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MLDS Center
Maryland Longitudinal Data System

Monthly Report for January 2017
Submitted February 3, 2017

Staff
The Center added three new employees this month. With these additions, the Center is fully staffed! The Director of Reporting Services and MHEC Liaison fills a vacancy created in April when the previous employee left the Center for a new job. The other two positions are new and include a data analyst and business analyst. The data analyst will add additional capacity for data loading and developing and analyzing data sets for reports, data requests, and dashboards. The business analyst will develop formalized procedures and documentation on various Center operations.

1. Ann Kellogg, Director of Reporting Services and MHEC Liaison - Ann Kellogg has focused her career in postsecondary education in the areas of academic operations and regulatory compliance serving in positions with large public universities, small colleges, and private for-profit education institutions. Prior to joining MHEC and MLDSC, Ann served as a consultant for a postsecondary student information system software vendor where she provided guidance and expertise on accreditation, regulatory compliance, and academic operations to both internal staff and external clients. Ann received both a master's degree and a bachelor's degree from Michigan State University and is currently pursuing a PhD in Public Policy at the University of Maryland, Baltimore County. Her research interests include the effects of state-level education governance structure on policy adoption and intergovernmental collaboration

2. Matthew Koerner, Data Analyst - Matthew Koerner joins the MLDS Center with a history of leadership and educational program development and implementation as well as data collection, visualization, and reporting. Matthew earned a B.S. in Animal Science from the University of Maryland, College Park and worked previously for MSDE as the Maryland Future Farmers of America (FFA) Executive Director (FFA is a career and technology student leadership organization for students in agriculture related programs) and most recently as Career and Technical Education (CTE) Accountability Coordinator.

3. Sean Duvall, Business Analyst - Sean Duvall earned his bachelor's degree in Information Systems from Towson University and started working for System Automation Corporation. While working there, he collaborated with numerous state regulatory agencies, such as the Indiana Alcohol and Tobacco Commission, California's Registry of Charitable Trusts, and New Hampshire's Health and Human Services division. He specialized in creating data exports and imports; installing, configuring, and maintaining enterprise-level information systems; and collecting and documenting business requirements.

Legislation
The legislation to increase, from 5 years to 20 years, the amount of time that a student record may remain linked to a workforce record after the student's last enrollment in a Maryland educational institution is moving forward. The Governor's Legislative Office did not submit the bill as departmental legislation, but was supportive of the proposed change and encouraged staff to seek private sponsorship. To that end, Delegate Anne Kaiser, has introduced the legislation in the House (see HB 680) and Senator Steve Waugh has committed to do the same in the Senate. No hearings are scheduled at this time.

Strategic Communications Plan

MLDS Center staff have been working on a Strategic Communications Plan in response to the recommendation of the Governing Board at the December meeting. An outline of the plan will be shared at the February Research and Policy Board Meeting for feedback from stakeholders. A final draft of the plan will be reviewed by the Research and Policy Board and presented at the March Governing Board Meeting.

One component of the Strategic Communications Plan is developing revised mission and vision statements for the Center. A clear mission and vision statement will help drive communications and ensure a consistent and focused message is delivered. To develop the mission and vision statements, staff will conduct brainstorming sessions with various groups (including researchers and the Research and Policy Advisory Board) to get input on the question: "What does a successful MLDSC look like?"

Promise Heights Grant
University of Maryland, School of Social Work (SSW) submitted an application to the U.S. Department of Education for a Promise Neighborhoods Implementation Grant. With the Governing Board's approval, the Center added its support for the grant and planned to participate in evaluating grant related program outcomes for students in the Promise Heights Neighborhood schools. Unfortunately, the SSW was not awarded the grant. The Center will continue to look for opportunities to conduct analyses of specific program outcomes like those contemplated in the MLDS portion of the project.

