. The OPI assumes the Board of Trustees delegates its authority to the district superintendent, who will act as authorized*



*representative (AR) of the school district receiving federal and/or state grants. If the school district, because of its size, does not have a district superintendent, the principal will be presumed to be the AR. If a district has neither a superintendent nor a principal, the county superintendent will assume the role of AR. Although the AR role is presumed to follow that rule, the trustees may instead request an exception to the rule in order to designate the board chair, another board member, or an employee in the role of AR for the board. The board chair must submit this form to the OPI to request an exception.*

***Authorized Representative of a Sub Recipient Who is Not a School District - The chairperson of the managing board or committee of the sub recipient organization is assumed to be the authorized representative, unless the board designates an alternative by submitting this form to the OPI.***

In the survey invitation email, it was requested that Authorized Representatives forward the survey invite to any additional staff member who was in a position to offer feedback on GEMS. Using this method of dissemination ensured that only individuals with working knowledge of or potential interest in GEMS participated in the survey, and allowed school districts and organizations more control over the process.

The survey invite was sent to 497 individuals via the OPI listserv. The survey completion rate was monitored over time, and was:

- February 27 – 30 completions (6.0%)
- March 4 – 34 completions (6.8%)
- March 13 – 42 completions (8.5%)

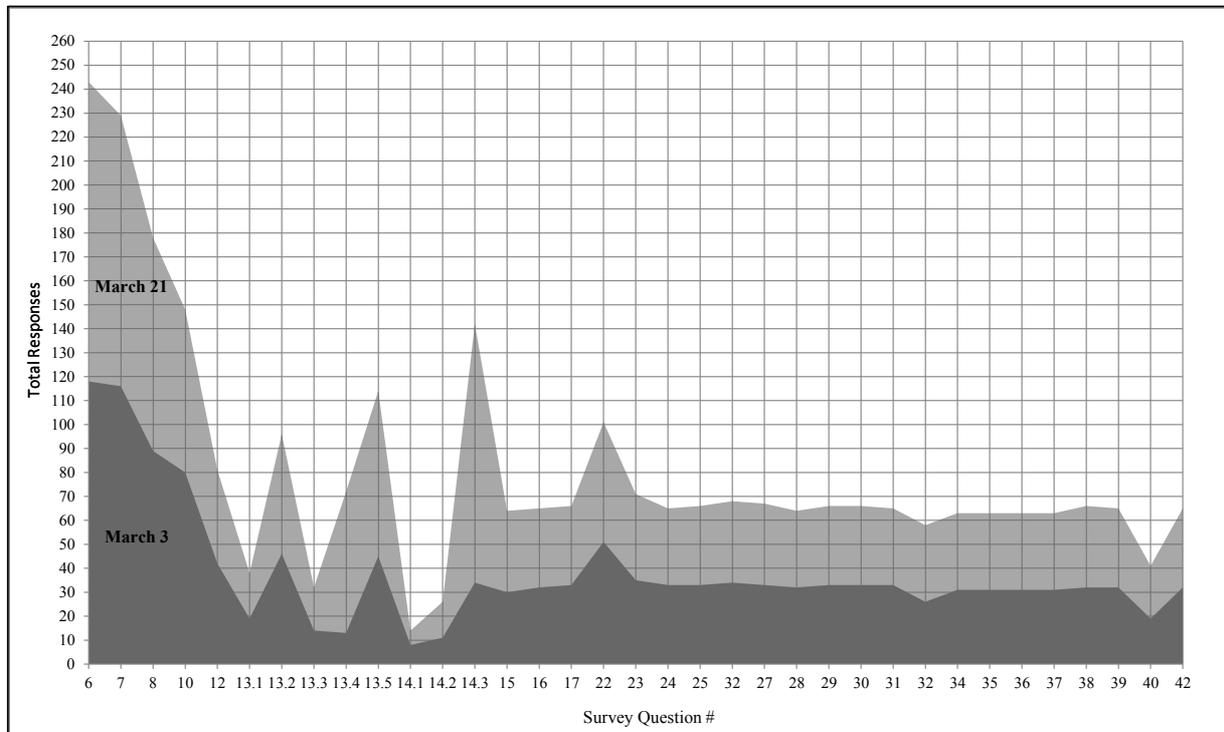
By the close date of March 21, the Year 1 survey had yielded 67 completions, for a total completion rate of 13.5 percent. In addition, the survey yielded 205 views and 162 partial completions. Partial completions were included in the final survey results. Final survey results were provided to the OPI in Evergreen's March 2014 bi-monthly progress report.

An analysis of survey responses was also completed by Evergreen to examine at which points throughout the survey participants were most likely to exit or not respond, which may indicate non-applicable questions, confusing questions, or breaking points for survey respondents. This analysis was used to make adjustments and improvements to the Year 2 GEMS Annual Evaluation Survey.

**Exhibit 2-5** displays an example of a component of this analysis; the number of completions by survey question. These data show which questions participants were least likely to respond to. Several important points regarding the exhibit include: demographic questions (Q1-Q5) and free response questions (Q42-Q48) are not displayed; and the spikes and valleys for some questions are due to the fact that several survey questions allowed participants to "select all that apply." As can be seen, there was a high number of responses from questions 6 through 22, and responses plateaued from question 23 through the end of the survey.



**Exhibit 2-5  
Year 1 GEMS Annual Evaluation Survey  
Survey Responses by Question**



Source: Created by Evergreen Solutions, 2014.

The Year 2 GEMS Annual Evaluation Survey was designed to collect longitudinal data from GEMS stakeholders to compare to the baseline data collected during the Year 1 survey. While the number of questions was reduced for the Year 2 survey, questions remaining were identical or similar to the Year 1 survey so comparisons could be made; with the exception being that several questions were added to collect feedback on the FAFSA report and Early Warning System added to GEMS during Year 2 of the evaluation. The Year 2 survey included 21 total questions.

Distribution of the Year 2 survey occurred on September 24, 2015 and the survey was closed on October 19, 2015. The Year 2 survey was distributed using the same method as the Year 1 survey, where survey invitations were sent to all ARs of schools and districts throughout the state. However, during Year 2, Evergreen also received an email list of school counselors throughout the state, which were also sent a survey invite to respond to questions on the FAFSA data tool only. The Year 2 survey invitation was sent via email to 259 ARs as well as 69 school counselors, for a total of 328 stakeholders. In total, 88 stakeholders responded to the survey, yielding a final response rate of 27.0 percent.



An analysis of survey results is included in **Chapter 3**. Complete comparison survey results for the Year 1 and Year 2 surveys are included in the **Appendix** to this report, and are used throughout **Chapter 3** to support evaluation findings.

### ***Observations and Meetings***

Evergreen identified a number of opportunities to observe K-20 Data Project activities and worked with OPI to ensure that evaluators could attend these events. These observations included project meetings, OPI presentations, and USDOE monitoring calls. The observations completed during the evaluation included the following:

- OPI K-20 Data Project Conference Presentation (January 16, 2014);
- OPI High School Follow-up Report Conference Presentation (January 16, 2014);
- OPI Data Governance Council Meeting Call (April 15, 2014);
- USDOE Monitoring Call (May 13, 2014);
- OPI Data Governance Council Meeting Call (May 20, 2014);
- OPI K-20 Data Project Conference Presentation (January 21, 2016); and
- OPI GEMS Conference Presentation (January 21, 2016).

All observations allowed Evergreen to better monitor the pulse of the project, stay abreast of project activities, and better understand the information being conveyed by the OPI to stakeholders regarding the K-20 data system.

Regular meetings were also held with OPI staff regarding project progress throughout the duration of the evaluation. In total, approximately 26 monthly or bi-monthly meetings were held to discuss project timelines, developments, and progress. These meetings were also used as a time to plan evaluation activities and strategies, discuss evaluation tools and methods, and to obtain feedback from the OPI on monthly reports submitted by the evaluator.

### ***Documents and Data Review***

Documents and data review were an integral part of the evaluation of the K-20 Data Project. As such, Evergreen included in its bi-monthly progress reports a list of all documents and data requested to date (referred to as the “Data Request List”), as well as new requests for documents or data from the OPI. This list included the documents requested at the beginning of the project during the initial meetings and on-site visit. All documents and data requested served a purpose in the evaluation, and acted as artifacts and evidence to support evaluation findings and project outcomes.

**Exhibit 2-6** displays Evergreen’s final list of all documents requested from OPI. As can be seen, each item requested is coded for easy reference. As can be seen, there are 31 items on the list, which were collected and stored on the evaluation SharePoint site. Ongoing collection, review, and updates to these data and documents were an integral part of the evaluation.



### Exhibit 2-6 Evaluation Data Request List

Item #	Item
O-1	Telephone/E-mail Directory for K20 Project Staff
O-2	K20 Councils and Members List
O-3	Project Management Plan and Timelines for Rollout of K20 Data Project
O-4	Reports or Updates on K20 Data Project (if available)
O-5	List of all Dashboards and Reports Currently in GEMS
O-6	Annual Surveys and Results Conducted for GEMS
O-7	Previous GEMS Requirements Collection Tools Used
O-8	Sample High School Transcript Data
O-9	Dates of OPI Assessment Conference in January 2014
O-10	Names of Vendors and Contracts for K20 Data Project
O-11	PowerPoint by Brett on answering research questions
O-12	IBM/ConnectEDU Work Plan (once available)
O-13	Final Proposed Research Questions
O-14	K20 Data Flow
O-15	GEMS Usage Report
O-16	DART Survey Results/ (or just questions)
O-17	GEMS Training Evaluations (hard copies)
O-18	Useful lessons learned from GEMS build
O-19	MUS Requirements by Institution
O-20	OPI's Thursday PM Conference Presentation PP
O-21	Data Governance Council Meeting Minutes – March 18, 2014
O-22	Written update submitted through GRADS by OPI to USDOE
O-23	Upcoming OPI presentations related to the GEMS K20 Data Project
O-25	Updated list of Data Governance Council members
O-26	K20 Project Narrative
O-27	Updated K20 Data Project work plan
O-28	OPI presentations from the Title I and MCAN conferences
O-29	Participant evaluations of OPI presentation at the Title I conference
O-30	Updated pilot school list
O-31	Example weekly status report from IBM
O-32	2016 Conference Presentations

Source: Created by Evergreen Solutions, 2016.

### **Training Evaluations**

In Year 3 of the K20 Data Project (Year 2 of the evaluation), the OPI rolled out pilot training on the data transport and transcript system to volunteer schools and districts throughout the state. As part of this process, Evergreen worked with the OPI and IBM to develop a training evaluation tool to assess stakeholder satisfaction with the training sessions offered. **Exhibit 2-7** displays the final training evaluation form created by Evergreen.

This form was made available to participants of the training following each session in paper format, and was also provided in digital format using an online survey platform. In total, five responses were received, and the results of the training evaluation are shared in **Chapter 3** of this report to support evaluation findings and outcomes. Trainings at which evaluations were submitted occurred on April 8, May 28, June 16 and 23.



