MLDS Center
Maryland Longitudinal Data System

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Monthly Report for June and July 2017
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Meetings

Data Governance Advisory Board

The Data GAB meeting took place on June 21st. Data GAB members discussed the June Governing Board meeting, the impact of the changes to the Data Inventory, and the passage of HB 680 (Chapter 791)/SB 1165 (Chapter 790), which permits data to be linked for 20 years after a student's last enrollment in a Maryland education institution. Members also discussed the Data Collection Calendars in preparation for approval at the September Governing Board meeting. Much of the discussion centered around collections that have been identified for submission to the MLDS but have not been transmitted by the partner agencies. The members outlined the reasons data collections may not yet be available and agreed that such information should be conveyed in the Data Collection Calendars, with a revised timeline. Staff provided preliminary data for the annual Dual Enrollment report. Data GAB members provided recommendations on reporting the data. MSDE shared the 2015 SLDS Grant - Annual Performance Report for input from partner agencies utilizing SLDS grant funding.

MLDSC & MSDE Executive Team Meeting

On June 7th, Ross Goldstein and the MLDS Center management team met with Dr. Salmon and the MDSE Executive Team. The meeting was a good opportunity for the MSDE staff to learn about the Center and how the Center can provide help with policy questions.

Reporting

Dashboards

The Center has been working on translating the annual Dual Enrollment Report into dashboards. The These dashboards will have two components: statewide trends and county trends. The statewide trends dashboard will provide data points on dual enrollment beginning with the 2011-2012 cohort. The county trends dashboard will display county-specific trends on key data points. Additionally, the Center has continued to refine its dashboard layout and design elements. The new layouts integrate text and graphics and incorporate new features, such as hyperlinks and pop-up boxes. The goal is to increase viewer engagement with the dashboard and provide supplemental information on the subject being presented.

The Center completed work on the dashboard *Maryland Novice Teachers who Attended Maryland Public Schools*. The dashboard expands on previous novice teacher dashboards by adding new data points related to the K-12 public school attendance patterns of novice teachers.

Population Attributes

A hierarchy for the population attribute structure has been defined. The hierarchy puts like attributes into categories and was then used to refine the attribute structure for K-12 and postsecondary populations. Additionally, preliminary work was done on defining attributes for labor and wage data.

The Center's pilot project on associating attributes with the population continued. New attributes on high school exiters were defined and applied. Documentation on this attribute is being completed. The documentation is two-fold: technical documentation on how the queries were built, and scope definition documentation on the decision made to associate or exclude individual unit records from this attribute.

The pilot phase was expanded from attribute definition to attribute usage. The predefined attributes were successfully used to answer a new data request, providing a faster turn-around than what could previously be completed.

Research Branch

Statistician

The Research Branch conducted a search for a statistician, during which three candidates were interviewed. Dr. Bess Rose was the top choice and has joined the Research Branch as of July 24, 2017.
Bess received her Ed.D. in Teacher Development and Leadership from Johns Hopkins School of Education and her Master of Education in Measurement and Evaluation from Western Governors University in Salt Lake City. She was previously the Senior Study Director at Westat (one of the foremost social science research firms in the nation) and, prior to Westat, the Research and Evaluation Coordinator at the Maryland State Department of Education.

Dr. Rose has completed her background check and security paperwork, and has just received clearance to access the data. Dr. Henneberger has begun helping Dr. Rose with replicating SAS programs in the Operational Data System.

Data Briefs

The research team has completed two additional data briefs that correspond to the high school to workforce dashboards. The data briefs provide easy to interpret information about the MLDS Center series of dashboards on High School Transitions to Workforce. Specifically, the data briefs address the dashboard on Median 4-Quarter Wages by High School Outcomes (#27) and Workforce Participation by High School Outcomes (#26).

Conference Presentations

Dr. Amber Bloomfield presented her research on the relationship between students' postsecondary institution location (in-state versus out-of-state) and the students' likelihood of subsequent employment in the State of Maryland at the Association for Institutional Research (AIR) Forum 2017 in Washington, DC on June 1, 2017. The AIR Forum is the world's largest conference for institutional researchers and features higher education professionals presenting on a wide variety of topics.

