MLDS CENTER
Maryland Longitudinal Data System

Better Data • Informed Choices • Improved Results

Data Gap Analysis

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Maryland Longitudinal Data System Center
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Contents

Introduction

This document catalogs known gaps in the data contained in the Maryland Longitudinal Data System and identifies the reasons, impacts, and resolution of those gaps. Data gaps result from a variety of issues including the fact that the data is not collected, the data is collected, but not by one of the Center's data partners, or the Center is prohibited from collecting the data. This data gap analysis is intended for the the MLDS Governing Board, staff of the MLDS Center, and stakeholders to understand and accurately interpret the information contained in the System.

Each Data Gap listed includes:
1. A description of the **gap;**
2. The **reason** the gap exists;
3. The **impact** of the gap on Center output;
4. A **resolution**;
5. The **feasibility** of the resolution; and
6. The current **status**.

Summary

There are 30 cataloged gaps, and 3 resolved gaps. The graphs below summarize the gaps by sector, status, and feasibility.

Complete Listing of Data Gaps by Status

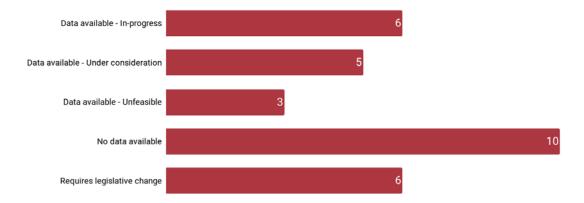| #	Sector	Gap	Feasibility	Status
1	Workforce	Removal of workforce records that are not matched to a student record	Data available - In-progress	Active
3	Workforce	Federal and Military Employees	Data available - In-progress	Active
4	Workforce	Contingent and alternative employment arrangements	Data available - In-progress	Active
5	Workforce	Apprenticeship Data	Data available - In-progress	Active
13	Postsecondary	Teacher Candidates	Data available - In-progress	Active
2	Workforce	Standard Occupational Classification (SOC) Codes	No data available	Closed
7	Workforce	Part-time or full-time employment and number of hours worked	No data available	Closed
8	Workforce	Out-of-State workforce data	Requires legislative change	Closed
15	Postsecondary	State Aided Independent out-of-state enrollments 2008-2012	Data available - Unfeasible	Closed
19	PK12	Student Discipline Data	Requires legislative change	Closed
20	PK12	Juvenile delinquency records	Requires legislative change	Closed
21	PK12	Children in need of assistance records	Requires legislative change	Closed
22	PK12	Criminal records	Requires legislative change	Closed
23	PK12	Medical and health records	Requires legislative change	Closed
25	PK12	Private PK12 School Students	No data available	Closed
26	PK12	Homeschooled Students	No data available	Closed
28	PK12	Out-of-State PK12 Education Data	No data available	Closed
29	PK12	PK12 Program Data	No data available	Closed
6	Workforce	Licensure from DLLR and other license granting agencies	Data available - Under consideration	Planned
9	Workforce	National and Professional Certifications	Data available - Under consideration	Planned
10	Postsecondary	Remedial Placement Assessments	Data available - Under consideration	Planned
11	Postsecondary	Non-Credit Postsecondary Data/ Adult Education Data	Data available - Under consideration	Planned
12	Postsecondary	Out-of-State Postsecondary Education Data	Data available - Under consideration	Planned
14	Postsecondary	Postsecondary Program Data	No data available	Planned
16	Postsecondary	For-Profit Private Postsecondary Data	Data available - Under consideration	Planned
17	Postsecondary	Socioeconomic Status Data for Postsecondary Students	No data available	Planned
18	Postsecondary	Postsecondary Faculty and Staff	Data available - Under consideration	Planned

#	Sector	Gap	Feasibility	Status
24	PK12	Career and Technical Education Data	Data available - In-progress	Planned
27	PK12	School Climate Data	No data available	Planned
30	PK12	Socioeconomic Status for PK12 Students	No data available	Planned

Priorities

Listed below are the data gaps that Center staff believe are achievable and will significantly close obstacles to accurately analyzing and reporting on student and workforce outcomes over time.

1. Removal of workforce records that are not matched to a student record (1)
2. Comptroller Data to resolve data gaps for Federal and Military Employees (3) and Contingent and alternative employment arrangements (4)
3. Apprenticeship Data (5)

Considerations

1. **Limitations on Student Data**
   State law provides limitations (see Ed. Art. § 24-701(f)(3), Annotated Code) on what constitutes student data for purposes of inclusion in the MLDS.