Review of Governor's P-20 Leadership Council Final Reports, Planned Response and Action
The MLDS Center executive team reviewed the recommendations from the Governor's P-20 Leadership Council's *2016 Annual Report* and its report on *Progress on Implementing College and Career Readiness and College Completion Strategies in Maryland.*

The *Annual Report* contains 11 recommendations for the MLDS Center. The Executive team is planning responses and actions for these recommendations. Additional guidance will be obtained from the Research and Policy Advisory Board members at the February meeting. This guidance will assist MLDS Center staff in providing a comprehensive response to the Governing Board on the P-20 recommendations.

Dashboard Development
Center staff are working on the development of two dashboards. The first dashboard will utilize data from the Dual Enrollment report. The second dashboard will identify bachelor degree graduates from Maryland public postsecondary institutions who become first-time teachers in Maryland public schools.

MHEC Collections Components
Ms. Kellogg is working with the data team to begin formal documentation and standardization of the files transmitted by MHEC to the Center.

Research
Research Series
Dr. Terry Shaw presented the research series for December. The research series focuses on the workforce outcomes of the following categories of Maryland students who did not go on to attend college:
1. Students who graduated from high school,

2. Students who earned a GED, and
3. Students who were high school non-completers.

This research report is responsive to two Research Agenda questions: #19 - *What are the workforce outcomes for Maryland students who earn a high school diploma (via high school graduation or GED®) but do not transition to postsecondary education or training?* and #21 - *What are the workforce outcomes of Maryland high school non-completers?* The written report being finalized for release in February 2017.

General Research Activity
The research team continues its work to refine code to pull data from the system and conduct analyses to answer research questions on:
1. Examining the workforce outcomes of Maryland high school students who enrolled in college in-state compared to Maryland high school students who enrolled in college out-of-state; and
2. Examining how financial aid impacts college and workforce outcomes for Maryland students. This topic was submitted for a regional student conference presentation for the Association for Public Policy Analysis and Management (APPAM).

The research team has also been collaborating with the data team to advise on the best ways to present data dashboards on Maryland postsecondary students who go on to teach in Maryland public schools. Finally, Dr. Henneberger has been meeting with Dr. Jane Arnold Lincove, who is a researcher at the UMBC, School of Public Policy. Dr. Lincove's area of research includes the economics of education, education policy, and equality and efficiency of market-based education reform. The Center hopes to find ways to collaborate with Dr. Lincove on future projects.

Synthetic Data Project (SDP)
The SDP Team started off the New Year resuming several important tasks that had been ongoing in December. The team is well into planning the End User Group meeting which will occur on March 14 and will include 15-20 education researchers who will give input about the nature and structure of the synthetic data sets. The team is also in the process of hiring Dr. Reshmi Nair who will be the Research Project Director. The team is very much looking forward to her starting. Additionally, efforts are underway to to hire a temporary IT Program Manager and a Database Engineer.

The SDP team is also working to to assess and gain deeper understanding of the data in order to plan for the processes to build the data sets. The team met with members of the Center's data team to finalize plans to build an initial database structures so the "gold standard" data sets can be built.

System Management
Oracle
Tejal Cherry has taken part in several meetings with MSDE OIT regarding future use of Oracle. MSDE is making plans to move all of their Oracle databases to a cloud service that is hosted and maintained by Oracle. This will result in a considerable cost savings for MSDE and require less in-house technical support. Currently, the Center's Oracle licenses and the cost of those licenses are shared with MSDE. When MSDE ends those licenses, MLDS will either have to:
     (1) Obtain and fully fund its own Oracle server licenses;

(2) Follow MSDE's lead and move to the Oracle cloud; or

(3) Switch to MS SQL (a vastly more affordable database solution when compared to Oracle).

The first option is simply cost prohibitive. The second option may be feasible, but still more costly than our current shared licenses with MSDE. Ms. Cherry is still negotiating with Oracle on the price for the cloud hosting. Finally, the third option, is a cost efficient solution that many state agencies (including MHEC) are implementing. The Center's preference would be to maintain the status quo - transitioning to the cloud or to a new database platform will be a considerable amount of work and an unwanted distraction from the Center's core mission. Nonetheless, when MSDE moves to the cloud, the Center must be ready to implement a new solution. Accordingly, Ms. Cherry is working with the entire team to analyze options and plan accordingly.