Conference Submission

Dr. Laura Stapleton and Yating Zheng submitted a paper to the American Educational Research Association (AERA) annual meeting. If accepted, the paper will be presented in April of 2018 in New York City. AERA's mission is to "advance knowledge about education, to encourage scholarly inquiry related to education, and to promote the use of research to improve education and serve the public good" (from http://www.aera.net/About-AERA). The paper submission focuses on the use of two different

statistical methods (Value Added Modeling and Propensity Score Methods) to answer the MLDS research question "Which 4-year institutions are graduating students most effectively and in the timeliest fashion?"

Research Series
Plans have begun for the Fall research series. Members of the research team and outside speakers in the College of Education will present on various topics.

Synthetic Data Project

Personnel
Ten finalists were interviewed for the IT Project Manager position. The top-ranked candidate, Kotes Cheruku, was offered the position, which he accepted. Kotes started August 1, 2017. SDP team and the MLDS information technology staff have been assisting with his set-up and training.

In addition to the project manager position, two research assistants were hired on the College Park campus. Tessa Johnson and Yi Feng who will both serve in the role of project coordinator. They have been through background checks, received security clearance to access data, and begun their training.

Technical Advisory Panel Meeting Planning
The SDP team is working to arrange a meeting of a Technical Advisory Committee. The Committee will be made up of five leading experts in statistics who will help assess the SDP statistical methodologies and provide feedback. The Committee meeting is being planned for late October. Two of the original five members identified for the Committee are no longer available. In their place, two new members have been identified: Dr. Martha Stinson from U.S. Census and Dr. Danny Pfeffermann, Professor of Statistics, Southampton Statistical Sciences Research Institute and the Department of Statistics, Hebrew University of Jerusalem. Additionally, the team is pleased that Dr. Larry Hedges has confirmed his participation on the panel. Dr. Hedges is a Professor of Statistics at Northwestern University and is currently completing IES-funded research on using synthetic data with K-12 longitudinal data in seven states.

Conference Attendance
Daniel Bonnery was a member of the organisation committee of the conference SAE2017, a satellite meeting from 61st ISI World Statistics Congress, for which Synthetic Data was a theme. In addition to delivering papers, Daniel Bonnery and Partha Lahiri had the opportunity to interact with leading experts on synthetic data. They also attended a special invited session on the topic of confidentiality. Professor Lahiri gave a talk at the World Statistics Congress on solving small area problem using synthetic data. Professor Lahiri overviewed literature from three different disciplines and suggested a new statistical idea that may be pursued for SDP Data with appropriate modification.

Additionally, members of the SDP team attended the 2017 Joint Statistical Meeting (JSM) in Baltimore. JSM is one of the largest statistical events in the world. The conference has more than 6,000 attendees from 52 countries. Topics range from statistical applications to methodology and theory to the expanding boundaries of statistics, such as analytics and data science.

State Spotlight

The SDP project was selected to be featured in an upcoming U.S. Department of Education 'State Spotlight' report. The team drafted a three-page story about the project and assisted Department of Education staff in preparing the final document.

Procedure Development
<u>Protocol for External Researchers</u>
Researcher requests for MLDS data have increased over the past year. In response, Center staff are developing protocols to receive, evaluate, and respond to researcher requests for data. The development of this protocol seeks to balance the Center's commitment to the highest standards of security and data privacy, while expanding the Center's capacity to conduct the research priorities specified in state statute, and outlined in the MLDS Research Agenda. These protocols detail the research that may be conducted using data from the MLDS, the submission and review process, and steps necessary to work with data from the System. These protocols build on procedures developed by other state SLDS and guidance from the National Center for Education Statistics, Institute of Education Sciences (IES), the SLDS Grant Program.

<u>Linkage of Education and Workforce Data, Implementation of 20-Year Limit</u>
With the change to the statute, Center staff have linked education and workforce records that are under the 20-year limit for data currently in the MLDS. As part of this process, Center staff have begun developing procedures to document the disposal or return of data that expires in the MLDS. Center staff are reviewing DoIT procedures, and best industry practices in the development of these procedures.