2. **Limitations on the release of data to facilitate state and federal reporting requirements**
   The Maryland Every Student Succeeds Act (ESSA) Consolidated State Plan includes an indicator of postsecondary readiness which reports multiple measures of student success after high school. The Maryland State Department of Education has an interest in partnering with the Center to fulfil their reporting requirements, but in many cases requires unit-record level data to meet reporting requirements.

   While the fulfillment of "information and data requests to facilitate State and federal education reporting with existing State agencies" is a function of the Center, only aggregate data may be released in reports and in response to data requests (§24–703). This inability to provide unit record level data to agency partners limits the Center's value as a resource.

Workforce Data

1. Removal of workforce records that are not matched to a student record

Gap	MLDS must remove all workforce records that are not matched to a student record within 90 days after receiving the workforce record from DLLR. This leaves a gap of a person's workforce history that may exist prior to or concurrent to education records.

Reason	Data Sharing Agreement Between the Maryland Department of Labor, Licensing & Regulation and Maryland Longitudinal Data System Center, 5.c. Disposal and Destruction of Transferred Student and Workforce (TSWF) Data, Signed August 6, 2014
	    i. TSWF Data must not be retained with personal identifiers for longer than such period of time as is necessary to match and/or de-identify data sets.
	    ii. Unmatched Confidential UI Data will be not be kept for more than 90 days, at which point it will be returned to DLLR or destroyed, as directed by DLLR.

Impacts	The timelines for agency partners to provide data are not aligned. State statute requires the educational record to be the beginning of the link to wage records. Labor data is submitted to MLDS on a quarterly basis, and lagged about two quarters. Education data is collected on an academic calendar schedule and are lagged close to a year behind the date of collection. Wage records are often provided to the MLDS prior to many of the education records. Because the wage records may not be maintained by the MLDS beyond 90 days, there is a gap.
Resolution	Request DLLR include an annual data file to the MLDS that includes the combined records for all four quarters of a calendar year. This change would need to be reflected in the MLDS Data Collections Calendar.
Feasibility	Data available - In-Progress
Status	Active

2. Standard Occupational Classification (SOC) Codes

Gap	MLDS does not receive SOC (Standard Occupational Classification) codes from any source. SOC codes indicate the employee's occupation whereas NAIC provides the industry of the company for which the employee works.
Reason	SOC codes are not currently collected by DLLR.
Impacts	To understand workforce outcomes for students, researchers need to know the student's occupation. Without SOC codes, researchers are left to make assumptions. For example, a computer science major working for a restaurant chain is assumed not to be working in an occupation for which he or she trained. However, that student could be the IT manager for the restaurant chain, in charge of supporting and maintaining its IT infrastructure. Similarly, it is assumed that a computer science major working for a large IT Tech firm is employed in his or her field of training when in fact the student could be an administrative assistant.
Resolution	Explore ways to gather information on workers occupation.
Feasibility	No data available
Status	Closed

3. Federal and Military Employees

Gap	Federal employment including military employees are not included in the workforce data.
Reason	Federal and military employees do not participate in the UI system and are therefore not part of the data provided to the MLDS.
Impacts	Maryland ranked fourth among the states in federal government employment in 2013 according to information from the Bureau of Labor Statistics.[1] Federal employment in Maryland accounted for 6.5% of total employment in the state (119,097). Maryland ranks fourth among the states in federal government employment, with 145,783 non-military federal jobs in 2016. On a per capita basis, the state ranks first with 242 federal jobs per 10,000 residents. Further, these jobs pay better in Maryland than in any other state, with an average annual wage of $99,351, which is 27% higher than the national average.[2] The lack of federal wage information leaves an incomplete picture of employment - especially considering that government jobs are often STEM and higher salary jobs.
Resolution	As of January 2018, the Federal Employment Data Exchange System (FEDES) will be temporarily suspended while the Employment and Training Administration (ETA) reassesses the feasibility of FEDES[3]. Explore the possibility of receiving Maryland income tax data from the Maryland Office of the Comptroller. Maryland income tax is collected for all workers, including federal and military employees and contingent and alternative workers.
Feasibility	Data available - In-progress
Status	Active