Tasks

The system management team completed the following tasks this month:

1. Developed a complete list of action items from recommendations in the recently completed security audit;

2. In response to a security audit recommendation, created of four distribution groups (IT, management, research, and all) in Active Directory to be used for email communications;

3. Installed Windows patches/update on all the VM workstations and all the server;

4. Added additional encryption to system staging schema tablespace for compliance purposes;

5. Installed and configured the new version of the Oracle tool used for data integration;

6. Set up a file server for MLDS documents to serve as the comprehensive solution for the agency to share and store documents;

7. Integrated the web development tool with the business intelligence tool used by the Center;

8. Developed a new overlay that will be used with the email delivery subscription services to help with communications and outreach; and

9. Completed an interactive data inventory on the website.

Data Loading

Staff completed the following data loading tasks:

1. Loaded new SASID merges into staging table;

2. Loaded school data sets files for the year 2016 & 2017 into K-12 school table;

3. Loaded MVA data for the month of December 2016;

4. Updated the data model diagram by adding newly created tables into the new schema; and

5. Continued identity resolution for individuals who have multiple system ID'S for the same identifier (SSN).
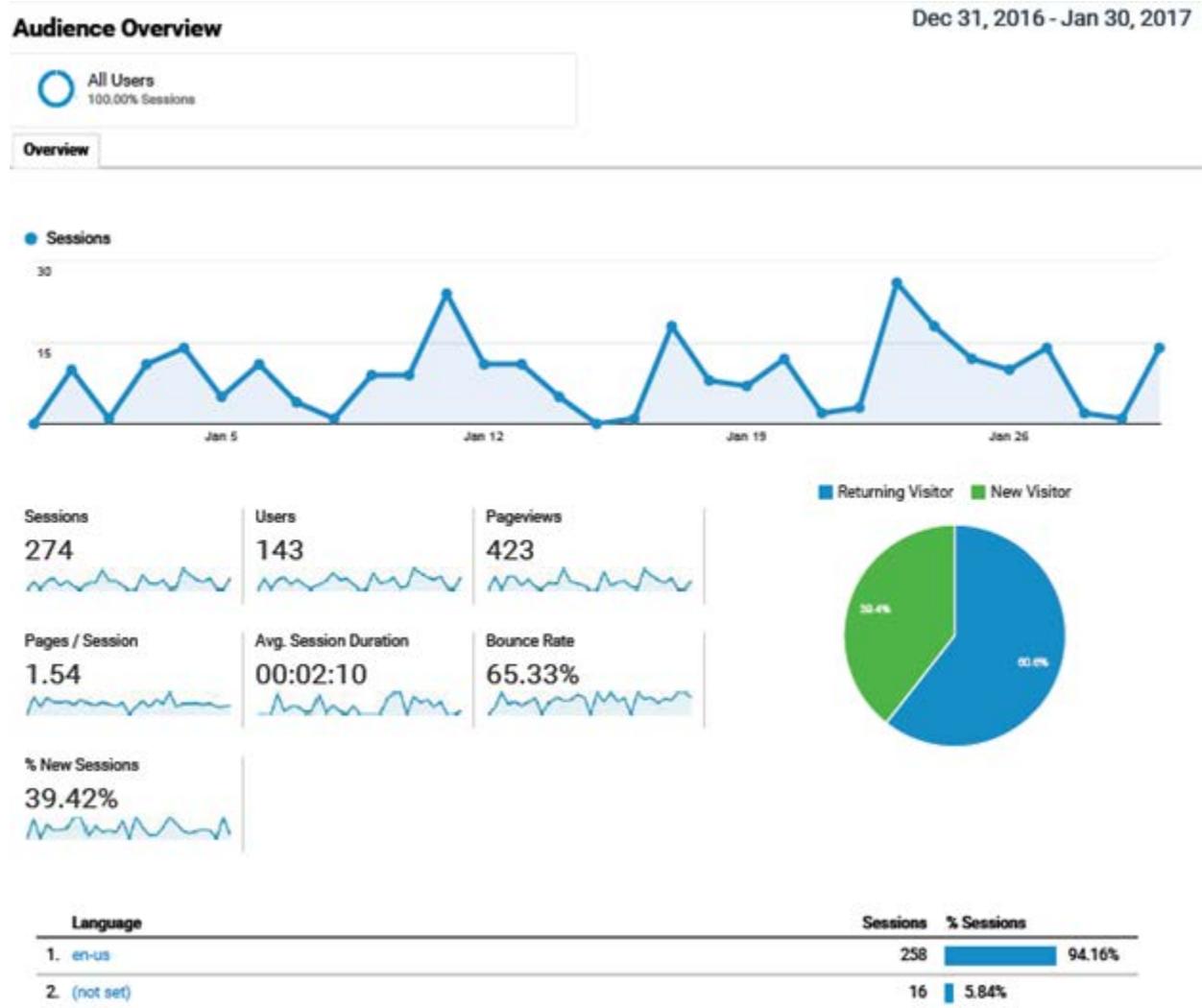
Website

