



Monthly Report for January 2016

Submitted February 5, 2016

2016 Legislative Session

On January 20th, Ross Goldstein and Angela Henneberger provided an update on the MLDS Center and its research for the Senate Education, Health, and Environmental Affairs Subcommittee on Education. Specifically, Mr. Goldstein provided an overview of the significant accomplishments of the Center over the past year and Dr. Henneberger discussed the findings of the Dual Enrollment Report.

On January 28th and February 2nd the Senate Budget and Taxation Subcommittee on Education, Business and Administration and the House Appropriations Committee, respectively, held higher education budget overview hearings. The budget overview included several issues and questions directed at the MLDS Center. The testimony provided by Mr. Goldstein at the hearings is attached.

Data

Motor Vehicle Administration (MVA) Data

The Center finalized the MOU with the Maryland Department of Transportation, Motor Vehicle Association (MVA) in November. This MOU allows MVA to provide personally identifiable information for the Center to utilize in the data matching process. The Center determined a gap in accurately identifying identities when matching records directly from K12 to workforce data. While K12 identities contain full names, dates of birth, and other identifying information, a social security number is not always accurate or available. Workforce identities rely solely on social security number. For students who enter postsecondary institutions, higher education bridges the gap between the K12 and workforce data due to the inclusion of a social security number. For those persons who do not enter higher education, there is a missing link between K12 and workforce. The MVA data will assist the Center in resolving identities across all of our collected data.

Center staff met with MVA staff in late December to introduce ourselves and establish the process for sharing data. The Center successfully received data from the MVA in January. Center staff is working to incorporate the MVA data into the identity matching process.

Data from Partner Agencies

The Center continues to process and load data from each of the partner agencies as it is received according to the Data Collection Schedule.

Reporting

Dashboard Development - Research Agenda Question #12

Peter Hobbs has developed a dashboard prototype for Research Agenda Question #12. That question and the planned dashboard address what happens to first-time students who enroll in a Maryland Community

College, but do not transfer to a 4-year public or independent institution within the State of Maryland. The student outcomes have been determined, and data definitions for the dashboard narrative have been established. The preliminary version of the report is to be developed by Batul Sultana. That dashboard, and several other variations of it will go live in February.

Report prototypes for research questions #18 and #20 have been drafted, and Laia Tiderman will take the lead on the development for those dashboards.

Dashboard Development Lifecycle Workflow

A visual representation of a report and dashboard development lifecycle is being drafted by Mr. Hobbs. This workflow diagram provides a logical workflow, and a suggested timeline for completion of dashboards to be assembled by the Center. It is expected that the final copy of the workflow will be settled and adopted by end of this month.

Research

General

The Research Branch has been busy working with the data and the data loading team to improve data quality and research utility of the system. The researchers have focused on several analyses that will lead to reports over the next 4 months, including remedial education, high school to workforce, STEM, and early childhood workforces.

One of the doctoral students, James Zheng, took a week-long training in advanced Structural Equation Modeling (free to students here). Mr. Zheng has also been developing early childhood data tables and working to resolve issues with degree names (and why data were different from the prior data loaded from the MHEC Degree Information System file). Mr. Zheng also worked on figuring out how to roll up and report the NAIC (North American Industry Classification) codes. Dr. Stapleton provided oversight to Mr. Zheng and gave feedback on the tables.

The Research Team has also met to discuss the analytic plan for the STEM workforce report (5.1 SLDS 2012). This report will assess the state and regional job acceptance and retention of STEM students after they graduate from a Maryland postsecondary institution.

Meeting

Dr. Stapleton, took part in a meeting with Mr. Goldstein and Ms. Cherry and the Optimal Solutions Group. The Optimal Solutions Group is a private research and technology firm that is trying to learn about the technological complexities of the ETL (extract, transform, and load) process for large data systems like the MLDS.

2015 SLDS Grant

Dr. Woolley and Dr. Stapleton have been working on administrative tasks in order to get the Synthetic Data Project up and running.



Higher Education Fiscal 2017 Budget Overview

**Response by the Maryland Longitudinal Data System Center
for
The Senate Budget and Taxation Subcommittee on Education, Business and Administration
January 28, 2016
&
The House Appropriations Committee
February 2, 2016**

The Maryland Longitudinal Data System (MLDS) Center appreciates the opportunity to respond to the issues raised in the budget analysis. First, as an overview, the Center is pleased to note some of its progress and accomplishments over the past year, including the following.