4. Contingent and alternative employment arrangements

Gap	Contingent workers are people who do not expect their jobs to last or who reported that their jobs are temporary. These workers may also be referred to as freelance. Alternative employment arrangements include people employed as independent contractors, on-call workers, temporary help agency workers, and workers provided by contract firms.[4]
Reason	Contingent and alternative workers do not participate in the UI system and are therefore not part of the data in the MLDS.
Impacts	In 2005 contingent and alternative employment accounted for up to 4 percent of all workers.[5] More recent estimates show these types of employment increasing[6,7]The lack of information on independent contractors and self-employed workers leaves an

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[1] U.S. Department of Labor, Bureau of Labor Statistics. *Career Outlook: Working for the federal government: Part 1*. Retrieved February 2018 from https://www.bls.gov/careeroutlook/2014/article/federal-work-part-1.htm.

[2] Maryland State Department of Commerce. *Rankings and Statistics, Rankings, Workforce*. Retrieved February 2018 from http://commerce.maryland.gov/about/rankings-and-statistics.

[3] U.S. Department of Labor, Employment and Training Administration (ETA); Federal Employee Data Exchange System. Retrieved February 2018 from https://www.doleta.gov/performance/fedes.cfm.

[4] U.S. Department of Labor, Bureau of Labor Statistics. *Labor force characteristics*. Retrieved February 2018 from https://www.bls.gov/cps/lfcharacteristics.htm#contingent.

[5] U.S. Department of Labor, Bureau of Labor Statistics. *Career Outlook: Working in a gig economy.* Retrieved February 2018 from https://www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm.

[6] U.S. Department of Commerce, U.S. Census Bureau. *More Than 380,000 Nonemployer Businesses Added to the U.S. Economy, U.S. Census Bureau Reports.* Retrieved February 2018 from https://www.census.gov/newsroom/press-releases/2013/cb13-99.html.

[7] Noguchi, Yuki. (2018, January 22). Freelanced: The Rise of the Contract Workforce. NPR. Retrieved February 2018 from https://www.npr.org/2018/01/22/578825135/rise-of-the-contract-workers-work-is-different-now

	incomplete picture of employment outcomes for Maryland workers.
Resolution	Explore the possibility of receiving Maryland income tax data from the Maryland Office of the Comptroller. Maryland income tax is collected for all workers, including federal and military employees and contingent and alternative workers.
Feasibility	Data available - In-progress
Status	Active

5. Apprenticeship Data

Gap	Apprenticeship data is currently not in the MLDS.
Reason	DLLR has apprenticeship data but it is not yet provided to the MLDS. Apprenticeship is not part of the Data Inventory and it is not specified in the data sharing agreement with DLLR.
Impacts	MLDS cannot report on the impact that apprenticeship programs have on student outcomes or make comparisons between other critical training programs and apprenticeships programs.
Resolution	MLDS has engaged in discussions over the past year with DLLR on the availability of the apprenticeship data. DLLR is in the process of migrating to the federal apprenticeship data system. Once the migration is completed DLLR will work with the Center to explore ways to include this data in the MLDS.
Feasibility	Data available - In-progress
Status	Active

6. Licensure from DLLR and other license granting agencies

Gap	Professional licensure from DLLR or other license granting state agencies are not included in the MDLS.
Reason	MLDS does not receive credential or licensure information from DLLR or MSDE, nor is that data part of the Data Inventory or data sharing agreements with MLDS agency partners. Other licensing information would include health professional licensing in Maryland, or Maryland Department of Agriculture. Additional research is needed to compile all the licensing and credentialing agencies in Maryland. MLDS does not have data sharing agreements with other agencies that issue licenses or credentials.
Impacts	License and credential attainment is considered by many sources to be an educational outcome especially for students engaged in Career and Technical education programs. For students leaving Maryland public high schools and postsecondary institutions, license and credential attainment are positive educational outcomes that can inform the workforce opportunities for Maryland students.
Resolution	There are a large number of state agencies that grant licensure. The Center will begin incorporating this data as specific needs are identified.
Feasibility	Data available - Under consideration
Status	Planned

7. Part-time or full-time employment and number of hours worked

Gap	The wage information provided by UI data does not indicate the number of hours worked or whether the employee was employed full or part-time.
Reason	UI data only provides the wages earned for the entire quarter.
Impacts	Knowing whether wages are part-time or full-time would allow more meaningful comparison of workforce outcomes.
Resolution	None

