



# MLDS CENTER

Maryland Longitudinal Data System

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## MEMORANDUM

**TO:** MLDS Governing Board  
**FROM:** Mr. Ross Goldstein, Executive Director  
**DATE:** March 10, 2025  
**SUBJECT:** Project Approvals and Updates

### Purpose

This agenda item is to update the Board on projects that have been reviewed and approved by the Executive Director under *Project Approval and Management Procedures*; projects that, when necessary, require Board review and approval; and updates on ongoing projects. Please note that in addition to the information presented for each new project, this memorandum also includes the complete project abstract submitted by the researcher for your further information and review.

### Projects for Consideration

<b>ERA # 101</b>	The Impact of Industrial Credentials on Students' Education and Labor Market Outcomes—Evidence from Microsoft Certifications
<b>Researcher</b>	Dr. Jing Liu University of Maryland College of Education MLDS Center Investigator
<b>Research Questions</b>	Research Question 1: What are the effects of earning a Microsoft certification on labor market outcomes, such as their labor market participation and quarterly earnings?  Research Question 2: What are the effects of earning a Microsoft certification on student postsecondary education outcomes?  Research Question 3 (exploratory): Do the effects of Microsoft certifications vary by credential subjects and subgroups of students?
<b>RPB Review</b>	The RPB was supportive of the project and noted the first use of Microsoft certification data in the MLDS.
<b>Exec. Dir. Determination</b>	Approved. The subject of this project is responsive to the Research Agenda, provides information about student performance that can be used to improve the state's education system, requires the use of longitudinal cross sector data, and is

	being conducted by a qualified researcher.
<b>Board Action</b>	Informational

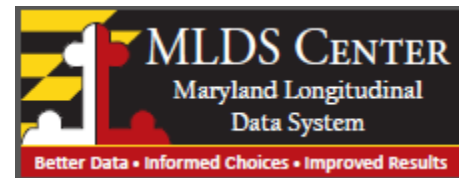
<b>ERA # 106</b>	In what ways are Black male students finding workforce or post-secondary success within and across the state of Maryland and to what extent do factors at the high schools contribute to this success?
<b>Researcher</b>	Dr. Tracy Sweet University of Maryland College of Education MLDS Center Associate Director of Research
<b>Research Questions</b>	<p>Research Question 1 - What is the state of outcomes for Black boys in the state of Maryland regarding high school outcomes (high school graduation, AP/IB course taking, lack of juvenile justice involvement), post-secondary outcomes (2-year or 4-year enrollment, degree earning, and wages) and how does this vary across high school districts? How have these outcomes changed between 2008- present?</p> <p>Research Question 2 - Focusing on college enrollment, degree earning, and wages earned as outcomes, to what extent can this variance be explained by school and district-level covariates such as socio- demographic variables and average school outcomes?</p> <p>Research Question 3 - To what extent can machine learning predictive algorithms be used to predict outcomes (college enrollment, degree earning, wages earned) for Black men? Are there different methods of analysis that should be recommended or avoided when doing a sub-group/intersectional analysis?</p>
<b>RPB Review</b>	The RPB was supportive of the project and noted the additional collaboration with several districts with whom the MLDS has not yet worked. The RPB also noted the importance and timeliness of the topic.
<b>Exec. Dir. Determination</b>	Approved. The subject of this project is responsive to the Research Agenda, provides information about student performance that can be used to improve the state's education system, requires the use of longitudinal cross sector data, and is being conducted by a qualified researcher.
<b>Board Action</b>	Informational

<b>ERA # 98</b>	Moving the Needle on School Attendance and Truancy: A Study of Maryland's Bright Spot Middle and High Schools
<b>Researcher</b>	Dr. Clea McNeely

	University of Tennessee, Knoxville
<b>Research Questions</b>	<p>Research Question 1 - What are the trends over time (2022 – 2024) in excused absences, unexcused absences, in-school suspensions, and out-of-school suspensions? How do these trends vary across student characteristics and between schools and districts?</p> <p>Research Question 2 - What are potential measures of equitable reduction in absenteeism combined with the equitable reduction in exclusionary responses to absenteeism? How do these measures compare in terms of ease of measurement, sensitivity to detecting change over time, and ease of interpretability?</p> <p>Research Question 3 - Which “bright spot” Maryland middle and high schools equitably reduced absenteeism and responses to absenteeism (use of the unexcused code, in-school suspensions, and court truancy adjudications) between 2022 and 2024?</p> <p>Research Question 4 - Does attending a “bright spot” school improve academic achievement and reduce early school leaving compared to a matched sample of students who do not attend a bright spot school?</p>
<b>RPB Review</b>	The RPB was supportive of the project and noted the timeliness of research on attendance policies.
<b>Exec. Dir. Determination</b>	Approved. The subject of this project is responsive to the Research Agenda, provides information about student performance that can be used to improve the state's education system, requires the use of longitudinal cross sector data, and is being conducted by a qualified researcher.

**Project Updates**

<b>ERA # 87</b>	Understanding the relationship between high school opportunity gap and postsecondary outcomes and earnings for Black students in Maryland
<b>Researcher</b>	Dr. Frim Ampaw Morgan State University MLDS Center Associate Director of Research
<b>Update</b>	Dr. Ampaw presented additional background research, revised her research questions according to the RPB comments, and presented descriptive statistics for the opportunity gap measures using MLDS data. The RPB was appreciative and noted the improved understanding of the application with Dr. Ampaw's revisions.