<u>Removal of Correctional Education Data from the System</u>
At the June Governing Board Meeting, the Board approved the removal of Correctional Education data from the MLDS Data Inventory. Center staff analyzed the correctional education data within the System and removed about 4,200 records.

Data Requests
1. Dr. Marie desJardins, UMBC, various follow-up requests for data on outcomes of students who take at least one computer science class in high school.
2. Dr. Anthony Foster, USM, request for update of tables from the MLDS Report on "Assessing the Workforce Outcomes of Maryland STEM Postsecondary Graduates."
3. Dr. Dara Shaw, MSDE, various follow-up requests on teacher employment related topics.
4. Dr. Dara Shaw, MSDE, data relating to outcomes for CTE concentrators.
5. Dr. Katie Anderson, Towson University, request for update to a prior report on workforce outcomes for Towson degree recipients.
6. Request for information on special education students and their IEP plans. The request was denied because it required individual student data and data unavailable to MLDS.
7. Professor Arpit Gupta, New York University, request to cooperate with a study on the impact of parental incarceration on student outcomes. The request was denied because it required individual student data and data unavailable to MLDS.

System Management
<u>Tasks</u>

The system management team worked on the following tasks this month:
1. Completed encryption of hard drives for all laptops as per direction from DoIT.
2. Completed procurement of the Continuous Monitoring Services (Intrusion Detection System) through DoIT's master IT contract with Skyline/Cyber Engineering. Staff is working with Cyber Engineering to set-up those services in the MLDS environment. The system should be operational in early September.
3. Continued working to meet DoIT's requirement to update IP addresses to the statewide standards. Four of the Center's five virtual local area networks have successfully been completed. The remaining VLAN has some ongoing issues that the team is working with Oracle to resolve.
4. Continued working with DoIT to change Anti Virus Software on all MLDSC server to McAfee as per DoIT standards.
5. Continued working with DoIT on procuring equipment necessary to meet the MLDSC requirements for setting up its environment at the Tier Point location as part of the State Enterprise Management Plan.
6. Completed creating four VMs for new Researchers and completed giving them necessary access as needed.

Data Loading
1. Completed loading "end of term" data files from MHEC. The Center also received past and current enrollment and diploma files from MHEC, which will are being loaded.
2. Completed loading student, course, grade and teacher data from MSDE.
3. Wage records from DLLR are in progress and GED data been completed.
4. Staff continued the ongoing work of performing identity resolution for individuals who have multiple system ID'S for the same identifier (SSN).

Top 10 Dashboards Hits - June

Dashboard Name	Number of Hits
1. High School Graduates - Initial Postsecondary Enrollments	25
28. High School Outcomes by Industry	23

Dashboard Name	Number of Hits
3. High School Graduates Initial Postsecondary Enrollments By County	21
24. High School Outcomes and Postsecondary Enrollment Status - Annualized Wages OverTime	19
26. Workforce Participation by High School Outcomes	16
12. Highest Enrollments by In-State Institution	15
2. High School Graduates - Initial Postsecondary Enrollments By Year	15
18. Students Who Initially Enroll in a Maryland Community College - Wage Visibility	14
11. High School Graduates with Initial Postsecondary Enrollments	12
13. Highest Enrollments by Out-of-State Institution	12

Top 10 Dashboards Hits - July

Dashboard Name	Number of Hits
1. High School Graduates - Initial Postsecondary Enrollments	13
16. Initial Postsecondary Enrollments - Type of Institution by Race/Ethnicity	11
3. High School Graduates Initial Postsecondary Enrollments By County	8
25. Overview of High School Outcomes	7

20. Students Who Initially Enrolled in a Maryland Community College - Wages By Summary Over Time	6
28. High School Outcomes by Industry	6
12. Highest Enrollments by In-State Institution	5
18. Students Who Initially Enroll in a Maryland Community College - Wage Visibility	5
18. Students Who Initially Enrolled in a Maryland Community College - Outcomes	5
21. High School Outcomes - Overview	5