### Exhibit 2-7 Evaluation Data Request List

**Montana Office of Public Instruction**  
**Data Transport Training**  
**Evaluation Form**



Montana  
Office of Public Instruction  
Denise Juneau, State Superintendent  
opi.mt.gov

**Please complete this training evaluation form in hard copy, or right now online at**  
<https://www.surveymonkey.com/r/datatransport>

**Location:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Instructor(s):** \_\_\_\_\_ **Type of training:**  Online/Webex  In-person

Is another representative from your organization in attendance at this training?  Yes  No

**Your Role:**  
 Superintendent  Principal  Technology Specialist  Data Support  Secretary  Teacher  Other

**Job Title:** \_\_\_\_\_

**At what level do you work (circle one)?** K 1 2 3 4 5 6 7 8 9 10 11 12 Higher Edu All

How was your district's attendance at this training determined? \_\_\_\_\_

How was your attendance at this training determined? \_\_\_\_\_

What were your expectations for this training? \_\_\_\_\_

Were your expectations met? Why or why not? \_\_\_\_\_

Additional trainings that you'd like to see offered: \_\_\_\_\_

Suggestions for improving this training: \_\_\_\_\_

Please Rate each Statement (Circle Rating)	N/A	Strongly Disagree			Strongly Agree		
1. Presenters demonstrated thorough knowledge of the topic.	0	1	2	3	4	5	
2. This training provided me with valuable information.	0	1	2	3	4	5	
3. I will be able to apply what I learned.	0	1	2	3	4	5	
4. The presenter(s) solicited questions from the audience.	0	1	2	3	4	5	
5. Questions were well answered.	0	1	2	3	4	5	
6. I was satisfied with the quality of the training.	0	1	2	3	4	5	
7. Real-life situations were used to explain concepts.	0	1	2	3	4	5	
8. I know where to go to find additional information/support.	0	1	2	3	4	5	
9. My understanding of the system's <b>data flow</b> is sufficient.	0	1	2	3	4	5	
10. My understanding of the system's <b>data security</b> is sufficient.	0	1	2	3	4	5	
11. My understanding of the system's <b>functionality</b> is sufficient.	0	1	2	3	4	5	
12. The teaching techniques used helped my learning.	0	1	2	3	4	5	
13. The materials used helped or enhanced my learning.	0	1	2	3	4	5	
14. I was given an opportunity to practice using the new ideas.	0	1	2	3	4	5	
15. The time allotted for the topics covered was appropriate.	0	1	2	3	4	5	
16. The training schedule met my needs.	0	1	2	3	4	5	

Source: Created by Evergreen Solutions, 2014.



## **Reports**

The scope of work for the evaluation required bi-monthly progress reports and a Yearly Wrap-up Report in Year 1 of the evaluation, and monthly progress reports and a Yearly Wrap-up Report in Year 2 of the evaluation. To address this, a progress report template was produced by Evergreen and submitted to OPI for approval in November 2013. The progress report addressed the collection of stakeholder input and the progress of system development and implementation over time. Progress reports also acted to share evaluation activities completed and planned; new and completed documents and data requests; as well as tracked the status of K-20 Data Project implementation. Evergreen discussed each progress report at monthly phone meetings with the OPI K-20 Project Manager.

The outline for the progress report template is displayed in **Exhibit 2-8**. As can be seen, the outline included sections for intermittent commendations and recommendations. Over the course of the evaluation, several commendations and recommendations were made, including:

## **Commendations**

- Communications of the K20 Data Governance Council are noted as highly efficient and effective by council member interviews.
- The proposed research questions developed by OPI provide an excellent vision for what the K-20 Data Project will achieve/provide to stakeholders.
- OPI staff has spent time reviewing/studying K20 data dashboards and reports in other states to glean insight on best practices. This provides excellent information for the development of the OPI's own K20 module.
- The OPI data governance structure and processes put in place are effective and efficient. Significant thought has gone into the management of data which will allow it to be used much more efficiently both internally and externally.
- OPI presenters observed by Evergreen evaluators at the Data and Assessment conference provided excellent information to attendees regarding GEMS use. The exposure will likely contribute to increased interest in GEMS.

## **Recommendations**

- Communications on GEMS updates/changes/initiatives are currently limited. The OPI should explore options for additional communication to districts on GEMS activities. One individual interviewed recommended putting GEMS on the "social media circuit," including Facebook or Twitter, to make periodic announcements.
- Some districts work directly with MUS to get remediation data, which could undermine the utility of GEMS. OPI should work to explore this process, which districts use it, and how GEMS can replace this need through the college and career readiness domain. It should be noted that since the college readiness domain went into production, OPI is now getting all requests for remediation data—whether received directly or routed to them from the MUS.



**Exhibit 2-8  
Bi-Monthly Progress Report Outline**

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EVERGREEN SOLUTIONS, LLC



**CONTINUOUS IMPROVEMENT AND  
DATA-USE EVALUATOR FOR K-20  
PROJECT**

**BI-MONTHLY PROGRESS REPORT #1  
DATE**

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**DATA-USE EVALUATOR PROGRESS**

**A. MAJOR ACCOMPLISHMENTS/DELIVERABLES**

☞ Accomplishment 1

**B. TASKS FOR NEXT MONTH**

**B.1 Incomplete Tasks**

☞ Task 1.

**B.2 New Work for Next Month**

☞ Task 2.

**C. COMMENDATIONS/RECOMMENDATIONS**

☞ None at this time.

**D. PROBLEMS/ISSUES**

☞ None at this time.

**E. DATA REQUEST LIST**

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*Page 1 of 2*

Source: Created by Evergreen Solutions, 2015.



**Exhibit 2-8 (Continued)  
Evaluation Bi-Monthly Report Outline**

**K20 PROJECT IMPLEMENTATION STATUS**

**A. MAJOR ACCOMPLISHMENTS**

➡ None at this time.

**B. PROJECT TASK STATUS**

**Overdue Tasks**

Task	Start	Finish	Explanation

**Six Weeks Report**

Status	Number	Task Name	Start	Finish

**Charts and Graphs**

**C. RISKS/IMPACT/CONTIGENCY**

➡ None at this time.

**D. ISSUES**

➡ None at this time.

**E. LESSONS LEARNED**

➡ None at this time.

**F. OPI RESPONSE TO EVALUATION FEEDBACK**

➡ None at this time.

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Page 2 of 2

Source: Created by Evergreen Solutions, 2015.



- Districts are not required to participate in the submission of transcript data to OPI. There is concern that districts will not use the GEMS college and career readiness domain, and there is a huge reliance on district submitted data for success of this domain. The advantage for districts is that GEMS provides them with a free electronic transcript. OPI should review what tools districts are using (similar to GEMS) to gain a better understanding of district needs.
- Based on feedback from the focus groups, it is recommended that OPI explore adding a new GEMS Use Case for curriculum directors, outlining how this group may use GEMS data to inform decisions about curriculum.
- To promote transparency, Evergreen recommends that once finalized, the GEMS Evaluation Survey results be posted on the OPI website for stakeholders to view.

The evaluation methods and activities discussed in this section provide the evidence, artifacts, and support for evaluation findings listed in **Chapter 3**.



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*Chapter 3*  
*Evaluation Results*



## ***3.0 EVALUATION RESULTS***

Under the stipulations of the FY2012 SLDS grant program, which funds the Montana Office of Public Instruction's (OPI) K-20 Data Project, OPI was required to hire a grant evaluator to develop a continuous system for stakeholder input and feedback. This chapter outlines findings of the evaluation for each of the main components of the project shared in **Chapter 2**, including:

- Collecting Initial Input from Stakeholders and Tracking Implementation
- Evaluation of Training
- Evaluation of Functionality and Ease of Use
- Evaluation of the Utility of System Data and Reports

This chapter is organized into the following five sections:

- 3.1 Initial Input and Implementation
- 3.2 Training Evaluation
- 3.3 Evaluation of Functionality/Ease of Use
- 3.4 Evaluation of the Utility of System Data and Reports
- 3.5 Evaluation Summary

### ***3.1 INITIAL INPUT AND IMPLEMENTATION***

The requirement for this component of the evaluation included design and implementation of a preliminary input collection tool for stakeholders and end-users to gather feedback on the K-20 Data Project, as well as the design and implementation of a project plan and schedule for collecting this initial input and for conducting the evaluation. Evergreen's work plan for the evaluation of the K-20 Data Project is displayed and discussed in **Chapter 2** of this report. This work plan detailed the project plan and schedule for collection of initial input and for completion of all other evaluation activity.

Key dates and activities for collecting initial input from K-20 Data Project stakeholders were finalized in November 2013 and revisited entering Year 2 of the evaluation. The key activities, as well as their dates, completed for collection of stakeholder input were as follows:

- Project Startup Conference Call – September 9, 2013
- Evaluation Kick-Off Meeting – October 11, 2013
- Evaluation Statement of Work Submitted – October 15, 2013
- On-site Visit and Interviews – November 13-14, 2013
- Year 1 Focus Group – January 17, 2014
- Year 1 Pilot Evaluation Survey – January 24 through February 1, 2014
- Year 1 Full Evaluation Survey – February 25 through March 21, 2014
- Year 1 Yearly Wrap-up Report – June 30, 2014
- Year 2 Training Evaluation – Summer 2015
- Year 2 Evaluation Survey – September 24 through October 19, 2015



- Year 2 Focus Groups – January 21-22, 2016
- Year 2 Yearly Wrap-up Report – March 1, 2016

An overview of each activity conducted by Evergreen to collect initial input on the K-20 Data Project is provided below.

### ***Interviews***

As noted in **Chapter 2**, Evergreen interviewed key stakeholders during the week of November 11, 2014. Specifically, from November 13-14, Evergreen interviewed 17 key stakeholders at the OPI. Interviews acted as a mechanism to learn more about development of the K-20 Data Project, as well as to collect feedback from stakeholders on their goals and expected outcomes for the project. Rather than discussing the logistics of the interviews conducted as was completed in **Chapter 2**, this section provides a summary of feedback received during the evaluation interviews for each interview question. Personally identifiable information has been removed. Note that interviews were not completed as part of the Year 2 evaluation.

#### **1. How is K-20 Project communication managed?**

Interviewees noted email communication as one of the main forms of communication for receiving information on the K-20 Data Project. Initial communication was geared toward simply getting awareness out about GEMS. Venues noted for discussion regarding the project included Data Governance Council and MUS Board of Regents meetings. One interviewee noted that the agendas and meeting minutes prepared for Data Governance Council meetings are succinct and helpful.

District-level interviewees shared that they would like to see more on-site presentations by OPI regarding the K-20 Data Project, while higher education interviewees mentioned that they need a better understanding of what the whole project is to accomplish and what K-12 stakeholders are doing to contribute. Perhaps the main concern regarding the project was release of GEMS data to the general public. Proactive communication on the part of OPI was noted as an area where if increased, could have a dramatic positive impact across all stakeholders. There is also a perceived barrier to interactions between K-12 stakeholders and MUS; however, interviewees noted that communication between these groups is improving as the enabling factors grow stronger.