\*This form is subject to disclosure in a Public Information Act request.

Project Title	Agency Control #
The Impact of Industrial Credentials on Students’ Education and Labor Market Outcomes–Evidence from Microsoft Certifications	101

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### Section 1. Principal Investigator

<b>Principal Investigator (please list additional project team members in Section 7)</b>
Jing Liu
<b>Principal Investigator’s Email Address</b>
_Jliu28@umd.edu
<b>Name of University or Organization</b>
University of Maryland College Park
<b>Principal Investigator Background and Qualification (provide overview of experience and attach a CV)</b>
Dr. Jing Liu is assistant professor in education policy at the University of Maryland College Park. He earned his Ph.D. in the economics of education from Stanford University in 2018 and completed his postdoctoral training from Brown University in 2020. He has been working with longitudinal data systems for about 10 years and has published his work in top journals in economics, policy, and education. He became an affiliate with the MLDS Center in 2020.

A completed form is available [here](#) for your review.

**Important:** Once submitted, this application is a public document that will be shared with stakeholders throughout the project review process and generally made available pursuant to a *Public Information Act Request*.

## Section 2. Project Information

### Background and Purpose of the Study

(No more than 500 words; please include references; references do not count toward the word count)

With rapid technological advances, the labor market exhibits a growing need for more frequent and ongoing skill development (Carnevale, Smith, & Strohl, 2010; Deming & Noray, 2020). According to data released by the US Department of Labor, aside from a temporary dip as a result of the COVID-19 pandemic, the number of unfilled jobs increased steadily during the last decade, from 2.2 million in May 2009 to a record high of 9.2 million in May 2021, which is almost the same as the number of individuals who were unemployed during the same month (US Bureau of Labor Statistics, 2021). While many factors may influence inefficiencies in labor force demand and supply, evidence suggests that one of the main reasons for the unfilled positions is the mismatch between the skills required for jobs and the skills workers hold, or the “skills gap” (AACC, 2017). Accordingly, the federal and state governments increasingly prioritize workforce training in their policy agendas.

Recent quasi-experimental research demonstrates that short-term postsecondary training programs can generate meaningful labor market returns for participants. For instance, Carruthers and Sanford (2018) and Darolia, Guo, and Kim (2023) respectively demonstrate that students who receive diplomas or certificates from short-term technical training programs in Tennessee and Kentucky realize quarterly earnings gains of hundreds of dollars. In related work, our own recent work shows that students who earn an industry-recognized credential through Virginia’s FastForward noncredit workforce training program experience a quarterly earnings gain of approximately \$1,000 and increased probability of employment by 2.4 percentage points (Xu et al., 2024). Furthermore, an important feature of short-term workforce training programs such as FastForward programs is that they typically enroll and improve earnings outcomes for populations (e.g. Black, male, and older students) that are underrepresented and are associated with historically worse outcomes in traditional higher education (Bailey and Dynarski, 2011; Digest of Education Statistics, Table 303.50; National Student Clearinghouse, 2017).

In this project we propose to use quasi-experimental methods to estimate the impact of obtaining a Microsoft certification on labor market outcomes and postsecondary educational participation. Our primary outcomes will be engagement in the workforce and quarterly earnings measured up to 36 months after the certification exam. We will secondarily examine the impact of Microsoft credentials on postsecondary educational participation in credit-bearing training program.

#### References:

Bailey, M. J., & Dynarski, S. M. (2011). Gains and gaps: Changing inequality in US college entry and completion (No. w17633). National Bureau of Economic Research.

Carnevale, A. P., Smith, N., & Strohl, J. (2010). Help wanted: Projecting jobs and education requirements through 2018. Georgetown University, Center on Education and the Workforce.

Carruthers, C. K., & Sanford, T. (2018). Way station or launching pad? Un- packing the returns to adult technical education. *Journal of Public Economics*, 165, 146-159.

Darolia, R., Guo, C., & Kim, Y. (2023). The Labor Market Returns to Very Short Postsecondary Certificates. IZA Discussion Papers, No. 16081, Institute of Labor Economics (IZA), Bonn

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Deming, D. J., & Noray, K. (2020). Earnings dynamics, changing job skills, and STEM careers. *The Quarterly Journal of Economics*, 135(4), 1965-2005. <https://doi.org/10.1093/qje/qjaa021>

Xu, D., Bird, K., Cooper, M., and Castleman, B. (2024). Noncredit Workforce Training, Industry Credentials, and Labor Market Outcomes. (EdWorkingPaper: 24-959). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/6rd4-tg25>

**Research Project Question**

*Research Question 1:* What are the effects of earning a Microsoft certification on labor market outcomes, such as their labor market participation and quarterly earnings?

*Research Question 2:* What are the effects of earning a Microsoft certification on student postsecondary education outcomes?

*Research Question 3 (exploratory):* Do the effects of Microsoft certifications vary by credential subjects and subgroups of students?