Feasibility	No data available
Status	Closed

8. Out-of-State workforce data

Gap	MLDS only receives wage data for people who are employed in Maryland.
Reason	MLDS only has access to Maryland UI records. There are interstate programs that are designed to exchange workforce data to allow states to continue to analyze student outcomes even if the student leaves the state. However, these interstate programs require re-disclosure of data which is prohibited by State law.
Impacts	Maryland is closely situated to other states and the District of Columbia. Movement across state lines is commonplace. Information on the movement of students across state lines for employment can assist the Center in answering policy questions related to "brain-drain" and workforce retention.
Resolution	Explore ways the MLDS may receive data through DLLR via the Wage Record Interchange System (WRIS or WRIS II). The MLDS may also explore opportunities with other SLDS, such as the Multistate Longitudinal Data Exchange. Either option would require changes to state statute, revised data sharing agreements, approval by the MLDS Governing Board, and inclusion of the data elements in the Data Inventory.
Feasibility	Requires legislative change
Status	Closed

9. National and Professional Certifications

Gap	The MLDS does not contain national, professional, or industry certifications for people educated or employed in Maryland.
Reason	This data is not captured by MLDS agency partners. The information is maintained by businesses or professional organizations and not captured in a way that is easily accessible.
Impacts	Certifications are an important component in understanding education and workforce outcomes.
Resolution	Explore the sources for available data and research solutions from other SLDS, including the Certification Data Exchange Project.
Feasibility	Data available - Under consideration
Status	Planned

Postsecondary Education Data

10. Remedial Placement Assessments

Gap	The MLDS does not contain information on the the remedial placement assessments students may take upon entering higher education. These tests determine students' placement in remedial coursework. These assessments may include AccuPlacer or other assessments.
Reason	Remedial placement assessments and scores are maintained by the institution issuing the exam. MLDS agency partners do not have established data collections to capture this data.
Impacts	Restricts MLDS ability to provide more in-depth analysis of remedial education.
Resolution	These assessments vary by institution and is not uniform. At this time MLDS agency partners have not identified a compelling reason to capture this data.

Feasibility	Data available - Unfeasible
Status	Planned

11. Non-Credit Postsecondary Data/ Adult Education Data?

Gap	Non-Credit Postsecondary Courses are not available in the MLDS
Reason	Unit record data on students taking non-credit courses are not collected by MHEC from any of their postsecondary institutions. Non-credit coursework includes technical education, occupational training, courses for students with intellectual and developmental disabilities, life enrichment, English-as-Second Language, life skills, etc. MHEC does collect unit record data from non-degree seeking students taking credit-bearing courses. Those data are provided in current MHEC collections.
Impacts	People access educational opportunities throughout their lifetime for a variety of reasons. The absence of non-credit coursework limits MLDS ability to report on occupational training and retraining, technical education, and vulnerable populations such as students with intellectual and developmental disabilities.
Resolution	This is not part of MHEC's current collections, though they are exploring the possibility of collecting this information.
Feasibility	Data available - Under consideration
Status	Planned

12. Out-of-State Postsecondary Education Data

Gap	Out-of-State postsecondary education data is limited to enrollments and degrees awarded to students who exited from a Maryland public high school. The out-of-state postsecondary data does not provide information on GPA, course enrollment, or credit accumulation.
Reason	Out-of-state postsecondary data is provided from the National Student Clearinghouse through a contract with MSDE. The data from the Clearinghouse is only available for students who exited from a Maryland public high school. This type of information is not collected by the Clearinghouse.
Impacts	This limits the Center's ability to make comparisons between students who went to college in-state and out-of-state on key college variables, including GPA. Additionally, we are unable to control for these variables when looking at outcomes across groups, because the variables are only present for one group.
Resolution	Explore the possibility of MHEC or the MLDS Center entering into a contract with the National Student Clearinghouse.
Feasibility	Data available - Under consideration?
Status	Planned