#### **2. Are you aware of any best practice models for K-20 data reporting/dashboards used in other states?**

When asked about best practice models or sources of academic information on the reporting and use of K-20 data, interviewees identified the following:

- Ed-Fi Alliance Standards – described as a leading educational data standard that builds a secure bridge between disparate data systems;
- the states of Connecticut, Tennessee, Kansas, Kentucky, and Nebraska’s State Department of Education College Readiness Reports; and



- National Center for Education Statistics’ STATS-DC Conference.

**3. Who are the top-three most likely users of the K-20 data and reports? Others? How would these groups/individuals most likely use K-20 data (daily, weekly, monthly, annually? For what purpose?)**

Exhibit 3-1 displays a summary of aggregated responses to this interview question in the form of a matrix of user profiles. As can be seen, interviewees listed a variety of potential users across K-12 school districts, MUS, OPI, and other organizations.

**Exhibit 3-1  
GEMS User Matrix**

User		Expected Frequency and Type of Use
K-12	School Administrator	<ul style="list-style-type: none"> <li>• Annually - To look at remediation rates at certain schools. To prevent further remediation.</li> <li>• School Administrators should use it once per month.</li> <li>• Assessing impact of course level completed in HS with success in college</li> <li>• Annually - to assign staff, change policy, and determine college and career ready pathways, strengthening program offerings.</li> <li>• Quarterly</li> </ul>
	Superintendent	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Annually - to assign staff, change policy, and determine college and career ready pathways, strengthening program offerings.</li> <li>• Quarterly</li> <li>• To answer “What are districts doing to get students ready college?”</li> </ul>
	Counselor	<ul style="list-style-type: none"> <li>• NA</li> </ul>
	Data Specialist	<ul style="list-style-type: none"> <li>• Monthly if not weekly</li> </ul>
	School Board Member	<ul style="list-style-type: none"> <li>• Frequently</li> </ul>
MUS	Researcher	<ul style="list-style-type: none"> <li>• Annually</li> <li>• Monthly/Annually – to measure what percent of HS students came to their campus and their success.</li> </ul>
	Recruiter	<ul style="list-style-type: none"> <li>• Monthly –to learn more about the population of high schools they are going to visit.</li> </ul>
	Registrar/Admissions Officer	<ul style="list-style-type: none"> <li>• Daily - Forecasting readiness of future cohorts</li> <li>• Daily - as semester starts then gradually decrease to monthly as the semester progresses.</li> <li>• At MUS, the registrar would be the most likely user.</li> <li>• Annual</li> <li>• Annual</li> </ul>
OPI		<ul style="list-style-type: none"> <li>• Daily - OPI should be a data driven decision making leader</li> <li>• Annually - supporting the board to make transition decisions from K-12 to higher Ed – they should know data inside and out and be data advocates.</li> <li>• Monthly if not more</li> <li>• OPI needs to start mentoring the research that will bear some fruit. There is a need to coordinate the folks who would do Masters work or PhD work on the research. Create a venue for these folks to do this. The colleges and universities do not know much about this, because OPI has to bring something to the table for them to consider and at this point it is all conceptual.</li> <li>• Frequently</li> </ul>
Other	State Legislature	<ul style="list-style-type: none"> <li>• Frequently</li> </ul>
	General Public	<ul style="list-style-type: none"> <li>• Occasionally</li> </ul>

Source: Created by Evergreen Solutions, 2014.



**4. What goals will users have in accessing K-20 data?**

Interviewees shared the following goals in accessing K-20 data:

- accessing campus feeder reports;
- accessing timely K-20 data;
- finding examples of how to use the data;
- accessing data for decision making;
- for monitoring purposes;
- measuring changes in low performing schools;
- adding value to processes;
- evaluating legislative decisions about mandating certain levels of math completion;
- improving instruction;
- comparing data;
- identifying best practices in well-performing areas/districts;
- displaying test scores;
- limiting redundancy in data collection;
- researching issues;
- identifying and communicating which districts are more college ready;
- improving communication between K-12 and higher education; and
- transferring transcripts efficiently and effectively.

**5. What K-20 indicators would be useful to you, or the user groups discussed?**

The following indicators were noted as being potentially useful to interviewees:

- socio-economic indicators; data disaggregated by socio-economic status;
- indicators linked to GearUp and Trio;
- college readiness indicators (including: highest level of math completed; completion of core courses; high school GPA and class rank; and course taking patterns in high school);
- enrollment summary indicators, including: projected retainment rate by grade and high school and student demographic projections;
- graduation rate;
- success rates;
- remediation rate;
- success rate by high school math completed; and
- post-graduation placement.

**6. What is the most efficient and effective way to solicit user requirements from user groups?**

- training and professional development;
- district data clerk surveys;
- general orientation process in which OPI speaks to deans of education; and
- general surveys.



Interviewees were also given the opportunity to share any additional concerns they had regarding the K-20 Data Project. This interview question yielded the following feedback:

- There seems to still be an “us against them” mentality between K12 and higher education. Higher education stakeholders do not feel they are getting as much out of the K-20 Data Project as K-12 stakeholders are, and they feel their needs are seen as less critical.
- K-12 organizations are becoming more and more consistent in assessments. However, MUS institutions do not have in place the same placement tests for Math and English – validity has not been tested. One positive step MUS institutions took was to establish is common course numbering, but the same placement tests are not used at all institutions.
- Students have the ability to choose whether or not they take remedial courses. Stakeholders need more information on why some students choose to take these courses and why some do not.
- College placement tests need to be standardized.
- OPI needs to study and verify the accuracy of the data.
- A monthly reminder on GEMS updates and additions would be well received.
- Stakeholders would like to see more consistency in placement tests at the higher education level; or at minimum, an overview on the requirements/entrance exams used at each institution.
- Districts must be able to export the raw data from GEMS for it to be useful.

### ***Evaluation Survey***

The GEMS Annual Evaluation Surveys yielded the largest volume of input from stakeholder groups. The surveys were designed to assess perceptions of stakeholders to determine what could be improved in GEMS related to the layout, reporting functionality, ease of use, and data availability, as well as to garner feedback on general stakeholder perceptions of GEMS. The Year 1 survey established a baseline for measuring changes in stakeholder perceptions against Year 2 survey results.

**Exhibit 3-2** displays survey respondents by position type. As can be seen, the largest K-12 respondent group was Superintendents, which accounted for 36.3 percent of all K-12 respondents in Year 1 and 59.3 percent in Year 2. In Year 1, this was followed by “other,” at 15.7 percent of total respondents; School Administrators at 12.8 percent of total respondents; and District Administrators at 11.8 percent of total respondents. In Year 2, this was followed by Counselors at 17.4 percent of total respondents; “Other” at 10.5 percent of total respondents; and School Administrators at 5.8 percent of total respondents. Across the Higher Education respondent group, the Registrars, Researchers, and “other” were the largest respondent groups in Year 1, each accounting for 25 percent of all responses. In Year 2, only one higher education employee



responded. Note that respondents were not required to provide feedback for any of the survey demographic questions.

**Exhibit 3-2  
GEMS Annual Evaluation Survey Results  
Respondent Position Type**

K-12 Positions	Year 2		Year 1	
	#	%	#	%
Assessment Coordinator	2	2.30%	3	2.90%
Counselor	15	17.40%	7	6.90%
CTE Director	0	0.00%	0	0.00%
Curriculum Director	0	0.00%	2	2.00%
Data Coach/Specialist	0	0.00%	4	3.90%
District Administrator	2	2.30%	12	11.80%
Instructional Coach	0	0.00%	0	0.00%
Instructional Technology Specialist	0	0.00%	3	2.90%
MIS Director/CIO	1	1.20%	1	1.00%
School Administrator	5	5.80%	13	12.80%
Superintendent	51	59.30%	37	36.30%
Teacher	1	1.20%	4	3.90%
Other	9	10.50%	16	15.70%
<b>Total</b>	<b>86</b>	<b>100.00%</b>	<b>102</b>	<b>100.00%</b>
Higher Education Positions	Year 2		Year 1	
	#	%	#	%
Academic Advisor	0	0.00%	1	12.50%
Administrator	1	100.00%	1	12.50%
Admissions Officer/Specialist	0	0.00%	0	0.00%
Professor	0	0.00%	0	0.00%
Recruiter	0	0.00%	0	0.00%
Registrar	0	0.00%	2	25.00%
Researcher	0	0.00%	2	25.00%
Other	0	0.00%	2	25.00%
<b>Total</b>	<b>1</b>	<b>100.00%</b>	<b>8</b>	<b>100.00%</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.

**Exhibit 3-3** displays survey respondents by organization for Year 1 and Year 2. In Year 1, 72 organizations were represented. In addition, 14 survey respondents indicated “other” for this survey question. In Year 2, 41 organizations were represented, and 11 survey respondents indicated “other” for this survey question.



**Exhibit 3-3  
Year 1 GEMS Annual Evaluation Survey Results  
Respondent Organizations**

<b>Organization</b>	<b>#</b>	<b>Organization</b>	<b>#</b>
Absarokee Public Schools	4	Judith Gap Public Schools	1
Alberton K-12 Schools	1	Kalispell Public Schools	1
Anaconda Public Schools	2	Kinsey Elementary	2
Arrowhead Schools	1	Laurel Public Schools	1
Bainville K-12 Schools	1	Libby K-12 Schools	2
Baker K-12 Schools	1	Liberty Elementary	1
Belt Public Schools	1	Lincoln K-12 Schools	1
Big Sandy Public Schools	1	Livingston Public Schools	1
Big Sky K-12 Schools	1	Lockwood Elementary	1
Billings - MSU	7	Malta K-12 Schools	2
Billings Public Schools	2	Melstone Public Schools	4
Bozeman Public Schools	4	Miles City Public Schools	1
Bridger K-12 Schools	1	Missoula Co Public Schools	2
Cayuse Prairie Elementary	1	Monforton Elementary	1
Centerville Public Schools	2	Moore Public Schools	1
Choteau Public Schools	1	Plains Public Schools	1
Colstrip Public Schools	2	Polson Public Schools	1
Conrad Public Schools	1	Powell County High School	1
Cut Bank Public Schools	1	Reed Point Public Schools	1
Darby K-12 Schools	1	Reichle Elementary	1
East Helena Elementary	1	Roberts K-12 Schools	1
Elysian Elementary	1	Roy K-12 Schools	1
Fairfield Public Schools	1	Ryegate K-12 Schools	1
Fromberg K-12	1	Savage Public Schools	1
Frontier Elementary	1	Shelby Public Schools	2
Geyser Public Schools	1	Shepherd Public Schools	1
Glasgow K-12 Schools	1	Sheridan Public Schools	2
Glendive Public Schools	1	Sidney Public Schools	2
Great Falls Public Schools	4	Sunburst K-12 Schools	1
Hamilton K-12 Schools	2	Target Range Elementary	1
Hardin Public Schools	3	Terry K-12 Schools	1
Havre Public Schools	1	Thompson Falls Pub Schools	4
Heart Butte K-12 Schools	1	Troy Public Schools	2
Helena Flats Elementary	1	Whitefish Public Schools	3
Helena Public Schools	1	Wibaux K-12 Schools	1
Highwood Public Schools	1	Winnett K-12 Schools	2
Hysham K-12 Schools	1	Other	14
Jefferson High School	1	<b>Total</b>	<b>127</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.