**Research Methods**

**(Please include information for: Sample/Cohort and Justification; Definition of Measures and Constructs; Analysis Approach)**

We plan to estimate the causal effects of earning a Microsoft certificate on postsecondary and labor market outcomes using a regression discontinuity (RD) design. This method allows us to hold constant student’s education background and knowledge about the specific subjects they were tested on by comparing students who scored just above and just below the threshold necessary to earn the certificate itself. The estimated difference in outcomes between these two groups represents the causal effect of earning a Microsoft certificate. We will complement the RD estimates by exploring additional quasi-experimental estimation strategies. For instance, following Bulman (2015), we will explore leveraging variation induced by the opening or closing of a Microsoft testing center at a student’s own or a neighboring high school as an instrument for whether a student took an exam. These alternative identification strategies allow us to leverage different sources of exogenous variation and estimate effects on different margins of industry credential exam-taking. We can think of two strategies to collect information on test centers. First, we can observe when a center started to have or stop having test-takers (and whether that’s true before and after those dates) as a way to infer the opening and closing time of a center. Alternatively, as all the tests are administered by Pearson VUE, we can directly work with them to get such information. With that said, the IV approach is only supplemental to our main RDD approach. If we find there is no way to get reliable information on test centers, we will reevaluate whether this identification strategy is feasible.

We plan to use data from all test takers who were Maryland residents from the 2013 calendar year to 2022. The data contain 17,982 observations at the student-exam level. As we need to primarily use an RD design which exploits variation from a small bandwidth of passing the test, we would like to use all the data to maximize our statistical power. When power allows, we will also use subsamples such as high school student test takers, to explore specific subgroups of interest.

The data elements needed for answering this question include K-12 attendance, assessment, courses, schools, college readiness, completers/graduates; Microsoft test taking and certification status; postsecondary courses, enrollment, credits/grades, graduates; and workforce wage data. Data from K-12 attendance, assessment, courses, schools, college readiness will primarily serve as control variables, such as student demographics (e.g., race, gender, special education status, English learner status), academic performance (e.g., GPA, test scores), course-taking patterns (e.g., whether enrolled in CTE courses)

<b>How will this research benefit the State of Maryland in terms of state or local policy and/or practice?</b>		
Maryland is in the process of implementing the Blueprint for Maryland’s Future. One component of the Blueprint is the goal of having 45% of high school students complete a registered apprenticeship or earn an industry-recognized credential. This study provides a timely understanding of how industry credentials impact students’ education and labor market outcomes. The findings will help state policy makers assess the impact of this new policy.		
<b>Explain why this research requires longitudinal cross-sector data?</b>		
The majority of students who took a Microsoft test are junior and senior high school students. We will link Microsoft test taking data with student postsecondary and labor market outcomes to evaluate the impact of receiving a Microsoft credential.		
<b>Proposed Center Output (Typical products for the MLDS Center include a research series presentation to stakeholders and a research brief in the MLDS Center template).</b>		
We propose creating a summary report of research and findings for this project’s Center Output. The MLDS Center summary report would include tables and charts showing the findings of our analyses, as well as prose descriptions of the research questions, methods of analysis, and the results obtained. This summary will also be included in full in the final report to be shared to any relevant stakeholders.		
<b>Timeline for the proposed project (identify major deliverables and approximate dates)</b>		
<ul style="list-style-type: none"> <li>• Spring 2025: pre-analysis plan and registration</li> <li>• Spring 2025 - Summer 2025: data clearing and merging; refine analysis plan</li> <li>• Summer 2025 - Spring 2026: data analysis</li> <li>• Fall 2025 &amp; Fall 2026: internal and external dissemination, including a research series presentation at MLDS Center</li> <li>• Fall 2026 - Winter 2026: manuscript writing</li> <li>• Spring 2027: Finish a research brief for MLDS Center</li> </ul>		
<b>Plans for further development (i.e. journal submission, etc)</b>		
We plan to submit the finished manuscript to a top-tier economics or public policy journal, such as American Economic Journal—Economic Policy and Journal of Policy Analysis and Management. We also plan to distribute the findings through presentations in academic conferences and policy briefs shared to other relevant stakeholders.		

### Section 3. MLDS Center [Research Agenda](#)

Does your project relate to one of the following areas which the General Assembly has specifically directed the MLDS to study:	Yes	No
The impact of a State or federal education program? <sup>1</sup>	X	
The performance of educator preparation programs?		X
Best practices regarding classroom instruction?		X

<sup>1</sup> All projects must relate to a state or federal education program. If you are not sure, please contact [ross.goldstein@maryland.gov](mailto:ross.goldstein@maryland.gov).

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The impact of child welfare programs on the educational and economic outcomes of students?		X
An analysis of social determinants, provided by State agencies <sup>2</sup> and appropriate local agencies, that impact education performance of students and indicate the need for wraparound services for students.		X
Does your project use State or Federal financial aid <sup>3</sup> data?		X
<b>If you are requesting to use FAFSA data please explain how this research will benefit the administration of Title IV federal financial aid.</b>		
<b>Research Agenda Category (page 2 of the <a href="#">Research Agenda</a>) – Which category does the project address? Please explain.</b>		
This project concerns program & policy evaluation as we focus on evaluating the causal impact of earning an industry credential.		
<b>Research Agenda Themes (page 2-3 of the <a href="#">Research Agenda</a>) - Which cross cutting theme is incorporated in the project? Please explain.</b>		
This project aligns with the theme Supports and Barriers as we will evaluate a policy that can impact the transition between education and workforce.		

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<sup>2</sup> State agencies include: Maryland Department of Health, Department of Human Services, and Department of Juvenile Services

<sup>3</sup> Financial aid data derived from the FAFSA may only be used in research to improve the administration of federal financial aid programs.



### Section 4. Data and Cross Sector Analysis

Please review the MLDS Center [Data Inventory](#) and the MLDS Center [Data Gap Analysis](#) prior to completing this section.