13. Teacher Candidates

Gap	Maryland Approved Program Completers are not clearly identified in the MLDS.
Reason	MHEC collects data on students (both degree-seeking and non-degree seeking) that complete Maryland approved programs for teacher preparation. Currently, MHEC only provides data on program completers if the student earns a degree as part of the completion.
Impacts	The Center cannot correctly identify all students prepared by Maryland colleges to enter teaching. Collecting data on students completing non-degree teaching programs will allow MLDSC to identify these students as intending to teach when studying the teacher pipeline.
Resolution	MHEC is currently revising how it collects data on Maryland Approved Program Completers. The new collection will be piloted in 2018 and fully deployed in 2019.
Feasibility	Data available - In-progress
Status	Active

14. Postsecondary Program Data

Gap	Postsecondary institutions offer a wide array of educational opportunities for students which lead to positive student outcomes that are not captured in the MLDS data. This includes summer enrichment and pre-enrollment programs, and programs to support transfer students.
Reason	MHEC does not collect data on enrichment programs as the programs are widely varied and participation by students is typically optional. It is at the discretion of each institution to determine when and if an enrichment or pre-enrollment program will be offered and the qualifications for participation. Further, the programs are routinely modified or launched ad-hoc for one semester only.
Impacts	Program participation is likely a confounder in analyses. Because we do not know which students participate in programs, analyses are biased to the degree that program participation is related to the predictor and outcome variables. For example, in an analysis examining the relationship between college enrollment and long-term outcomes, students participating in certain programs geared toward improving long-term outcomes may have better long-term outcomes. By not controlling for program participation, analyses are likely over-estimating the relationship between college enrollment and long-term outcomes (i.e., some of the relationship would actually be due to program participation).
Resolution	Center staff will work with MHEC to determine if there are available sources of data, or to provide contextual data to inform analyses.
Feasibility	No data available
Status	Planned

15. State Aided Independent out-of-state enrollments 2008-2012

Gap	MLDS Center does not have unit records for students who completed high school out-of-state and enrolled in Maryland State-Aided Independent institutions prior to 2012.
Reason	State Aided Independent institutions did not provide unit record data on students enrolling from out-of-state high school to MHEC prior 2012. Only aggregate data was provided to MHEC.
Impacts	State-Aided institutions enroll large numbers of students that went to high school out-of-state. State-Aided institutions are often excluded from analysis due to incomplete records.

Resolution	MHEC does not have the data and does not have any plans to collect the data. MLDS could collect data from each institution.
Feasibility	Data available - Unfeasible
Status	Closed

16. For-Profit Private Postsecondary Data

Gap	MLDS Center does not receive unit record data on Maryland colleges classified as For-Profit Private institutions.
Reason	MHEC does not require for-profit private institutions to submit data via the MAC2 collection; they complete MHEC surveys that provide aggregate data.
Impacts	Enrollment in for-profit private institutions constitutes less than 2% of all Maryland postsecondary degree-seeking enrollments.
Resolution	MHEC would need to expand MAC2 data collection to for-profit institutions to be able to provide data to MLDS Center.
Feasibility	Data available - Under consideration
Status	Planned

17. Socioecomonic Status Data for Postsecondary Students

Gap	Socioeconomic status data for postsecondary students is limited to household financial data provided on student financial aid applications (approximately 70% of all enrollees). Data include adjusted gross income, parents' educational level, and expected family contribution. These data are limited to those who completed a FAFSA and had financial aid disbursed; the data do not include students who did not apply for aid, applied for aid but declined awards or who did not require the FAFSA to receive aid. These undergraduate and graduate students could include both students from high socioeconomic backgrounds who do not need or expect to be granted aid, as well as students from low socioeconomic backgrounds who are likely eligible for aid but do not apply or decline offers of aid.
Reason	MHEC does not collect financial data on students that do not receive some type of financial aid (federal, state or institutional).
Impacts	Socioeconomic status (SES) has been correlated with an individual's skill development, academic achievement, work and life outcomes, and overall psychological and behavioral well-being.[8] SES data can inform provide additional context to inform policies at all levels of the education system.[9]
Resolution	Explore the the possibility of accessing data directly from FAFSA. Explore solutions from other SLDS.
Feasibility	No data available
Status	Planned

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[8] National Forum on Education Statistics. (2015). Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems. (NFES 2015-158). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
[9] American Psychological Association (APA). Education and Socioeconomic Status Fact Sheet. Retrieved February 2015 from http://www.apa.org/pi/ses/resources/publications/factsheet-education.aspx.