**Exhibit 3-3 (Continued)  
Year 2 GEMS Annual Evaluation Survey Results  
Respondent Organizations**

Organization	#	Organization	#
Beaverhead	1	Miles Community College	1
Big Horn	3	Missoula	3
Blaine	1	Musselshell	1
Broadwater	1	Park	4
Carbon	3	Powell	2
Carter	2	Ravalli	3
Cascade	3	Richland	1
Dawson	1	Roosevelt	2
Fallon	1	Rosebud	3
Fergus	2	Sanders	1
Flathead	4	Sheridan	2
Gallatin	3	Silver Bow	3
Glacier	1	Stillwater	1
Hill	1	Sweet Grass	1
Jefferson	2	Teton	1
Lake	4	Toole	1
Lewis & Clark	1	Valley	1
Liberty	1	Wheatland	3
Lincoln	1	Yellowstone	5
McCone	1	Other	11
Meagher	1	<b>Total</b>	<b>88</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.

**Exhibit 3-4** displays K-12 survey respondents by grade level served. As can be seen, the largest level reported by participants across both years was “All Levels,” at 63.4 percent in both Year 1 and Year 2. The second largest level reported across both years was Elementary, at 18.8 percent in Year 1 and 22.5 percent in Year 2.

**Exhibit 3-4  
GEMS Annual Evaluation Survey Results  
Respondent Grade Level (K-12 Only)**

K-12 Levels	Year 2		Year 1	
	#	%	#	%
Elementary School	16	22.50%	19	18.80%
Middle School	1	1.40%	4	4.00%
High School	7	9.90%	12	11.90%
All Levels	45	63.40%	64	63.40%
Not Applicable	2	2.80%	2	2.00%
<b>Total</b>	<b>71</b>	<b>100.00%</b>	<b>101</b>	<b>100.00%</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.



**Exhibit 3-5** displays survey results for the question related to GEMS support. As can be seen, the percentage of respondents agreeing with the statement “GEMS customer support is adequate” increased from 23.4 percent in Year 1 to 35.1 percent in Year 2.

**Exhibit 3-5  
GEMS Annual Evaluation Survey Results  
Support**

Survey Question	Year	Strongly Agree/ Agree	Disagree/ Strongly Disagree
GEMS customer support is adequate.	Year 2	35.08%	2.09%
	Year 1	23.44%	10.94%

*Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.*

**Exhibit 3-6** displays the survey results for the question “How often do you anticipate using GEMS over the next year?” for both the Year 1 and Year 2 evaluation survey. As can be seen, the majority of users across both years indicated that they use GEMS on a monthly basis, whereas the second largest group of stakeholders across both years indicated they use GEMS annually.

**Exhibit 3-6  
GEMS Annual Evaluation Survey Results  
Frequency of Use**

Frequency	Year 2		Year 1	
	#	%	#	%
Daily	2	2.90%	0	0.00%
Weekly	9	13.00%	12	13.60%
Monthly	31	44.90%	42	47.70%
Annually	12	17.40%	22	25.00%
Never	8	11.60%	6	6.80%
Other	7	10.10%	6	6.80%
<b>Total</b>	<b>69</b>	<b>100.00%</b>	<b>88</b>	<b>100.00%</b>

*Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.*

These survey results provide general characteristics about survey respondents. Additional survey results are used in subsequent sections to support evaluation outcomes related to specific components of the evaluation.

**Focus Groups**

As noted in **Chapter 2**, focus groups were conducted to gather input on the K-20 Data Project.



Year 1 focus group results were used to gather initial input on the K-20 Data Project. Highlights from the feedback received during the **Year 1** focus group included the following:

- Frequency of use among participants ranged from monthly, bi-annually, to annually. More frequently respondents indicated that they use data in GEMS annually.
- Several participants indicated that they are new to their positions as administrators, and are curious as to how they could use GEMS for making curriculum and instruction decisions.
- When asked who the most likely top three users of GEMS are, respondents shared that this is most likely K-12 counselors and administrators. One respondent indicated that GEMS is “too slow for teachers to use in the classroom,” and further elaborated that GEMS should have as an ultimate goal the ability to deliver real-time or current data to teachers in the classroom.
- Participants indicated that GEMS data have impacted their district in that it has helped confirm suspicions through data on issues they are speculative about. This same person indicated that they use GEMS to provide annual reports to their schools using the data available.
- One group of participants emphasized the importance of GEMS to them as a way to access and analyze CRT data.
- With regard to the K-20 domain, participants indicated they are most interested in knowing the number of students who go on to higher education and need math remediation, as well as characteristics about these students. Other post-education outcomes mentioned include hours worked and the affect that has on student achievement, retention rates, and gaps between rural and urban student achievement in postsecondary institutions.
- Regarding communications, participants shared that they do not receive information on GEMS via email, but would be interested in hearing more about it as news becomes available. They stated that if the district contact does get the GEMS email from OPI, they probably do not send it out to staff who may be interested.

General highlights from the feedback received during the **Year 2** focus groups included the following:

- When asked about familiarity with GEMS, approximately 38 of the 65 respondents (58.5 percent) indicated they are familiar with GEMS.
- When asked about what they dislike, one participant shared that they feared that GEMS would one day be used as an evaluation platform for assessing teacher performance.
- Communicating with parents regarding their child’s performance was noted as a potential use of GEMS by a Counselor in the focus group. This individual noted that



GEMS could be used to put into perspective their students' performance, but also added they were not currently doing this.

- Regarding GEMS communication, schools not currently using the OPI e-transcript solution noted that they would like to see a list of which schools are using it. They noted that this might encourage some of them not using it to adopt it. Also, one participant asked what the approval process is like for getting on boarded with the e-transcript solution – specifically whether or not schools generally have to get school board approval. After hearing the answer from an OPI staff member attending the session, the respondent shared that this would be a good piece of information to disseminate. Others also noted that they would like to know the approximate turnaround time to get transcripts from Parchment once they upload their data and how they can verify each college receives a transcript once submitted.
- One participant suggested marketing the e-transcript to the local co-ops, since support from them may garner support from the schools in their region.
- Also related to communication, one participant shared that there is a problem in getting information about GEMS out and therefore they don't know resources are available in GEMS. When asked if it could be caused by staff turnover, causing loss of institutional knowledge, the respondent stated that their administrative team has not turned over so that is not the problem. They shared that they simply don't hear about updates to the system, and that the most appropriate form of communication is email but the emails do not always get to the right person.
- One participant shared that they would like to see innovative ways other districts are using GEMS data.
- Several focus group participants noted that they have seen GEMS updates in the "Three Big Ideas" newsletter produced by the OPI.
- Two focus group participants noted that they thought salary data was added to GEMS, but they have been unable to find it.

In general, feedback from focus groups in Year 2 was more heavily focused on the practical use and analysis of data, versus on the technical use of GEMS which seemed to be the focus of participants in Year 1. This is a positive outcome, as it shows that Montana educators are less concerned about how to use the system, and more concerned with exploring the possibilities of data analysis through GEMS. Additional Year 2 focus group findings are used in subsequent sections of this chapter to support evaluation outcomes.

Together, interview feedback, survey results, and focus group feedback have provided valuable feedback for the K-20 Data Project team for continually improving the GEMS experience.



**3.2 TRAINING EVALUATION**

The evaluation of this component addresses the effectiveness of training for the entire K-20 Data Project. In Year 1, training conducted was informational in nature. That is, as the project was still in the development phase, there was a lack of systems and data to train users on so the information provided to users was aimed at what the finished system would provide, versus how the system is used. Evergreen observed OPI presentations, reviewed presentation materials, and compiled a list of completed and planned presentations related to GEMS and the K-20 Data Project. **Exhibit 3-7** displays training and presentations conducted by the OPI in related to the K-20 Data Project.

**Exhibit 3-7  
OPI Trainings and Presentations**

Title	Date	Topic
Title I Conference	23-Apr-14	K-20 Presentation
Title I Conference	24-Apr-14	General GEMS Presentation
Montana College Access Network Conference	28-Apr-14	K-20 Presentation
Montana Association of School Business Officials	19-June-14	General GEMS Presentation
National SLDS Meeting	12-May-14	General GEMS Presentation
Montana Higher Ed Consortium	15-May-14	K-20 Presentation
21 <sup>st</sup> Century Conference	9-Aug-14	K-20 Presentation
Montana Post-Secondary Educational Opportunities Council	1-Aug-14	K-20 Presentation
IBM Training	Spring 2015	Data Transport and Transcript Training

Source: Created by Evergreen Solutions, 2015.

In December 2014, during Year 2 of the evaluation, Evergreen worked with the OPI to develop a training evaluation tool to assess user perceptions on training to be conducted in spring 2015 on the data transport system; the first piece of the e-transcript system to be completed under the K-20 Data Project. All of the pilot trainings conducted were in-person trainings. The evaluation tool was provided to each pilot program school following their training session by OPI staff. In total, five schools completed and returned the training evaluation tool. All attendees were from K-12 organizations, including three Technology Specialists and two Secretaries.

**Exhibit 3-8** displays the aggregated results of the training evaluations. As can be seen, 100.0 percent of participants agreed with the statements provided on the evaluation instrument. In addition to these quantitative results, qualitative feedback provided by participants provided that the training met the expectations of all attendees.



**Exhibit 3-8  
OPI Data Transport Pilot Training  
Evaluation Results**

Statement	Strongly Disagree/Disagree	Strongly Agree/Agree
1. Presenters demonstrated thorough knowledge of the topic.	0.0%	100.0%
2. This training provided me with valuable information.	0.0%	100.0%
3. I will be able to apply what I learned.	0.0%	100.0%
4. The presenter(s) solicited questions from the audience.	0.0%	100.0%
5. Questions were well answered.	0.0%	100.0%
6. I was satisfied with the quality of the training.	0.0%	100.0%
7. Real-life situations were used to explain concepts.	0.0%	100.0%
8. I know where to go to find additional information/support.	0.0%	100.0%
9. My understanding of the system's <b>data flow</b> is sufficient.	0.0%	100.0%
10. My understanding of the system's <b>data security</b> is sufficient.	0.0%	100.0%
11. My understanding of the system's <b>functionality</b> is sufficient.	0.0%	100.0%
12. The teaching techniques used helped my learning.	0.0%	100.0%
13. The materials used helped or enhanced my learning.	0.0%	100.0%
14. I was given an opportunity to practice using the new ideas.	0.0%	100.0%
15. The time allotted for the topics covered was appropriate.	0.0%	100.0%
16. The training schedule met my needs.	0.0%	100.0%

Source: Created by Evergreen Solutions, 2016.

Training related to GEMS was also assessed using the survey instrument developed by Evergreen. Specifically, the survey assessed which training resources are accessed by users on the GEMS website and satisfaction with training materials. **Exhibit 3-9** displays the types of trainings accessed by respondents.