<b>Sectors*</b> <b>*The data falling within each sector is outlined below. The purpose of this section is to ensure the project is cross sector. Projects will not necessarily use all data elements within the sector (see methods section for definitions of measures).</b>	<b>X</b>
Early Childhood Education Sector	
K-12 Education Sector	X
Adult Education Sector	
Justice Involved Youth Sector	
Child Welfare Sector	
Postsecondary Education Sector	X
Other Completions and Credentials Sector	X
Workforce Sector	X

*Put an 'x' next to each data sector your project will include. You must have at least 2 sectors.*

<b>Do you plan to request to include <a href="#">external data</a> as part of your project?</b>
No

**\*Sectors**

**Early Childhood Education Sector**

- PreK Academic Engagement

**K-12 Public School Education Sector**

- Enrollment and attendance
- Assessments
- Courses and grades
- Completions
- Discipline
- Public School Characteristics

**Adult Education Sector**

- GED/NEDP Exam Results
- Apprenticeship
- Adult Education
- Correction Education

**Juvenile Justice Sector**

- Juvenile Justice Records
- Juvenile Education Records

**Child Welfare Sector**

- Out-of-Home Placements

**Postsecondary Education Sector**

- College and University Enrollment
- College and University Courses, Credits and Grades
- College and University Degrees
- College and University Workforce Training
- Financial Aid

**Other Completions and Credentials Sector**

- Industry Certifications
- Licenses

**Workforce Sector**

- Public School Teachers
- Public School Staff
- Workforce visibility/participation
- Workforce Earnings
- Workforce Industry

**Section 5. Financial Information**

<p><b>The MLDS Center incurs costs for every project related to: (a) IT support and infrastructure; (b) assistance from subject matter experts, (c) criminal history background checks; and (d) creation of an analytic data set. Average project costs are between \$1,000 and \$3,000. A detailed, customized estimate will be provided prior to project initiation. (Please indicate your answer with an “X”)</b></p>							
<table border="1"> <tr> <td>X</td> <td>I will reimburse MLDS for all applicable fees.</td> </tr> <tr> <td></td> <td>I will only be able to provide partial reimbursement.</td> </tr> <tr> <td></td> <td>I will need a waiver.</td> </tr> </table>	X	I will reimburse MLDS for all applicable fees.		I will only be able to provide partial reimbursement.		I will need a waiver.	
X	I will reimburse MLDS for all applicable fees.						
	I will only be able to provide partial reimbursement.						
	I will need a waiver.						
<p><b>Grant Funding (indicate with an ‘X’)</b></p>							
<table border="1"> <tr> <td>X</td> <td>This project has already received funding</td> </tr> <tr> <td></td> <td>I plan to apply or am in the process of applying for grant funding</td> </tr> <tr> <td></td> <td>No grant funding is planned</td> </tr> </table>	X	This project has already received funding		I plan to apply or am in the process of applying for grant funding		No grant funding is planned	
X	This project has already received funding						
	I plan to apply or am in the process of applying for grant funding						
	No grant funding is planned						
<p><b>Name of Grantor</b></p>							
<p>Arnold Ventures</p>							
<p><b>RFP or Grant Program Information (you may provide a link to the grantor’s website)</b></p>							
<p><a href="https://arnoldventures.smapply.us/prog/building_evidence_rfp/">https://arnoldventures.smapply.us/prog/building_evidence_rfp/</a></p>							
<p><b>Amount of grant funds sought or awarded.</b></p>							
<p>\$356,211</p>							
<p><b>Grant Application Date</b></p>							
<p>August 15, 2024</p>							
<p><b>Do you intend to proceed without grant funding?</b></p>							
<p>N/A</p>							
<p><b>Are you receiving other funding for this proposed project? If yes, how much?</b></p>							
<p>No</p>							

## Section 6. Special Considerations

**Principal Investigators NOT affiliated with a Maryland College or University – please provide information on:**

- a. Your familiarity with Maryland policies affecting your research topic; and
- b. How your project meets a specific Maryland research need?

**Please also upload (with this form) any letters of reference or endorsement from a Maryland researcher or a State or local agency that vouches for your qualifications and expertise.**

**For projects that involve a small population, please confirm that you are aware of the MLDS Center's [data suppression policy](#) and explain how you will report your findings while conforming to the suppression requirements.**

**For projects that involve a single school system, university, or program, please explain the statewide implications of the project.**

**Please also upload (with this form) any letters of support from the subject (i.e. school system or university) of the study.**

**Section 7. Project Team**

<p><b>Project Team</b></p> <ul style="list-style-type: none"> <li>- Please list all members of the research team and indicate roles and responsibilities.</li> <li>- If the Principal Investigator listed in Section 1 above is NOT the primary point of contact for the project (including research, data access, and presentations to stakeholders), please indicate which team member is the primary point of contact and provide that individual's contact information.</li> </ul>		
Name and Organization	Role	Is system access needed? (Yes/No)
Benjamin Castleman	Co-PI	Yes
Di Xu	Co-PI	Yes

**Section 8. Submission**

Once this form is completed, please complete the online application ([here](#)) and upload this form, CVs for all members of the research team, and any other supporting materials.



\*This form is subject to disclosure in a Public Information Act request.