18. Postsecondary Faculty and Staff

Gap	The MLDS does not receive information on people employed in Maryland institutions of higher education.
Reason	MHEC collects information on faculty and staff but has not provided the data to MLDS as there is not currently a question included on the research agenda that would require this data. Some data on faculty will be provided to the MLDS as part of the MHEC CIS collection. This collection is in the pilot phase with a tentative timeline for providing the collection to MLDS in 2018.
Impacts	The teacher-student link is an important part of an educational system. The ability to measure and control for the relationships between teachers and students provides more nuanced information on student outcomes.
Resolution	Review the MLDS Research Agenda. Work with MHEC to define the parameters necessary for MHEC to provide this data to the MLDS.
Feasibility	Data available - Under consideration
Status	Planned

PK-12 Data

19. Student Discipline Data

Gap	Student discipline data for PK12 students is not available in the MLDS.
Reason	The MLDS is prohibited by law from including this information under Md. Code, Ed. Art. § 24-701(f)(3)(iv).
Impacts	Student discipline information in K-12 is an important variable in understanding student outcomes. When modeling student outcomes, if these data are not included in the model, relationships between predictors of interest (e.g., course taking) and the outcome (e.g., achievement) may be less accurate than if these data were included in the model.
Resolution	Revisions to Md. Code, Ed. Art. § 24-701(f)(3)(iv)
Feasibility	Requires legislative change
Status	Closed

20. Juvenile delinquency records

Gap	Juvenile delinquency records for PK12 students are not available in the MLDS.
Reason	The MLDS is prohibited by law from including this information under Md. Code, Ed. Art. § 24-701(f)(3)(iv).
Impacts	Juvenile delinquency records are an important variable in understanding student outcomes. When modeling student outcomes, if these data are not included in the model, relationships between predictors of interest (e.g., course taking) and the outcome (e.g., achievement) may be less accurate than if these data were included in the model. Both the Departments of Juvenile Services (DJS) and Human Resources (DHR) have expressed an interest in working with the Center to report on the educational and workforce outcomes of children served by those agencies.
Resolution	Revisions to Md. Code, Ed. Art. § 24-701(f)(3)(iv)
Feasibility	Requires legislative change
Status	Closed

21. Children in need of assistance records

Gap	Children in need of assistance (CINA) records for PK12 students are not available in the MLDS.
Reason	The MLDS is prohibited by law from including this information under Md. Code, Ed. Art. § 24-701(f)(3)(iv).
Impacts	Information on children in need of assistance are an important variable in understanding student outcomes. When modeling student outcomes, if these data are not included in the model, relationships between predictors of interest (e.g., course taking) and the outcome (e.g., achievement) may be less accurate than if these data were included in the model. Both the Departments of Juvenile Services (DJS) and Human Resources (DHR) have expressed an interest in working with the Center to report on the educational and workforce outcomes of children served by those agencies.
Resolution	Revisions to Md. Code, Ed. Art. § 24-701(f)(3)(iv)
Feasibility	Requires legislative change
Status	Closed

22. Criminal records

Gap	Criminal records are not available in the MLDS.
Reason	The MLDS is prohibited by law from including this information under Md. Code, Ed. Art. § 24-701(f)(3)(iv).
Impacts	When modeling student outcomes, if these data are not included in the model, relationships between predictors of interest (e.g., course taking) and the outcome (e.g., achievement) may be less accurate than if these data were included in the model.
Resolution	Revisions to Md. Code, Ed. Art. § 24-701(f)(3)(iv)
Feasibility	Requires legislative change
Status	Closed

23. Medical and health records

Gap	Medical and health records for PK12 students are not available in the MLDS.
Reason	The MLDS is prohibited by law from including this information under Md. Code, Ed. Art. § 24-701(f)(3)(iv).
Impacts	When modeling student outcomes, if these data are not included in the model, relationships between predictors of interest (e.g., course taking) and the outcome (e.g., achievement) may be less accurate than if these data were included in the model.
Resolution	Revisions to Md. Code, Ed. Art. § 24-701(f)(3)(iv)
Feasibility	Requires legislative change
Status	Closed