**Exhibit 3-9  
GEMS Annual Evaluation Survey Results  
Accessing Online GEMS Training Resources**

Training Resources	Year 2		Year 1	
	#	%	#	%
I referenced data definitions and explanations	15	19.23%	11	10.70%
I completed some or all of the online training	6	7.69%	7	6.80%
I accessed the end user manual	6	7.69%	7	6.80%
I reviewed the FAQs	13	16.67%	20	19.40%
I used the Knowledgebase to search for information	3	3.85%	8	7.80%
I have accessed regional training documents	6	7.69%	8	7.80%
I have accessed use case examples	2	2.56%	3	2.90%
I have never accessed GEMS training resources	27	34.62%	39	37.90%
<b>Total</b>	<b>78</b>	<b>100.00%</b>	<b>103</b>	<b>100.00%</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.



As can be seen, in Year 1, 37.9 percent of respondents indicated that they have never accessed online GEMS training resources. In Year 2, this percentage decreased slightly to 34.6 percent. Of those respondents that have accessed online GEMS trainings, the largest percentage of respondents across both years indicated that they have reviewed FAQs documentation and referenced data definitions and explanations. According to the survey results, the case use examples are used most infrequently by respondents.

**Exhibit 3-10** displays the second survey statement related to GEMS training and training resources. As can be seen, in Year 1 28.8 percent of respondents indicated that the GEMS training resources they have been exposed to provided them with the skills and knowledge they were seeking; compared to 22.8 percent of respondents in Year 2.

**Exhibit 3-10**  
**GEMS Annual Evaluation Survey Results**  
**Satisfaction with GEMS Training**

Survey Question	Year	Strongly Agree/ Agree	Disagree/ Strongly Disagree
The GEMS training resources I have been exposed to provided me with the skills and knowledge I was seeking.	Year 2	22.80%	15.79%
	Year 1	28.80%	15.10%

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.

The final survey statement regarding training related to what actions could be taken to increase respondent’s use of GEMS. **Exhibit 3-11** displays the results for this survey statement. As can be seen, in Year 2, respondents indicated that receiving more information on how to use GEMS and improvements to training have the most potential to increase their use of it. In Year 1, the top two reasons were the same, with the exception being that respondents also indicated that data report improvements were needed to increase their usage.

**Exhibit 3-11**  
**GEMS Annual Evaluation Survey Results**  
**Increasing Usage**

I will use GEMS more often if:	Year 2		Year 1	
	#	%	#	%
Training is improved	25	60.98%	28	100.00%
More information is made available on how to use GEMS	41	100.00%	25	89.29%
Data dashboards are improved	14	34.15%	21	75.00%
Data reports are improved	17	41.46%	25	89.29%
Additional data are made available through GEMS	18	43.90%	23	82.14%
Other	9	21.95%	12	42.86%
None of the above	-	-	17	60.71%

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.



Evergreen also sought feedback on training from stakeholders through focus groups conducted in Year 2 of the evaluation. Highlights from the feedback received during the **Year 2** focus groups included the following:

- When asked who the top three users of GEMS are in their school district, respondents shared the position titles of Technology Director, Counselor, **Principal**, **Superintendent**, Nurse, **District Clerk**, and Curriculum Program Director (bolded are those mentioned in both Year 2 focus groups).
- Participants shared that in-person training providing an annual refresher on GEMS resources would most likely increase their use of it. Another added that there should be a designated point of contact at each school that is a trained GEMS user, and that this person should be trained to train others on its use.
- One participant shared that they would like to see innovative ways other districts are using GEMS data as part of the training process.
- Participants stated that on-site workshops or webinars are the most preferred method for receiving training.

Taken together, training evaluations, survey results, and focus group feedback yielded generally positive results on the training provided by the OPI. Data also provided insights as to how training can be improved moving forward and the most appropriate method for training users.

### **3.3 EVALUATION OF FUNCTIONALITY/EASE OF USE**

As noted in **Chapter 2**, activities outlined in the work plan for the evaluation of this component of the K-20 Data Project include assessing the ease of use of the system for end-users. This included designing and implementing evaluation tools for key elements of the system including, but not limited to, dashboards, navigation, reports, and the user interface.

Ease of use and functionality was assessed using focus groups and surveys. Included in this section are outcomes of the evaluation related to these characteristics of GEMS.

**Exhibit 3-12** displays survey results related to the different ways in which respondents use GEMS. As can be seen, a majority of respondents in Year 1 (100.0 percent) and Year 2 (62.7 percent) indicated that they use GEMS to view dashboards and reports. Further, there was a significant decline in the percentage of respondents indicating they access multiple types of data through GEMS between the two years, from 70.6 percent in Year 1 to 41.2 percent in Year 2. There was also a significant decline in the percentage of respondents indicating they use GEMS to compare their district to other districts, from 82.4 percent in Year 1 to 52.9 percent in Year 2.



**Exhibit 3-12  
GEMS Annual Evaluation Survey Results  
How Stakeholders Use GEMS**

Data Uses	Year 2		Year 1	
	#	%	#	%
I view dashboards and reports available through GEMS.	32	62.70%	51	100.00%
I access one type of data through GEMS.	7	13.70%	11	21.57%
I access multiple types of data through GEMS.	21	41.20%	36	70.59%
I download data from GEMS for analysis using other software.	5	9.80%	14	27.45%
I download and combine two or more data sets from GEMS for analysis using other software.	5	9.80%	14	27.45%
I use GEMS data to make decisions regarding curriculum and instruction.	12	23.50%	18	35.29%
I use GEMS data to make decisions regarding policy.	4	7.80%	10	19.61%
I use GEMS data to compare our district to other school districts.	27	52.90%	42	82.35%
I train others on GEMS.	2	3.90%	5	9.80%
I use GEMS data to create reports for leadership.	10	19.60%	18	35.29%
None of the Above	-	-	15	29.41%

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.

**Exhibit 3-13** displays survey results related which of the GEMS dashboards respondents use most regularly. Like the previous question, respondents could select one or more response options. Based on the results, the GEMS dashboards reportedly used most often across both years include:

- Career and Technical Education Perkins Dashboard;
- National Assessment of Educational Progress (NAEP);
- Student Achievement Dashboard;
- Child Nutrition School Program Eligibility and Participation;
- School Budget Dashboard;
- Per Pupil Revenues Dashboard;
- Per Pupil Expenditures Dashboard;
- Student Characteristics Dashboard;
- Graduation Dashboard; and
- Dropout Dashboard.

Whereas the GEMS dashboards reportedly used less often, in relation to others, include the:

- Adult and Basic Education Educational Goals Dashboard;
- ACT Career and Educational Aspirations;
- Child Nutrition Summer Program;
- Indian Education CRT Dashboard; and
- Indian Education NAEP Dashboard.



**Exhibit 3-13  
GEMS Annual Evaluation Survey Results  
GEMS Dashboards**

<b>Dashboard</b>	<b>Year 2</b>		<b>Year 1</b>	
<b>Program and Course Offerings Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Career and Technical Education Concentrator Dashboard	12	33.33%	13	33.30%
Career and Technical Education Perkins Dashboard	14	38.89%	9	23.10%
Adult and Basic Education Students Served Dashboard	1	2.78%	9	23.10%
Adult and Basic Education Educational Gains Dashboard	5	13.89%	6	15.40%
Adult and Basic Education Educational Goals Dashboard	4	11.11%	2	5.10%
<b>Total</b>	<b>36</b>	<b>100.00%</b>	<b>39</b>	<b>100.00%</b>
<b>Student Achievement Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
National Assessment of Educational Progress (NAEP)	20	23.81%	18	17.80%
Student Achievement Dashboard	29	34.52%	43	42.60%
ACT Academic Achievement	14	16.67%	19	18.80%
ACT Career and Educational Aspirations	7	8.33%	7	6.90%
ACT College Readiness	14	16.67%	14	13.90%
<b>Total</b>	<b>84</b>	<b>100.00%</b>	<b>101</b>	<b>100.00%</b>
<b>Student Services Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Student Transportation Dashboard	8	27.59%	8	23.50%
Child Nutrition School Program Eligibility and Participation	9	31.03%	14	41.20%
Child Nutrition School Program Funding and Reimbursement	9	31.03%	7	20.60%
Child Nutrition Summer Program	3	10.34%	5	14.70%
<b>Total</b>	<b>29</b>	<b>100.00%</b>	<b>34</b>	<b>100.00%</b>
<b>School Finance Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
School Budget Dashboard	28	46.67%	28	38.90%
Per Pupil Revenues Dashboard	15	25.00%	21	29.20%
Per Pupil Expenditures Dashboard	17	28.33%	23	31.90%
<b>Total</b>	<b>60</b>	<b>100.00%</b>	<b>72</b>	<b>100.00%</b>
<b>Student Characteristics Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Student Characteristics Dashboard	21	21.43%	19	16.10%
Graduation Dashboard	21	21.43%	23	19.50%
Dropout Dashboard	20	20.41%	24	20.30%
Special Education Child Count Dashboard	13	13.27%	14	11.90%
Indian Education Enrollment Dashboard	8	8.16%	11	9.30%
Indian Education Graduates and Dropouts Dashboard	7	7.14%	9	7.60%
Indian Education CRT Dashboard	5	5.10%	11	9.30%
Indian Education NAEP Dashboard	3	3.06%	7	5.90%
<b>Total</b>	<b>98</b>	<b>100.00%</b>	<b>118</b>	<b>100.00%</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.



**Exhibit 3-14** displays survey results related to which of the GEMS parameter reports respondents use regularly. Like the previous question, respondents could select one or more response options. Based on the results, the GEMS parameter based reports reportedly used most often across both years include the:

- Classes in Core Academic Subjects Taught by Highly Qualified Teachers;
- Courses Offered by School; and
- Year to Year Budget Comparison.

Whereas the GEMS parameter based reports reportedly used least often, in relation to others, include the:

- Count of School Districts by Equity Status;
- Per Pupil Revenue Trends by Enrollment Category; and
- Revenue by Enrollment Category.

Benchmarking stakeholder perceptions on ease of use of GEMS is another core component of this evaluation. As such, a survey question was developed to assess this measure. **Exhibit 3-15** displays survey feedback on GEMS ease of navigation. In Year 1, 38.2 percent of stakeholders indicated that the GEMS website is easy to navigation. In comparison, in Year 2, 32.2 percent of respondents indicated that the GEMS website is easy to navigation.

Year 2 focus group feedback also provided information on users perceptions regarding ease of use and functionality. Specifically, the following comments were made by stakeholders during the Year 2 focus groups:

- Overall, users like the look and feel of the system, noting that the layout is clean and intuitive.
- On the subject of navigability, one user shared that once logged in, the OPI should consider graying out any areas of GEMS their user permission level does not provide them access to, stating that they often click a link and are then given the access denied message.
- One participant shared that a site-map showing all the different areas of GEMS should be available, with a note on who in a school or district is the “typical” user or beneficiary of each particular area.
- Three respondents shared that GEMS masks data for schools with small student populations, and therefore GEMS is not useful to them for reviewing student performance.