Project Title	Agency Control #
In what ways are Black male students finding workforce or post-secondary success within and across the state of Maryland and to what extent do factors at the high schools contribute to this success?	106

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### Section 1. Principal Investigator

<b>Principal Investigator (please list additional project team members in Section 7)</b>
Tracy Sweet
<b>Principal Investigator’s Email Address</b>
<a href="mailto:tsweet@umd.edu">tsweet@umd.edu</a>
<b>Name of University or Organization</b>
University of Maryland College Park
<b>Principal Investigator Background and Qualification (provide overview of experience and attach a CV)</b>
I am currently the Associate Director for Research for MLDS and am an Associate Professor at the University of Maryland College Park in the College of Education. I have been involved in a number of MLDS research projects; I have reviewed proposals, and am currently working on a MLDS research project related to data science.

**Important:** Once submitted, this application is a public document that will be shared with stakeholders throughout the project review process and generally made available pursuant to a *Public Information Act Request*.

A completed form is available [here](#) for your review.

## Section 2. Project Information

### Background and Purpose of the Study

(No more than 500 words; please include references; references do not count toward the word count)

Education researchers have documented consistent differences in achievement between Black and White students so often that the term achievement gap is generally synonymous with Black students performing worse than White students, with often Black male students performing lowest on standardized tests (Bohrnstedt et al., 2015). There has been research on the causes, such as discipline (Pearman et al., 2019) or structural racism in general (Merolla & Jackson, 2019) and the term opportunity gap has been used to acknowledge the systemic factors as likely causes for differences (Milner, 2012). There has also been prevalent research on ways to remedy or close the opportunity gaps; a meta-analysis even exists (Jeynes, 2015).

However, there is much less research on Black students not in comparison to white students and even less research on where and how Black students are thriving. Through a research practice partnership with DEI directors at AACPS, MCPS, and PGCPs, this project proposes to use MLDS data to examine how Black male students are succeeding and thriving in Maryland public schools. Rather than focus on comparisons by race, this project will focus solely on Black male students to determine both individual and school-level factors that are associated with success. We define success in several ways (see research questions and methods below), but largely focus on post-secondary enrollment, completion, and work-force involvement. Maryland is unique in that the proportion of Black students varies widely across school districts and even between schools in a single school district for some districts, which allows us to quantify the contextual factors that are associated with variance in outcomes.

#### References

- Bohrnstedt, G., Kitmitto, S., Ogut, B., Sherman, D., & Chan, D. (2015). School Composition and the Black-White Achievement Gap. NCEs 2015-018. *National Center for Education Statistics*.
- Jeynes, W. H. (2015). A Meta-Analysis on the Factors That Best Reduce the Achievement Gap. *Education and Urban Society*, 47(5), 523-554. <https://doi.org/10.1177/0013124514529155>
- Merolla, D. M., & Jackson, O. (2019). Structural racism as the fundamental cause of the academic achievement gap. *Sociology Compass*, 13(6), e12696.
- Milner IV, H. R. (2012). Beyond a test score: Explaining opportunity gaps in educational practice. *Journal of Black Studies*, 43(6), 693-718.
- Pearman, F. A., Curran, F. C., Fisher, B., & Gardella, J. (2019). Are Achievement Gaps Related to Discipline Gaps? Evidence From National Data. *AERA Open*, 5(4). <https://doi.org/10.1177/2332858419875440>

### Research Project Question

1. What is the state of outcomes for Black boys in the state of Maryland regarding high school outcomes (high school graduation, AP/IB course taking, lack of juvenile justice involvement), post-secondary outcomes (2-year or 4-year enrollment, degree earning, and wages) and how does this vary across high school district? How have these outcomes changed between 2008-present?

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2. Focusing on college enrollment, degree earning, and wages earned as outcomes, to what extent can this variance be explained by school and district-level covariates such as socio-demographic variables and average school outcomes?
3. To what extent can machine learning predictive algorithms be used to predict outcomes (college enrollment, degree earning, wages earned) for Black men? Are there different methods of analysis that should be recommended or avoided when doing a sub-group/intersectional analysis?

**Research Methods**

**(Please include information for: Sample/Cohort and Justification; Definition of Measures and Constructs; Analysis Approach)**

We will conduct three threads of analyses:

I have revised my research methods to use a cohort that begins high school in 2008 to examine RQ2 and RQ3. As advised, this will allow for students to have graduated (if that was their intention) prior to the Covid-19 pandemic. For RQ1, I will use a sliding window based on the outcome of interest. I am interested in high school outcomes, so I will examine Black boys in high school starting in 2008 -2018, acknowledging that some recent trends in outcomes may not be reliable. For college outcomes, I will examine those graduating from high school in 2008 -2018 and enrolling in college. For workforce outcomes, I will examine wages earned from 2008-2018 by Black men in the 18-24 age group.

RQ1: We conduct a series of exploratory analyses to examine outcomes for Black boys and men. Using a cohort of Black male students who enter high school in the years 2008-2018, we will examine the following high school outcomes: AP/IB course-taking, standardized test scores, juvenile justice involvement, suspensions/expulsions, high school graduation, and wages earned from-part-time work, although we acknowledge that outcomes for students entering high school in 2017 will be impacted by the covid-19 pandemic. Course-taking will only be examined for later cohorts for which course data are available. Our aim is to examine trends over the past 10 more years, disaggregated by district. We will repeat for college-specific outcomes with students graduating from high school in 2008-2019 and enrolling in college. We will examine degrees earned within a 3- and 6-year time frame (using 2008-2017 for 4-year degrees). For examining wages earned and years in the workforce, we will examine the same cohorts of Black men, focusing on wages earned and years in the workforce, disaggregating by high school district and those who were enrolled in a college or university.