24. Career and Technical Education Data

Gap	Career and Technical education concentrator data for Maryland's K12 public school students is not currently included in the Data Inventory.
Reason	The MLDS includes information on CTE completers. CTE Completers are K12 students who have completed a career and technical education program of study. CTE concentrators are not included in MLDS data. CTE Concentrators are students who have enrolled in more than 50% of a career and technical education program of study. CTE concentrator data is not currently provided to the MLDS.
Impacts	Students engaged in CTE are prepared for a wide range of careers. These careers require varying levels of education- from high school and postsecondary certificates, to

	apprenticeships, or two- and four-year college degrees. Including this data in the MLDS provides an additional layer of analysis in understanding educational and workforce outcomes of Maryland students.
Resolution	CTE Concentrators are included in the [Maryland Every Student Succeeds Act (ESSA) Consolidated State Plan](). MSDE is currently working on how to accurately collect and report this information. The Center will continue to work with MSDE on ways to provide this data to the MLDS.
Feasibility	Data available - In-progress
Status	Planned

25. Private PK12 School Students

Gap	There is no data on private PK12 school students in the MLDS.
Reason	Maryland private schools voluntarily provide [aggregate school enrollment counts]() annually. No student level data is collected from private schools. Without student level data, there is no meaningful data for the MLDS. In the 2017-2018 school year, MSDE reported 893,689[10] public school students and 127,765[11] non-public school students.
Impacts	Some stakeholders believe having private K12 data will provide a source of comparison to Maryland public school student outcomes. The requirements for Maryland public school students and Maryland private school students are very different. Much of the data collected on public school students is not available for private school students.
Resolution	Work with MSDE and the Research Branch to find public sources of comparable data, if needed for analysis.
Feasibility	No data available
Status	Closed

26. Homeschooled Students

Gap	There is no data on homeschooled students in the MLDS.
Reason	Homeschool students register with their local school system which verifies compliance and provides instructional supervision. This data is not collected at the student level by MSDE. Data is only reported aggregately by each LEA, which does not provide meaningful data for the MLDS.
Impacts	Some stakeholders believe having data on homeschooled students will provide a source of comparison to Maryland public school student outcomes. The requirements for Maryland public school students and Maryland homeschooled students are very different. Much of the data collected on public school students is not available for homeschooled students.
Resolution	Work with MSDE and the Research Branch to find public sources of comparable data, if needed for analysis.
Feasibility	No data available
Status	Closed

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[10] Maryland State Department of Education. [Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools, September 30, 2017](). Published December 2017 at[http://marylandpublicschools.org/about/Pages/DCAA/SSP/index.aspx]().
[11] Maryland State Department of Education. [Nonpublic School Enrollment, State of Maryland, September 30, 2017](). Published February 2018 at [http://marylandpublicschools.org/about/Pages/DCAA/SSP/index.aspx]().

27. School Climate Data

Gap	There is no PK12 school climate data included in the MLDS.
Reason	These data have not been collected by MSDE at the student level.
Impacts	School climate provides important qualitative information from students, parents, and teachers about their schools. Much research has shown that differences in schools account for differences in student outcomes. Understanding the climate of a school can help explain the differences in student outcomes between schools.
Resolution	The Maryland Every Student Succeeds Act (ESSA) Consolidated State Plan includes school climate surveys. MSDE is currently working on how to accurately collect and report this information. The Center will continue to work with MSDE on ways to provide this data to the MLDS.
Feasibility	No data available
Status	Planned

28. Out-of-State PK12 Education Data

Gap	The MLDS does not contain information on out-of-state PK12 students.
Reason	This data is outside of the scope of the MLDS.
Impacts	Not applicable
Resolution	Limited data on students who attended out-of-state PK12 schools is available through MHEC collections as students enroll in higher education.
Feasibility	No data available
Status	Closed

29. PK12 Program Data

Gap	Local school systems and schools offer a wide array of supplemental educational services, programs, and enrichments for students which lead to positive student outcomes that are not captured in the MLDS data. This may include after school programs, behavioral interventions, and enrichment programs.
Reason	MSDE does not capture this type of information at the state level and it is unclear how robust the collection is of this information at the local school system level.
Impacts	Program participation is likely a confounder in analyses. Because we do not know which students participate in programs, analyses are biased to the degree that program participation is related to the predictor and outcome variables. For example, in an analysis examining the relationship between high school student poverty and long-term outcomes, students participating in enrichment activities may have better long term outcomes. By not controlling for program participation, analyses are likely over-estimating the relationship between poverty and long-term outcomes (i.e., some of the relationship would actually be due to program participation).
Resolution	Look for information from publicly available sources that would provide context as needed.
Feasibility	No data available
Status	Closed