Top 10 dashboards hits

Dashboard Name	#
High School Graduates - Initial Postsecondary Enrollments	35
High School Graduates – Initial Postsecondary Enrollments By Year	31

Website Hits

This is an overview of traffic to the website categorized by sessions, pages, page views etc.

Audience Overview

Dec 31, 2016 - Jan 30, 2017

All Users
100.00% Sessions

Overview

Sessions

Sessions	Users	Pageviews
274	143	423
Pages / Session	Avg. Session Duration	Bounce Rate
1.54	00:02:10	65.33%
% New Sessions		
39.42%		

Returning Visitor   New Visitor

Language	Sessions	% Sessions
1. en-us	258	94.16%
2. (not set)	16	5.84%

DoIT Network Integration Projects - MLDS Impact

The MLDS continues to work with DoIT to implement various aspects of DoIT's enterprise management solution. Below is a status of the various required tasks necessary for the Center to migrate to the managed enterprise solution.

1	Migration of firewall management from MSDE to DoIT Tier Point	After resolving all other issues, there was still a latency issue occuring when transferring data among databases. Staff recently completed provisioning 100Mbps at Tier Point to the secured VLAN from 50Mbps. DoIT changed some firewall configurations. MLDSC changed few database indexes and issue was resolved.	Successfully completed.
2	CommVault Backup - DoIT has configured CommVault solution at MSDE data center for all local backups. This replaced the prior Avamar backup solution.	Staff worked with DoIT to setup our backup retention policies to 90 days daily backup, 365 days monthly backup and 730 days yearly backup. Encryption policies have been setup for MLDSC, all machines are encrypted since they are on the same VM server and staff is working on testing the encrypted backup.	In Progress
3	Offsite Backup	Discussions are ongoing	In Progress
4	Google email syncing with MLDSC Active directory	Completed syncing Google Gmail and Active Directory with DoIT Statewide Directory Services (SDS).	Successfully completed.
5	Global VPN	Discussions are on going	In Progress
6	IP Addresses Scheme Change	DoIT has a statewide centralized policy that requires all IP addresses to be in the same IP designated range. Center staff is in the process of assigning a new IP addresses to all systems. This is a very big project and staff is working on impact analysis and test plan.	In Progress
7	McAfee Virus software - McAfee Anti-Virus was implemented by DoIT on MLDSC machines.	Users are facing slowness in running various programs after that. DoIT is working with MLDSC to resolve the issues.	Successfully completed.
9	MLDSC server migration	Discussions are on going	In Progress