RQ2: For this research question, we will use a cohort of Black male students who enter high school in 2008. If sample sizes require using an additional cohort, we will also include Black male students who entered high school in 2009. We have 4 outcome variables: college enrollment, degree completion, wages earned, and time in the workforce. Selection criteria will vary based on the outcome variable. College enrollment will include the entire sample; degree completion will focus only on individuals who enroll in a degree-seeking program in 2012-2014. We will examine two outcome variables: wages earned in the first 2 years after no-longer being enrolled in a degree program (or in the first 2 years after graduating high school if post-secondary enrollment is not found) – note that we may need to adjust these wages for inflation. We will also examine wages earned for all individuals in the sample in 2021. For time in the workforce, we will focus on high school graduates who did not enroll in post-secondary degree programs and will use the number of years (or quarters) in the workforce as the outcome variable.

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For each outcome variable, we will fit multilevel models with random intercepts by school (and include a fixed effect for district or fit a 3-level model if needed) with random slopes as warranted by the model selection process. I will be using predictors regarding the high school only. For example, student predictors include high school IEP status, attendance, FARMS status, ELL status, juvenile justice involvement and will consider using achievement variables such as high school GPA and standardized test scores; high school-level predictors include the racial make-up in the school, proportions of students with IEPs, FARMS, or ELL status levels; proportions of suspensions/expulsions/arrests, school-average attendance rates and test scores. Similarly, I will aggregate school-level predictors for the same district level information if needed.

For each outcome variable, we are interested in the extent to which school (or district) predictors explain variability across schools in both intercepts and random slopes, meaning that we expect to have school level predictors predicting random slopes (level 1/level 2 interactions). Further, we aim to estimate the contextual effects of the school, which supports fitting random intercept models with a fixed slope for a level 1 variable and includes a level 2 aggregate of that level 1 variable as a level 2 predictor of the random intercept. Models with multiple random slopes have convergence issues, so we will follow a series of strict model selection and diagnostic criteria so we can have great confidence in the models we share with our district partners. I also acknowledge that continued conversations with district partners may change the specific combinations of predictors that are included.

RQ3: Algorithmic bias is the concept that predictive algorithms often have worse predictions for observations in the minority group, however that is defined. Given the fact that Black students make up a minority of students and Black male students are disproportionately represented in post-secondary programs, this research question focuses on how machine learning algorithms should be employed for sub-group analyses. We will conduct an exploratory data-science specific analysis to examine how both statistical inference and machine learning algorithms for predicting wages and post-secondary enrollment and completion may suffer from algorithmic bias when Black male students are considered with other racial groups and female students compared to when they are examined alone. Using the samples in R2, we will apply several standard machine learning algorithms given the predictors mentioned above to examine the predictive performance. We will then conduct a series of empirical investigations to explore under what conditions these predictions are impacted by including additional individuals (non-Black men) in our sample. We will also apply common algorithmic bias mitigation strategies to determine whether they are useful. Our hypothesis is that predicted algorithms should be applied on intersectional groups separately, but it is possible that some algorithmic bias mitigation. This work will inform continued recommendations for how data can and should be analyzed equitably.

### **How will this research benefit the State of Maryland in terms of state or local policy and/or practice?**

To our knowledge, there has not been a study focusing on predicting outcomes for Black men based on the Maryland public high school attended. There has been anecdotal evidence and other studies that found predictors of success for Black male students, but the demographics of the state of Maryland do not mirror the US and it is relevant to know if there are high school factors that are consistently associated with post-secondary completion and positive work-force outcomes. Specifically, I will fit statistical models only on the Black male student population, which is also not a common practice. The benefit for the State is to understand which factors are associated with success;



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<p>this will inform practices that local districts may choose to take to improve outcomes for their Black male populations. Further, our methodological work will inform <i>how</i> researchers interested in studying sub-groups should be doing this work. Often models (statistical models or machine learning algorithms) are fit on the entire sample of students, leaving minoritized individuals to be less prominent in the modeling and the resulting model estimates.</p>
<p><b>Explain why this research requires longitudinal cross-sector data?</b></p>
<p>We are interested in studying post-secondary outcomes (i.e., college outcomes, workforce outcomes) for Black boys using covariates from MSDE. We will also incorporate data from the Department of Juvenile Services.</p>
<p><b>Proposed Center Output (Typical products for the MLDS Center include a research series presentation to stakeholders and a research brief in the MLDS Center template).</b></p>
<p>Research Series presentations; research briefs; research reports for DEI directors in several counties.</p>
<p><b>Timeline for the proposed project (identify major deliverables and approximate dates)</b></p>
<p>I hope to get approval in Fall 2024 and will complete the project during Summer/Fall 2025.</p>
<p><b>Plans for further development (i.e. journal submission, etc)</b></p>
<p>This project encompasses several research questions, so I predict that this work will result in several research products for the center. For the first research question alone, we plan to provide a research report for the DEI directors. Our hope to present our substantive findings at education conferences (SREE and AERA) and publish in education policy journals with collaborators in the Social Justice Research Practice Partnership (these include DEI directors and UMD researchers). Regarding journals for this work, I am not sure yet. Perhaps AERJ or something more specific like the Journal of Black Studies or the Journal of African American Males in Education. Ashani and I will present our methodological research at conferences (SREE, AERA, IMPS) and aim to publish in methods journals such as the Journal of Educational and Behavioral Statistics.</p>

**Section 3. MLDS Center [Research Agenda](#)**

Does your project relate to one of the following areas which the General Assembly has specifically directed the MLDS to study:	Yes	No
The impact of a State or federal education program? <sup>1</sup>	X	
The performance of educator preparation programs?		X
Best practices regarding classroom instruction?		X
The impact of child welfare programs on the educational and economic outcomes of students?		X
An analysis of social determinants, provided by State agencies <sup>2</sup> and appropriate local agencies, that impact education performance of students and indicate the need for wraparound services for students.	X	

<sup>1</sup> All projects must relate to a state or federal education program. If you are not sure, please contact [ross.goldstein@maryland.gov](mailto:ross.goldstein@maryland.gov).