**Exhibit 3-14  
GEMS Annual Evaluation Survey Results  
GEMS Parameter Based Reports**

Parameter Based Report	Year 2		Year 1	
	#	%	#	%
<b>General School and District Info Parameter Based Reports</b>				
Classes in Core Academic Subjects Taught by Highly Qualified Teachers	12	100.00%	15	100.00%
<b>Program and Course Offerings Parameter Based Reports</b>				
Courses Offered by School	13	72.22%	21	77.80%
Traffic Education Summary Report	5	27.78%	6	22.20%
<b>Total</b>	<b>18</b>	<b>100.00%</b>	<b>27</b>	<b>100.00%</b>
<b>Student Achievement Parameter Based Reports</b>				
Adequate Yearly Progress (AYP) Graduation Rate Trends	19	19.00%	30	20.30%
Adequate Yearly Progress (AYP) Improvement Status	18	18.00%	28	18.90%
Adequate Yearly Progress (AYP) Trends	23	23.00%	28	18.90%
General Educational Development (GED) Results by Age	2	2.00%	8	5.40%
MontCAS (CRT) Proficiency Comparisons by Subgroup	16	16.00%	26	17.60%
MontCAS (CRT) Proficiency Trends	22	22.00%	28	18.90%
<b>Total</b>	<b>100</b>	<b>100.00%</b>	<b>148</b>	<b>100.00%</b>
<b>School Finance Parameter Based Reports</b>				
Year to Year Budget Comparison	20	57.14%	21	51.20%
General Fund Recap	12	34.29%	16	39.00%
Count of School Districts by Equity Status	3	8.57%	4	9.80%
<b>Total</b>	<b>35</b>	<b>100.00%</b>	<b>41</b>	<b>100.00%</b>
<b>School Districts by Equity Status</b>				
Fund Balances Limitation	8	6.06%	8	6.20%
Flexibility Fund Balance Limitation	6	4.55%	5	3.80%
Reported Revenues by School District	7	5.30%	8	6.20%
Reported Expenditures by School District	10	7.58%	8	6.20%
Ending Fund Balances	13	9.85%	9	6.90%
Per Pupil Revenue and Expenditure Definitions	8	6.06%	8	6.20%
Per Pupil Revenue Trends by Enrollment Category	3	2.27%	7	5.40%
Per Pupil Revenue Trends by Legal Entity	6	4.55%	8	6.20%
Per Pupil Expenditure Trends by Enrollment Category	4	3.03%	7	5.40%
Per Pupil Expenditure Trends by Legal Entity	7	5.30%	6	4.60%
Revenue Trends Recap	7	5.30%	3	2.30%
Expenditure Trends Recap	6	4.55%	4	3.10%
Revenue by Enrollment Category	4	3.03%	4	3.10%
Expenditures by Enrollment Category	5	3.79%	7	5.40%
Budget Limit (ANB) Trends by Enrollment Category	9	6.82%	8	6.20%
Annual County Equalization	5	3.79%	5	3.80%
County Transportation and Retirement Mills Levied	6	4.55%	8	6.20%
State & Federal Grant Programs Summary Report	7	5.30%	8	6.20%
State & Federal Grant Funding Comparison by School System	6	4.55%	4	3.10%
Detailed State & Federal Grant Funding Report	5	3.79%	5	3.80%
<b>Total</b>	<b>132</b>	<b>100.00%</b>	<b>130</b>	<b>100.00%</b>
<b>Student Characteristics Parameter Based Reports</b>				
Enrollment Map	22	23.16%	16	17.40%
Montana Public School Enrollment by Grade – Elementary	18	18.95%	16	17.40%
Montana Public School Enrollment by Grade - High School	12	12.63%	17	18.50%
Four-Year Adjusted Cohort Graduation Rate Report	11	11.58%	13	14.10%
Graduation Matters Montana Snapshot of Dropouts and Completions	14	14.74%	16	17.40%
Special Education District Performance Report	10	10.53%	8	8.70%
Special Education Trends Report	8	8.42%	6	6.50%
<b>Total</b>	<b>95</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.



**Exhibit 3-15**  
**GEMS Annual Evaluation Survey Results**  
**GEMS Ease of Use**

Survey Question	Year	Strongly Agree/ Agree	Disagree/ Strongly Disagree
The GEMS website is easy to navigate.	Year 2	32.15%	32.14%
	Year 1	38.20%	27.90%

*Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.*

**3.4 EVALUATION OF THE UTILITY OF SYSTEM DATA AND REPORTS**

As noted in **Chapter 2**, activities outlined in the work plan for the evaluation of this component of the K-20 Data Project included developing a tool to measure whether end-users found the data useful; need additional data in the system; and can utilize and apply the data and reports effectively in regards to their information needs and goals. Both surveys and focus groups provided feedback on these questions.

One section of the evaluation survey was devoted strictly to measuring the extent to which GEMS data meets the information needs of stakeholders. **Exhibit 3-16** displays survey data for the survey statements in this section. As can be seen, the percentage of survey respondents agreeing with the statement “Data available through GEMS requires too much additional analysis to be useful” increased from 29.9 percent in Year 1 to 45.8 percent in Year 2. Despite this, the percentage of respondents agreeing with the statement “Resources available through GEMS have positively impacted my school, district, or postsecondary institution” increased from 26.1 percent in Year 1 to 30.0 percent in Year 2.

Based on the survey results, regarding whether end-users find GEMS data useful, the data show that a large percentage of users feel the data require too much additional analysis to be useful. Ideas for improving the usefulness of the data are shared in the focus group results in this section.

**Exhibit 3-16**  
**GEMS Annual Evaluation Survey Results**  
**Meeting the Needs of Stakeholders**

Survey Question	Year	Strongly Agree/ Agree	Disagree/ Strongly Disagree
Data available through GEMS requires too much additional analysis to be useful.	Year 2	45.83%	22.92%
	Year 1	29.90%	28.40%
Resources available through GEMS have positively impacted my school, district, or postsecondary institution.	Year 2	30.00%	18.00%
	Year 1	26.10%	21.60%

*Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.*



**Exhibit 3-17** displays survey results related to the importance of each GEMS resource to users. Specifically, users were asked to rank eight GEMS resources in order of importance. In Year 2, the resources receiving the highest percentage of responses within the top three included data analysis dashboards, district profiles, and classroom level data, whereas in Year 1 it was data analysis dashboards, district side-by-side comparisons, and classroom level data.

**Exhibit 3-17**  
**GEMS Annual Evaluation Survey Results**  
**Importance of GEMS Resources**

Year 2								
Rank	Quick Facts Documents	Parameter Based Reports	Data Analysis Dashboards	School Side-by-Side Comparisons	District Side-by-Side Comparisons	School Profiles	District Profiles	Classroom level data
1	20.59%	8.11%	27.03%	8.33%	10.00%	8.57%	15.00%	6.98%
2	11.76%	16.22%	21.62%	2.78%	12.50%	8.57%	15.00%	13.95%
3	2.94%	13.51%	10.81%	13.89%	12.50%	14.29%	12.50%	20.93%
4	11.76%	16.22%	8.11%	16.67%	15.00%	20.00%	10.00%	11.63%
5	5.88%	5.41%	10.81%	19.44%	15.00%	17.14%	17.50%	6.98%
6	14.71%	10.81%	10.81%	13.89%	10.00%	14.29%	5.00%	16.28%
7	14.71%	5.41%	10.81%	19.44%	7.50%	17.14%	10.00%	11.63%
8	17.65%	24.32%	0.00%	5.56%	17.50%	0.00%	15.00%	11.63%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
Year 1								
Rank	Quick Facts Documents	Parameter Based Reports	Data Analysis Dashboards	School Side-by-Side Comparisons	District Side-by-Side Comparisons	School Profiles	District Profiles	Classroom level data
1	14.30%	8.20%	24.00%	10.20%	8.20%	14.30%	6.30%	18.80%
2	6.10%	10.20%	16.00%	14.30%	24.50%	8.20%	16.70%	8.30%
3	8.20%	10.20%	12.00%	14.30%	16.30%	14.30%	14.60%	14.60%
4	16.30%	14.30%	8.00%	18.40%	4.10%	18.40%	16.70%	4.20%
5	10.20%	12.20%	12.00%	10.20%	12.20%	14.30%	18.80%	6.30%
6	10.20%	12.20%	18.00%	8.20%	8.20%	12.20%	12.50%	14.60%
7	14.30%	20.40%	8.00%	14.30%	14.30%	18.40%	4.20%	2.10%
8	20.40%	12.20%	2.00%	10.20%	12.20%	0.00%	10.40%	31.30%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.

In addition to survey results collected to support evaluation outcomes, focus group data were collected related to utility of system data and reports. Highlights from the feedback received during the **Year 2** focus groups, specifically related to utility of GEMS, included the following:

- When asked what they like about GEMS, participants said that they recognize the potential of GEMS, including what it currently has to offer and what it could one day provide. One respondent shared that they like the ability to drill down on the data in



GEMS, and triangulating data to gain insight. Another shared that they compare GEMS data to their preconceived notions and perceptions about performance in their school, adding that they like to be able to make year-to-year comparisons of growth. Another added that GEMS provides a “consolidated area of data.”

- When asked about what they dislike, one participant shared that they feared that GEMS would one day be used as an evaluation platform for assessing teacher performance. Three respondents shared that GEMS masks data for schools with small student populations, and therefore GEMS is not useful to them for reviewing student performance.
- Two respondents shared that they use GEMS once per year, around the time assessment results are published. One added that they look at other school districts and compare performance to their own, using GEMS to identify well performing schools in order to contact them to see if they can adopt any of their practices. Others specifically noted accessing free and reduced lunch data from GEMS but did not specific frequency of access; one noted that they use GEMS to track where seniors are going after graduation and then they contact the students by phone to find out what additional preparation the students wish they had before graduating high school in preparation for a postsecondary degree; and one participant stated they use it to “look up FAFSA information.”
- Regarding improvements to GEMS, several focus group participants supported adding information to GEMS on the math programs or other curriculum schools are using to determine if there is a strong correlation between student performance and the use of any particular program or curriculum tool. Even if causation is not established, just seeing what top performing schools are using would be helpful. A participant, upon hearing this comment, noted that they do use GEMS data to assess the success of different programs across their schools.
- One participant noted that they would like GEMS to provide analysis on the relationship between teacher or administrator turnover and student performance. This was just one example of statistical analysis focus group participants expressed interest in.
- One focus group participant noted that they need the ability to extract immediate and relevant meaning from GEMS data without additional analysis. Further elaborating that even with the data provided in GEMS, there are near limitless types of analysis that can be performed, and they just don’t have the time to run all the analysis or identify all analyses that would be beneficial. They concluded by sharing that they would like GEMS to accomplish this for them, so that they can “literally go into GEMS five minutes before a PLC meeting and pull a relevant analysis for the week.”
- One counselor noted that they would like GEMS to provide an indication of where a student might be most successful in their post-secondary career; for example, would they be better off to attend a community college first or go straight to a University.



In addition to assessing utility of the GEMS platform as a whole, survey items included in the Year 2 evaluation survey drilled down on certain areas of GEMS; specifically, the FAFSA completion report and the Early Warning System.

**Exhibit 3-18** displays survey results related to the FAFSA completion report. As can be seen, 42.9 percent of respondents indicated that they regularly use the FAFSA completion report. Further, 57.1 percent of respondents agreed that the FAFSA Completion Report provides adequate detail on what actions need to be taken to complete a student’s FAFSA.