1. Completed loading all data from partner agencies (2007-2008 through 2013-2014), which includes over 6.5 million student and worker records.
2. Through careful design, data management, and detailed efforts in identity resolution, the Center has successfully matched students across sectors and over time. Specifically, close to 90% of all 12th graders in a given year can be linked to a higher education and/or workforce record.
3. The Center applied for and received a highly competitive federal grant from the U.S. Department of Education in the amount of \$2.6 million. The grant project, which will be led by the Research Branch, will develop synthetic data for the purpose of expanding access to the data for research while ensuring absolute privacy and protection of personally identifiable information. The project will also position the MLDS Center as a major innovator in the use of longitudinal data.
4. The Center developed data quality standards to provide a consistent process for assessing the accuracy of information reported to the public. These standards were reviewed by a consultant for the Regional Education Laboratory (REL Mid-Atlantic) who noted that Maryland is ahead of the curve on addressing data reporting standards in writing.
5. Completed several research and reporting products including new data dashboards, data snapshots, a research report, and the 2015 Dual Enrollment Report.
6. Expanded the reach and impact of the Center by creating a temporary research staff appointment process to allow outside entities with an important Maryland research question access to the data. The first group to be given an appointment is Baltimore's Promise, a city-wide collaborative that seeks to use data to improve outcomes for city youth.

The following is a response to the questions and requests for comments raised in the Budget Overview.

Page 29 - The Executive Director of the MLDS Center should comment on identifying the most urgent questions for MLDS to analyze; what can be expected from the Baltimore's Promise collaboration; and when the MLDS website may have more content available for policymakers and the general public.

- 1) The Center's work is guided by the Research Agenda (attached) which is periodically reviewed and approved by the Governing Board. The Center also plans to work closely with the P20 Council to ensure it is addressing questions that are of immediate concern to State policy makers. Currently the Center is working on the following analyses in response to questions posed in the Research Agenda:
 - a) Analysis of post-graduate job acceptance and retention among college students graduating with STEM degrees;
 - b) Analysis of remedial course taking - specifically looking for high school predictors; and
 - c) Analysis of workforce outcomes for students who enroll in community college and do not go on to obtain a four year degree.

- 2) Baltimore’s Promise
 - a) The Governing Board adopted a limited temporary staff appointment process. The process is designed to balance the need to provide access to data for important State interests while ensuring the system is closely contained and managed to ensure the highest standards of privacy and security. Baltimore’s Promise is the first entity to receive a temporary staff appointment.
 - b) Baltimore’s Promise seeks to generate a fuller profile of postsecondary outcomes.
 - c) Specifically, they will use Center data to address the following research questions:
 - i) How many students move directly into the workforce after high school graduation?
 - ii) How many students work at the same time they pursue postsecondary education?
 - iii) How many students who complete a CTE certification in high school are in the workforce?
 - d) Since these are the same questions the Center will be addressing statewide, this partnership not only helps Baltimore’s Promise but also adds to the Center’s research capacity (at no additional cost to the Center).
- 3) Additional Content for the Public and Policymakers
 - a) The Center has built a solid foundation on which to build its reporting and future analyses and fully expects to have several new dashboards available in the coming months (on the topics listed above 1a – c).
 - b) The Budget Overview compared the Center’s output to Washington and Virginia. Those states have been fully functional for 3 to 4 years compared to the Center’s one year. The Center expects to have as much content as those other states over the next year or two.

Page 29 - Further, given the slower than envisioned production of analysis and reports from MLDS, and the absence of guidance from the P-20 Council in coordinating research interests with MLDS, the Executive Director of the MLDS Center, Chair of the P-20 Council, Secretary, State Superintendent of Schools, Chancellor, and representatives of the community colleges and independent institutions should comment on how MLDS and the P-20 Council can be held accountable over the next year for P-20 coordination and producing timely, incisive data analytics (snapshots, dashboards, reports, etc.) for policymakers and the public. Benchmarks and output metrics should be suggested so that the General Assembly can determine the value derived from the operating funds directly and indirectly tied to MLDS and the P-20 Council.

The MLDS Center, working the Department of Budget and Management, has established benchmarks and output metrics in its *Managing For Results* budget submission. The metrics include:

- 1) The number of dashboards posted;
- 2) The number of page views on the MLDS website;
- 3) The number of training seminars on the use and analysis of the data;
- 4) The number of times reports are cited; and
- 5) The number of reports that are published in scholarly journals.

Page 40 - The MLDS Director should comment on whether the amount of college credit savings students build up can be tracked through either dual enrollment or other methods, such as high school advanced placement credit, so that this may be compared to other forms of financial assistance. The Secretary and State Superintendent should comment on efforts to address the challenges discussed above as well as efforts to increase dual enrollment and make students aware of dual enrollment opportunities.