<sup>2</sup> State agencies include: Maryland Department of Health, Department of Human Services, and Department of Juvenile Services

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Does your project use State or Federal financial aid <sup>3</sup> data?	X
<b>If you are requesting to use FAFSA data please explain how this research will benefit the administration of Title IV federal financial aid.</b>	
<b>Research Agenda Category (page 2 of the <a href="#">Research Agenda</a>) – Which category does the project address? Please explain.</b>	
<p>Educational, Service, and Workforce Outcomes because we are interested in understanding outcomes for Black male students.</p> <p>Pathways and pipelines because we are interested in high school, college, and career pathways for Black male students.</p> <p>Methodological Inquiries and Measurement because we are interested in studying algorithmic bias with this population.</p>	
<b>Research Agenda Themes (page 2-3 of the <a href="#">Research Agenda</a>) - Which cross cutting theme is incorporated in the project? Please explain.</b>	
Equity and Inclusion because we are interested in understanding the intersectionality of being Black and male on the educational journeys for these students.	

**Section 4. Data and Cross Sector Analysis**

Please review the MLDS Center [Data Inventory](#) and the MLDS Center [Data Gap Analysis](#) prior to completing this section.

<b>Sectors*</b> <b>*The data falling within each sector is outlined below. The purpose of this section is to ensure the project is cross sector. Projects will not necessarily use all data elements within the sector (see methods section for definitions of measures).</b>	<b>X</b>
Early Childhood Education Sector	
K-12 Education Sector	X
Adult Education Sector	
Justice Involved Youth Sector	X
Child Welfare Sector	
Postsecondary Education Sector	X
Other Completions and Credentials Sector	
Workforce Sector	X

*Put an 'x' next to each data sector your project will include. You must have at least 2 sectors.*

<b>Do you plan to request to include <a href="#">external data</a> as part of your project?</b>
No

<sup>3</sup> Financial aid data derived from the FAFSA may only be used in research to improve the administration of federal financial aid programs.

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### **\*Sectors**

#### **Early Childhood Education Sector**

- PreK Academic Engagement

#### **K-12 Public School Education Sector**

- Enrollment and attendance
- Assessments
- Courses and grades
- Completions
- Discipline
- Public School Characteristics

#### **Adult Education Sector**

- GED/NEDP Exam Results
- Apprenticeship
- Adult Education
- Correction Education

#### **Juvenile Justice Sector**

- Juvenile Justice Records
- Juvenile Education Records

#### **Child Welfare Sector**

- Out-of-Home Placements

#### **Postsecondary Education Sector**

- College and University Enrollment
- College and University Courses, Credits and Grades
- College and University Degrees
- College and University Workforce Training
- Financial Aid

#### **Other Completions and Credentials Sector**

- Industry Certifications
- Licenses

#### **Workforce Sector**

- Public School Teachers
- Public School Staff
- Workforce visibility/participation
- Workforce Earnings
- Workforce Industry

**Section 5. Financial Information**

<p><b>The MLDS Center incurs costs for every project related to: (a) IT support and infrastructure; (b) assistance from subject matter experts, (c) criminal history background checks; and (d) creation of an analytic data set. Average project costs are between \$1,000 and \$3,000. A detailed, customized estimate will be provided prior to project initiation. (Please indicate your answer with an "X")</b></p>							
<table border="1"> <tr> <td style="width: 20px;"></td> <td>I will reimburse MLDS for all applicable fees.</td> </tr> <tr> <td></td> <td>I will only be able to provide partial reimbursement.</td> </tr> <tr> <td>X</td> <td>I will need a waiver.</td> </tr> </table>		I will reimburse MLDS for all applicable fees.		I will only be able to provide partial reimbursement.	X	I will need a waiver.	
	I will reimburse MLDS for all applicable fees.						
	I will only be able to provide partial reimbursement.						
X	I will need a waiver.						
<p><b>Grant Funding (indicate with an 'X')</b></p>							
<table border="1"> <tr> <td style="width: 20px;"></td> <td>This project has already received funding</td> </tr> <tr> <td></td> <td>I plan to apply or am in the process of applying for grant funding</td> </tr> <tr> <td>X</td> <td>No grant funding is planned</td> </tr> </table>		This project has already received funding		I plan to apply or am in the process of applying for grant funding	X	No grant funding is planned	
	This project has already received funding						
	I plan to apply or am in the process of applying for grant funding						
X	No grant funding is planned						
<p><b>Name of Grantor</b></p>							
<p>University of Maryland (some of this work is related to a Research Practice Partnership grant sponsored by UMD)</p>							
<p><b>RFP or Grant Program Information (you may provide a link to the grantor's website)</b></p>							
<p>NA</p>							
<p><b>Amount of grant funds sought or awarded.</b></p>							
<p>NA</p>							
<p><b>Grant Application Date</b></p>							
<p>NA</p>							
<p><b>Do you intend to proceed without grant funding?</b></p>							
<p>Yes</p>							
<p><b>Are you receiving other funding for this proposed project? If yes, how much?</b></p>							
<p>I am receiving funds for a larger partnership, so some of my time on this project will be in part funded by the RPP grant. This would be 0.3 months per year. I am receiving funds for my work with MLDS through a contract for the equivalent of 1 summer month and 1 course buyout along with a 20-hour GA.</p>							

## Section 6. Special Considerations

**Principal Investigators NOT affiliated with a Maryland College or University – please provide information on:**

- a. Your familiarity with Maryland policies affecting your research topic; and
- b. How your project meets a specific Maryland research need?