**Exhibit 3-18**  
**GEMS Annual Evaluation Survey Results**  
**FAFSA Completion Report – Year 2**

Survey Question	Yes	No
Within the GEMS Reports and Data menu, do you regularly use the FAFSA Completion Report?	42.86%	57.14%
Survey Question	Strongly Agree/ Agree	Disagree/ Strongly Disagree
The FAFSA Completion Report provides adequate detail on what actions need to be taken to complete a student’s FAFSA.	57.10%	0.00%

*Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.*

Respondents were further asked on the Year 2 survey “What improvements could be made to the FAFSA completion report?,” and given the opportunity to provide free-response feedback. Respondents provided the following feedback for this survey question:

- *I didn't even know this was an option in the system. I have all the college-bound seniors complete the FAFSA but didn't know there was a way to track their completion.*
- *I have not used GEMS before- this is my 1st year.*
- *I have not accessed the FAFSA completion report. I will need to do that in the future.*
- *At this time, the information provided is adequate for our needs.*
- *In previous years, I have not been able to have this access.*
- *Giving School Counselors logins to access the info.*
- *I have trouble with the passwords at times, I will need to try to use this more often when I have time to deal with the password issue.*



Survey participants were asked similar questions on the Year 2 survey regarding the GEMS Early Warning System. **Exhibit 3-19** displays the survey results related to the Early Warning System. As can be seen, 12.5 percent of respondents indicated that they have used the Early Warning System in GEMS, and of those, 75.0 percent agreed that the Early Warning System reports provide adequate information in identifying students at risk of dropping out.

**Exhibit 3-19**  
**GEMS Annual Evaluation Survey Results**  
**Early Warning System – Year 2**

Survey Question	Yes	No
Have you used the Early Warning System feature in GEMS?	12.50%	87.50%
Survey Question	Strongly Agree/ Agree	Disagree/ Strongly Disagree
The Early Warning System reports provide adequate information to help me identify students at risk of dropping out.	75.00%	0.00%

*Source: Evergreen Solutions GEMS Annual Evaluation Surveys, 2016.*

Respondents were further asked on the Year 2 survey “What improvements could be made to the Early Warning System?”, and given the opportunity to provide free-response feedback. Respondents provided the following feedback for this survey question:

- *Teacher Input as part of the system. Teachers know the students and their input can be valuable.*

### **3.5 EVALUATION SUMMARY**

The evaluation results presented in this chapter provide a comprehensive overview of the evaluation efforts completed in for the K20 Data Project. The feedback collected is meant to act as a springboard for future improvements and enhancements. Moving forward, the OPI also has access to the evaluation tools to conduct additional research and assessment.

A large project such as this is, many times, met with great challenges to completion. Adding to this is the presence of an outside evaluator and contractual relationships and the project becomes that much more complex. Evergreen would like to applaud the efforts of Susan Murray – OPI Project Manager; Anne Bauer – OPI Business Analyst; Brett Carter – OPI Data Research Analyst; Jamey Ereth – OPI Senior Project Manager; Jim Gietzen – OPI Information Technology Division Administrator; Sue Mohr – OPI Measurement & Assessment Division Administrator; Denise Bond - OPI Business Analyst; and Carmen Pennington – OPI Business Analyst. Their effort and dedication to advance the K-20 Data Project forward was paramount in achieving project success.



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*Appendix*  
*GEMS Evaluation Survey Results*



# APPENDIX

## Montana Office of Public Instruction

### GEMS Evaluation Survey

N = 88

Completion % = 27.0%

#### A. DEMOGRAPHICS SECTION

1. Please select your school district, education institution, or organization:			
Organization	#	Organization	#
Beaverhead	1	Miles Community College	1
Big Horn	3	Missoula	3
Blaine	1	Musselshell	1
Broadwater	1	Park	4
Carbon	3	Powell	2
Carter	2	Ravalli	3
Cascade	3	Richland	1
Dawson	1	Roosevelt	2
Fallon	1	Rosebud	3
Fergus	2	Sanders	1
Flathead	4	Sheridan	2
Gallatin	3	Silver Bow	3
Glacier	1	Stillwater	1
Hill	1	Sweet Grass	1
Jefferson	2	Teton	1
Lake	4	Toole	1
Lewis & Clark	1	Valley	1
Liberty	1	Wheatland	3
Lincoln	1	Yellowstone	5
McCone	1	Other	11
Meagher	1	<b>2015-16 Total</b>	<b>88</b>



<b>2.a Please select your current position category:</b>				
<b>K-12 Positions</b>	<b>2015-16</b>		<b>2014-15</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Assessment Coordinator	2	2.30%	3	2.90%
Counselor	15	17.40%	7	6.90%
CTE Director	0	0.00%	0	0.00%
Curriculum Director	0	0.00%	2	2.00%
Data Coach/Specialist	0	0.00%	4	3.90%
District Administrator	2	2.30%	12	11.80%
Instructional Coach	0	0.00%	0	0.00%
Instructional Technology Specialist	0	0.00%	3	2.90%
MIS Director/CIO	1	1.20%	1	1.00%
School Administrator	5	5.80%	13	12.80%
Superintendent	51	59.30%	37	36.30%
Teacher	1	1.20%	4	3.90%
Other	9	10.50%	16	15.70%
<b>Total</b>	<b>86</b>	<b>100.00%</b>	<b>102</b>	<b>100.00%</b>

<b>2b. Please select your current position category:</b>				
<b>Higher Education Positions</b>	<b>2015-16</b>		<b>2014-15</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Academic Advisor	0	0.00%	1	12.50%
Administrator	1	100.00%	1	12.50%
Admissions Officer/Specialist	0	0.00%	0	0.00%
Professor	0	0.00%	0	0.00%
Recruiter	0	0.00%	0	0.00%
Registrar	0	0.00%	2	25.00%
Researcher	0	0.00%	2	25.00%
Other	0	0.00%	2	25.00%
<b>Total</b>	<b>1</b>	<b>100.00%</b>	<b>8</b>	<b>100.00%</b>

<b>3. Please select the level at which you work: (k-12 only)</b>				
<b>K-12 Levels</b>	<b>2015-16</b>		<b>2014-15</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Elementary School	16	22.50%	19	18.80%
Middle School	1	1.40%	4	4.00%
High School	7	9.90%	12	11.90%
All Levels	45	63.40%	64	63.40%
Not Applicable	2	2.80%	2	2.00%
<b>Total</b>	<b>71</b>	<b>100.00%</b>	<b>101</b>	<b>100.00%</b>

## B. FAFSA

### 4. Within the GEMS Reports and Data menu, do you regularly use the FAFSA Completion Report?

Reasons	2015-16		2014-15	
	#	%	#	%
Yes	6	42.86%	-	-
No	8	57.14%	-	-
<b>Total</b>	<b>14</b>	<b>100.00%</b>	-	-

Survey Question	Year	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	NA
5. The FAFSA Completion Report provides adequate detail on what actions need to be taken to complete a student's FAFSA.	2015-16 n = 14	0.0%	57.1%	28.6%	0.0%	0.0%	14.3%
	2014-15	-	-	-	-	-	-

### 6. What improvements could be made to the FAFSA completion report?

- I didn't even know this was an option in the system. I have all the college-bound seniors complete the FAFSA but didn't know there was a way to track their completion.
- I have not used GEMS before- this is my 1st year
- I have not accessed the FAFSA completion report. I will need to do that in the future.
- At this time, the information provided is adequate for our needs.
- In previous years, I have not been able to have this access
- Giving School Counselors logins to access the info.
- I have trouble with the passwords at times, I will need to try to use this more often when I have time to deal with the password issue

## C. FREQUENCY OF USE

### 7. How often do you anticipate using GEMS over the next year? (select one)

Frequency	2015-16		2014-15	
	#	%	#	%
Daily	2	2.90%	0	0.00%
Weekly	9	13.00%	12	13.60%
Monthly	31	44.90%	42	47.70%
Annually	12	17.40%	22	25.00%
Never	8	11.60%	6	6.80%
Other	7	10.10%	6	6.80%
<b>Total</b>	<b>69</b>	<b>100.00%</b>	<b>88</b>	<b>100.00%</b>



<b>8. Which best describes how you use GEMS? (Select all that apply)</b>				
<b>Data Uses</b>	<b>2015-16 N=51</b>		<b>2014-15 N=51</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
I view dashboards and reports available through GEMS.	32	62.70%	51	100.00%
I access one type of data through GEMS.	7	13.70%	11	21.57%
I access multiple types of data through GEMS.	21	41.20%	36	70.59%
I download data from GEMS for analysis using other software.	5	9.80%	14	27.45%
I download and combine two or more data sets from GEMS for analysis using other software.	5	9.80%	14	27.45%
I use GEMS data to make decisions regarding curriculum and instruction.	12	23.50%	18	35.29%
I use GEMS data to make decisions regarding policy.	4	7.80%	10	19.61%
I use GEMS data to compare our district to other school districts.	27	52.90%	42	82.35%
I train others on GEMS.	2	3.90%	5	9.80%
I use GEMS data to create reports for leadership.	10	19.60%	18	35.29%
None of the Above	-	-	15	29.41%

<b>9. I will use GEMS more often if: (select all that apply)</b>				
<b>Reasons</b>	<b>2015-16 N=41</b>		<b>2014-15 N=28</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Training is improved	25	60.98%	28	100.00%
More information is made available on how to use GEMS	41	100.00%	25	89.29%
Data dashboards are improved	14	34.15%	21	75.00%
Data reports are improved	17	41.46%	25	89.29%
Additional data are made available through GEMS	18	43.90%	23	82.14%
Other	9	21.95%	12	42.86%
None of the above	-	-	17	60.71%