30. Socioeconomic Status for PK12 Students

Gap	The MLDS does not currently contain any measures of students' socioeconomic status.
Reason	The variables necessary to compute a robust measure of socioeconomic status are not available from MSDE.
Impacts	Socioeconomic status (SES) has been correlated with an individual's skill development, academic achievement, work and life outcomes, and overall psychological and behavioral well-being.[12] SES data can inform provide additional context to inform policies at all levels of the education system.[13] The term "socioeconomic status" can be defined broadly as one's access to financial, social, cultural, and human capital resources. Variables from three primary components are typically used to "measure" socioeconomic status: • family income • parental educational attainment • parental occupation.[14] The MLDS, like the education community as a whole, has historically relied on free and reduced-price meals (FARMS) data to identify socioeconomically disadvantaged students and schools. Using the FARMS indicator as a measure of SES has advantages and disadvantages. The advantage is that it is readily available and it is a commonly used measure in educational research (because it is usually the only measure available). One disadvantage is that the FARMS indicator is only a proxy measure of poverty; it reflects only household income and not parental educational attainment or occupational status (Cowan et al., 2012). A second disadvantage is that it reflects only families that chose to participate. A third disadvantage is that recent changes to the National School Lunch Program have expanded eligibility so that many students receive free meals at school regardless of household income, making data since 2012 particularly inaccurate (USDE, 2012).
Resolution	Explore alternative measures and sources of data to include in the MLDS.
Feasibility	No data available
Status	Planned

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[12] National Forum on Education Statistics. (2015). Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems. (NFES 2015-158). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

[13] American Psychological Association (APA). Education and Socioeconomic Status Fact Sheet. Retrieved February 2015 from http://www.apa.org/pi/ses/resources/publications/factsheet-education.aspx.

[14] National Forum on Education Statistics. (2015). (NFES 2015-158).

Appendix

Resolved Data Gaps

1. Required 5-year de-linking of student and workforce records

Gap	A student record must be de-linked from a workforce record five years after the student's last enrollment in a Maryland educational institution.
Resolution	Revisions to Ed. Art., § 24-702(c), Annotated Code of Maryland effective July 2017 that changes the limit from 5 to 20 years.
Status	Resolved

2. North American Industry Codes (NAIC)

Gap	NAIC (North American Industry Codes) used to determine the industry of each employer in the Unemployment Insurance UI database, are missing in the MLDS.
Resolution	NAIC codes provided by DLLR have been completely and consistently loaded into the MLDS. MLDS analysis shows that 99.2% of employers in the System have a NAIC code.
Status	Resolved

3. Early Childhood Education Data

Gap	The Division of Early Childhood Development (DECD) at MSDE implemented the Kindergarten Readiness Assessment (KRA) in 2016?. The MLDS does not contain this assessment data.
Resolution	Data elements related to the KRA were approved for inclusion by the MLDS Governing Board in December 2016.
Status	Resolved

Feasibility Definitions

1. **Data available - In-Progress**
   This status indicates the Center has identified a data source and is working to establish agreements to obtain the data. The change may require additional approvals, such as changes to MOUs, inclusion in the Data Inventory, or changes to the Data Collection Calendar.
2. **Data available - Under consideration**
   The data is available at the source, but not currently collected by an MLDS agency partner, or other state agency. This status indicates the agency partner or the source organizations have expressed an interest to provide this data to the Center.
3. **Data available - Unfeasible**
   The data is available at the source, but not collected by an MLDS agency partner or other state agency. The collection of the data would require a new data collection by a state agency. This status indicates that it is administratively infeasible to capture the data.
4. **No data available**
   The data is not available from the source, not collected by an MLDS agency partner or other state agency, and the Center has found no examples of the data collected with fidelity in other states.
5. **Requires Legislative Change**
   The data may or may not be available at the source, but the Center is unable to establish an agreement to obtain the data, or consider the collection of the data because state statute prohibits the MLDS from incorporating the data.

Statuses

- **Planned**: "Planned" indicates that Center staff are exploring options to resolve the gap.
- **Active**: "Active" indicates Center staff are actively working on the resolution identified to resolve the gap.
- **Resolved**: "Resolved" indicates that the gap has been eliminated by enacting the resolution listed.
- **Closed:** "Closed" indicates that the gap has no resolution and cannot be eliminated.