Understanding the long term impact of programs, like dual enrollment or advanced placement courses, is exactly the type of analysis the MLDS is designed to conduct. For example, the Center will be able to analyze whether a high school program, such as dual enrollment, has an impact on a student’s time to degree and could then estimate the potential college credit savings.



RESEARCH AGENDA

The Maryland Longitudinal Data System (MLDS) provides the ability to examine student preparation, progress and outcomes over time, across PreK-12, postsecondary education and training, and the workforce. Establishing the Research Agenda is the duty of the MLDS Governing Board (see Ed. Art. § 24-704(g)(5), Annotated Code of Maryland). This revised Research Agenda reflects the Governing Board's commitment to longitudinal analyses of critical education and workforce transitions and outcomes. Accordingly, the research agenda of the MLDS Center will focus on what happens to students before and after critical transitions and not on topics that could otherwise be researched by one partner agency using its own data.

To that end, all research analyses, and therefore research reports intended to inform policy and programming, will utilize data from at minimum two of the three partner agencies providing data to the MLDS Center:

- 1) Maryland State Department of Education;
- 2) Maryland Higher Education Commission; and
- 3) Department of Labor, Licensing, and Regulation.

For example, all analyses of the postsecondary readiness, access, persistence and completion will be examined, when available, in the context of the academic experiences, achievement, and life circumstances of Maryland students in the PreK-12 education system and/or prior workforce experiences. Similarly, all analyses of the workforce transition or outcomes will be conducted in the context of the academic experiences, achievement, and life circumstances of Marylanders, which may include PreK-12 data, postsecondary education or training data, or both, as well as prior workforce experiences.

The Center research analyses may also include data from sources other than these three agencies as the Center grows and the sources of data expand.

Finally, all research analyses of each of the following research questions will include examinations of how results vary by different critical student subgroups and backgrounds (which is MLDS – Question 15). Such subgroups and backgrounds, for example, include: 1) race or ethnicity, 2) gender, 3) socioeconomic status, 4) language, 5) ability, and 6) setting.

A. Postsecondary Readiness and Access

1. Are Maryland students academically prepared to enter postsecondary institutions and complete their programs in a timely manner? (MLDS – Q1 – P20W priority)
2. What percentage of Maryland high school exiters go on to enroll in Maryland postsecondary education? (MLDS– Q2)
3. What percentage of Maryland high school exiters entering college are assessed to need to take developmental courses and in what content areas? (MLDS – Q3 – P20W priority)
4. Which financial aid programs are most effective in improving access and success (i.e., retention and graduation) for Maryland students?(MLDS – Q9 – P20W priority)
5. Assess the need for inclusion of online education data. (SLDS Grant Q5.2)

B. Postsecondary Completion

6. How likely are students placed in developmental courses to persist in postsecondary education and transfer and/or graduate? (MLDS – Q4)
7. Are community college students able to transfer within the state to 4-year institutions successfully and without loss of credit? (MLDS – Q5 – P20W priority)
8. What are the differences in performance, retention, and graduation, including time to degree, of students who initially matriculate at a Maryland community college and transfer to a Maryland 4-year institution versus those who initially matriculate at a Maryland 4-year? (MLDS Q7)
9. What are the differences in performance, retention and graduation, including time to degree, of students beginning in dual enrollment programs, at 2-year institutions and at 4-year institutions? (MLDS Q8)
10. What are the characteristics of 2-year institutions that are allowing students to persist most effectively and either graduate or transfer? (MLDS Q10)
11. Which 4-year institutions are graduating students most effectively and in the timeliest fashion? (MLDS Q11)

C. Workforce Outcomes

12. What happens to students who start at community colleges and do not go on to 4-year institutions? (MLDS Q6)
13. What are the educational and labor market outcomes for individuals who use federal and state resources to obtain training at community colleges or other postsecondary institutions? (MLDS Q12)
14. What economic value do noncredit community college credentials have in the workplace? (MLDS Q13)
15. Are exiters of Maryland colleges successful in the workforce? (MLDS Q9 – P20W priority)
16. Assess STEM post-graduate student state and regional job acceptance and retention. (SLDS Grant Q5.1)
17. Assess training and retention of early childhood workforce in Maryland. (SLDS Grant Q5.3)
18. 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? (new)
19. What are the workforce outcomes for Maryland high school students who complete Career Technical Education coursework, who either enter the workforce directly or also obtain postsecondary education or training? (new)
20. What are the workforce outcomes of Maryland high school non-completers? (new)