<b>10. Which of the following GEMS dashboards do you regularly use: (Select all that apply)</b>				
<b>Program and Course Offerings Data Analysis Dashboards</b>	<b>2015-16</b>		<b>2014-15</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Career and Technical Education Concentrator Dashboard	12	33.33%	13	33.30%
Career and Technical Education Perkins Dashboard	14	38.89%	9	23.10%
Adult and Basic Education Students Served Dashboard	1	2.78%	9	23.10%
Adult and Basic Education Educational Gains Dashboard	5	13.89%	6	15.40%
Adult and Basic Education Educational Goals Dashboard	4	11.11%	2	5.10%
<b>Total</b>	<b>36</b>	<b>100.00%</b>	<b>39</b>	<b>100.00%</b>
<b>Student Achievement Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
National Assessment of Educational Progress (NAEP)	20	23.81%	18	17.80%
Student Achievement Dashboard	29	34.52%	43	42.60%
ACT Academic Achievement	14	16.67%	19	18.80%
ACT Career and Educational Aspirations	7	8.33%	7	6.90%
ACT College Readiness	14	16.67%	14	13.90%
<b>Total</b>	<b>84</b>	<b>100.00%</b>	<b>101</b>	<b>100.00%</b>
<b>Student Services Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Student Transportation Dashboard	8	27.59%	8	23.50%
Child Nutrition School Program Eligibility and Participation	9	31.03%	14	41.20%
Child Nutrition School Program Funding and Reimbursement	9	31.03%	7	20.60%
Child Nutrition Summer Program	3	10.34%	5	14.70%
<b>Total</b>	<b>29</b>	<b>100.00%</b>	<b>34</b>	<b>100.00%</b>
<b>School Finance Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
School Budget Dashboard	28	46.67%	28	38.90%
Per Pupil Revenues Dashboard	15	25.00%	21	29.20%
Per Pupil Expenditures Dashboard	17	28.33%	23	31.90%
<b>Total</b>	<b>60</b>	<b>100.00%</b>	<b>72</b>	<b>100.00%</b>
<b>Student Characteristics Data Analysis Dashboards</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Student Characteristics Dashboard	21	21.43%	19	16.10%
Graduation Dashboard	21	21.43%	23	19.50%
Dropout Dashboard	20	20.41%	24	20.30%
Special Education Child Count Dashboard	13	13.27%	14	11.90%
Indian Education Enrollment Dashboard	8	8.16%	11	9.30%
Indian Education Graduates and Dropouts Dashboard	7	7.14%	9	7.60%
Indian Education CRT Dashboard	5	5.10%	11	9.30%
Indian Education NAEP Dashboard	3	3.06%	7	5.90%
<b>Total</b>	<b>98</b>	<b>100.00%</b>	<b>118</b>	<b>100.00%</b>

11. Which of the following GEMS parameter based reports do you regularly use: (select all that apply)				
Question	2015-16		2014-15	
	#	%	#	%
<b>General School and District Info Parameter Based Reports</b>				
Classes in Core Academic Subjects Taught by Highly Qualified Teachers	12	100.00%	15	100.00%
<b>Program and Course Offerings Parameter Based Reports</b>				
Courses Offered by School	13	72.22%	21	77.80%
Traffic Education Summary Report	5	27.78%	6	22.20%
<b>Total</b>	<b>18</b>	<b>100.00%</b>	<b>27</b>	<b>100.00%</b>
<b>Student Achievement Parameter Based Reports</b>				
Adequate Yearly Progress (AYP) Graduation Rate Trends	19	19.00%	30	20.30%
Adequate Yearly Progress (AYP) Improvement Status	18	18.00%	28	18.90%
Adequate Yearly Progress (AYP) Trends	23	23.00%	28	18.90%
General Educational Development (GED) Results by Age	2	2.00%	8	5.40%
MontCAS (CRT) Proficiency Comparisons by Subgroup	16	16.00%	26	17.60%
MontCAS (CRT) Proficiency Trends	22	22.00%	28	18.90%
<b>Total</b>	<b>100</b>	<b>100.00%</b>	<b>148</b>	<b>100.00%</b>
<b>School Finance Parameter Based Reports</b>				
Year to Year Budget Comparison	20	57.14%	21	51.20%
General Fund Recap	12	34.29%	16	39.00%
Count of School Districts by Equity Status	3	8.57%	4	9.80%
<b>Total</b>	<b>35</b>	<b>100.00%</b>	<b>41</b>	<b>100.00%</b>
<b>School Districts by Equity Status</b>				
Fund Balances Limitation	8	6.06%	8	6.20%
Flexibility Fund Balance Limitation	6	4.55%	5	3.80%
Reported Revenues by School District	7	5.30%	8	6.20%
Reported Expenditures by School District	10	7.58%	8	6.20%
Ending Fund Balances	13	9.85%	9	6.90%
Per Pupil Revenue and Expenditure Definitions	8	6.06%	8	6.20%
Per Pupil Revenue Trends by Enrollment Category	3	2.27%	7	5.40%
Per Pupil Revenue Trends by Legal Entity	6	4.55%	8	6.20%
Per Pupil Expenditure Trends by Enrollment Category	4	3.03%	7	5.40%
Per Pupil Expenditure Trends by Legal Entity	7	5.30%	6	4.60%
Revenue Trends Recap	7	5.30%	3	2.30%
Expenditure Trends Recap	6	4.55%	4	3.10%
Revenue by Enrollment Category	4	3.03%	4	3.10%
Expenditures by Enrollment Category	5	3.79%	7	5.40%
Budget Limit (ANB) Trends by Enrollment Category	9	6.82%	8	6.20%
Annual County Equalization	5	3.79%	5	3.80%
County Transportation and Retirement Mills Levied	6	4.55%	8	6.20%
State & Federal Grant Programs Summary Report	7	5.30%	8	6.20%
State & Federal Grant Funding Comparison by School System	6	4.55%	4	3.10%
Detailed State & Federal Grant Funding Report	5	3.79%	5	3.80%
<b>Total</b>	<b>132</b>	<b>100.00%</b>	<b>130</b>	<b>100.00%</b>
<b>Student Characteristics Parameter Based Reports</b>				
Enrollment Map	22	23.16%	16	17.40%
Montana Public School Enrollment by Grade – Elementary	18	18.95%	16	17.40%
Montana Public School Enrollment by Grade - High School	12	12.63%	17	18.50%
Four-Year Adjusted Cohort Graduation Rate Report	11	11.58%	13	14.10%
Graduation Matters Montana Snapshot of Dropouts and Completions	14	14.74%	16	17.40%
Special Education District Performance Report	10	10.53%	8	8.70%
Special Education Trends Report	8	8.42%	6	6.50%
<b>Total</b>	<b>95</b>	<b>100.00%</b>	<b>92</b>	<b>100.00%</b>

**D. UTILITY OF SYSTEMS AND REPORTS**

12. Please rank the following GEMS resources in order of importance to you (2015-16):								
2015-16								
Rank	Quick Facts Documents	Parameter Based Reports	Data Analysis Dashboards	School Side-by-Side Comparisons	District Side-by-Side Comparisons	School Profiles	District Profiles	Classroom level data
1	20.59%	8.11%	27.03%	8.33%	10.00%	8.57%	15.00%	6.98%
2	11.76%	16.22%	21.62%	2.78%	12.50%	8.57%	15.00%	13.95%
3	2.94%	13.51%	10.81%	13.89%	12.50%	14.29%	12.50%	20.93%
4	11.76%	16.22%	8.11%	16.67%	15.00%	20.00%	10.00%	11.63%
5	5.88%	5.41%	10.81%	19.44%	15.00%	17.14%	17.50%	6.98%
6	14.71%	10.81%	10.81%	13.89%	10.00%	14.29%	5.00%	16.28%
7	14.71%	5.41%	10.81%	19.44%	7.50%	17.14%	10.00%	11.63%
8	17.65%	24.32%	0.00%	5.56%	17.50%	0.00%	15.00%	11.63%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
2014-15								
Rank	Quick Facts Documents	Parameter Based Reports	Data Analysis Dashboards	School Side-by-Side Comparisons	District Side-by-Side Comparisons	School Profiles	District Profiles	Classroom level data
1	14.30%	8.20%	24.00%	10.20%	8.20%	14.30%	6.30%	18.80%
2	6.10%	10.20%	16.00%	14.30%	24.50%	8.20%	16.70%	8.30%
3	8.20%	10.20%	12.00%	14.30%	16.30%	14.30%	14.60%	14.60%
4	16.30%	14.30%	8.00%	18.40%	4.10%	18.40%	16.70%	4.20%
5	10.20%	12.20%	12.00%	10.20%	12.20%	14.30%	18.80%	6.30%
6	10.20%	12.20%	18.00%	8.20%	8.20%	12.20%	12.50%	14.60%
7	14.30%	20.40%	8.00%	14.30%	14.30%	18.40%	4.20%	2.10%
8	20.40%	12.20%	2.00%	10.20%	12.20%	0.00%	10.40%	31.30%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>



**E. REPORTS AND ANALYSIS TOOLS/INFORMATION NEEDS**

Survey Question	Year	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	NA
13. Data available through GEMS requires too much additional analysis to be useful.	2015-16 n = 48	8.33%	37.50%	27.08%	22.92%	0.00%	4.17%
	2014-15 n = 67	10.50%	19.40%	29.90%	25.40%	3.00%	11.90%
14. Resources available through GEMS have positively impacted my school, district, or postsecondary institution.	2015-16 n = 50	0.00%	30.00%	46.00%	6.00%	12.00%	6.00%
	2014-15 n = 65	1.50%	24.60%	35.40%	7.70%	13.90%	16.90%

15. Have you used the Early Warning System feature in GEMS?				
Reasons	2015-16		2014-15	
	#	%	#	%
Yes	8	12.50%	-	-
No	56	87.50%	-	-
<b>Total</b>	<b>64</b>	<b>100.00%</b>	-	-

16. If “Yes” to # 15: The Early Warning System reports provide adequate information to help me identify students at risk of dropping out.				
Reasons	2015-16		2014-15	
	#	%	#	%
Strongly Agree	1	12.50%	-	-
Agree	5	62.50%	-	-
No Opinion	2	25.00%	-	-
Disagree	0	0.00%	-	-
Strongly Disagree	0	0.00%	-	-
<b>Total</b>	<b>8</b>	<b>100.00%</b>	-	-

17. If yes to #15: What improvements could be made to the Early Warning System?	
<ul style="list-style-type: none"> <li>Teacher Input as part of the system. Teachers know the students and their input can be valuable.</li> </ul>	

**F. TRAINING**

<b>18. To what extent have you accessed training resources available on the GEMS website: (select all that apply)</b>				
Training Resources	2015-16		2014-15	
	#	%	#	%
I referenced data definitions and explanations	15	19.23%	11	10.70%
I completed some or all of the online training	6	7.69%	7	6.80%
I accessed the end user manual	6	7.69%	7	6.80%
I reviewed the FAQs	13	16.67%	20	19.40%
I used the Knowledgebase to search for information	3	3.85%	8	7.80%
I have accessed regional training documents	6	7.69%	8	7.80%
I have accessed use case examples	2	2.56%	3	2.90%
I have never accessed GEMS training resources	27	34.62%	39	37.90%
<b>Total</b>	<b>78</b>	<b>100.00%</b>	<b>103</b>	<b>100.00%</b>

Survey Question	Year	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	NA
<b>19.</b> The GEMS training resources I have been exposed to provided me with the skills and knowledge I was seeking.	2015-16 n = 57	1.75%	21.05%	31.58%	12.28%	3.51%	29.82%
	2014-15 n = 66	3.00%	25.80%	27.30%	12.10%	3.00%	28.80%

**G. FUNCTIONALITY AND EASE OF USE**

Survey Question	Year	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	NA
<b>20.</b> The GEMS website is easy to navigate.	2015-16 n = 56	1.79%	30.36%	17.86%	32.14%	0.00%	17.86%
	2014-15 n = 68	4.40%	33.80%	22.10%	25.00%	2.90%	11.80%

**H. COMMUNICATIONS/SUPPORT**

Survey Question	Year	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree	NA
<b>21.</b> GEMS customer support is adequate.	2015-16 n = 57	1.75%	33.33%	47.04%	2.09%	0.00%	15.79%
	2014-15 n = 64	6.25%	17.19%	50.00%	6.25%	4.69%	15.63%