**Please also upload (with this form) any letters of reference or endorsement from a Maryland researcher or a State or local agency that vouches for your qualifications and expertise.**

**For projects that involve a small population, please confirm that you are aware of the MLDS Center's [data suppression policy](#) and explain how you will report your findings while conforming to the suppression requirements.**

I do not anticipate having small numbers, but we will abide by the data suppression policy.

**For projects that involve a single school system, university, or program, please explain the statewide implications of the project.**

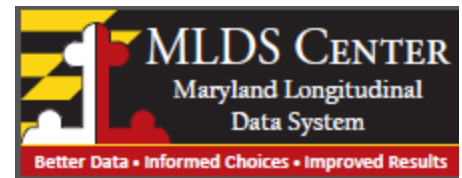
**Please also upload (with this form) any letters of support from the subject (i.e. school system or university) of the study.**

**Section 7. Project Team**

<p><b>Project Team</b></p> <ul style="list-style-type: none"> <li>- Please list all members of the research team and indicate roles and responsibilities.</li> <li>- If the Principal Investigator listed in Section 1 above is NOT the primary point of contact for the project (including research, data access, and presentations to stakeholders), please indicate which team member is the primary point of contact and provide that individual's contact information.</li> </ul>		
Name and Organization	Role	Is system access needed? (Yes/No)
Ashani Jayasekera	GA	Yes

**Section 8. Submission**

Once this form is completed, please complete the online application ([here](#)) and upload this form, CVs for all members of the research team, and any other supporting materials.



\*This form is subject to disclosure in a Public Information Act request.

Project Title	Agency Control #
Moving the Needle on School Attendance and Truancy: A Study of Maryland's Bright Spot Middle and High Schools	98

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### Section 1. Principal Investigator

<b>Principal Investigator (please list additional project team members in Section 7)</b>
Clea A. McNeely
<b>Principal Investigator's Email Address</b>
cmcneely@utk.edu
<b>Name of University or Organization</b>
University of Tennessee, Knoxville, College of Nursing
<b>Principal Investigator Background and Qualification (provide overview of experience and attach a CV)</b>
Dr. Clea McNeely is a Research Professor at the University of Tennessee, Knoxville College of Nursing. She received her DrPH (concentration in population studies and epidemiology) from the University of California, Los Angeles, and completed an NICHD-funded postdoctoral fellowship at RAND Corporation. She has served as a faculty member at the University of Minnesota Medical School, The Johns Hopkins Bloomberg School of Public Health, and the University of Tennessee, Knoxville. Dr.

**Important:** Once submitted, this application is a public document that will be shared with stakeholders throughout the project review process and generally made available pursuant to a *Public Information Act Request*.

## Project Approval - Detailed Application

McNeely’s research focuses on how schools can promote adolescent health and development. Her passion is to use quasi-experimental designs to evaluate the impact of long-standing state and local education policies that have never had their effectiveness examined. The William T. Grant Foundation, the National Institute of Justice, the Centers for Disease Control and Prevention, the World Health Organization, and several other foundations have funded her research.

Dr. McNeely has the requisite expertise in longitudinal analysis of linked administrative data. In research funded by the National Institute of Justice (NIJ-2014-IJ-CX-0010), she used administrative data from seven agencies (five school districts, a county attorney’s office, and the Minnesota Department of Education) to evaluate the effect of a truancy-diversion program on school attendance. The data was linked and hosted by Minnesota-Linking Information for Kids (Minn-LInK) ([www.cascw.umn.edu/research/minn-link](http://www.cascw.umn.edu/research/minn-link)). She used analysis strategies similar to the ones proposed here.

Dr. McNeely partners with national, state, and local education organizations to ensure her research questions are relevant and the interpretation of findings is accurate. Most recently, she used school-level data provided by MSDE to describe patterns of unexcused absences in Maryland in 2022 and 2023. Dr. Hedy Chang (CEO of Attendance Works) and I presented these findings to Maryland Superintendent of Schools Dr. Wright, Baltimore City Schools’ attendance liaisons, Baltimore City Superintendent Dr. Scalises, the Maryland Alliance for Racial Equality in Education, the MSDE School Attendance Task Force, and Attendance Works ([www.attendanceworks.com](http://www.attendanceworks.com)).

A completed form is available [here](#) for your review.

## Section 2. Project Information

### Background and Purpose of the Study

(No more than 500 words; please include references; references do not count toward the word count)

This strength-based study will identify Maryland’s “bright spot” schools that achieve low rates of chronic absence and fair and limited use of discipline for truant students. We also will determine whether these bright-spot schools improve academic outcomes. The results of this study will allow Maryland’s educators to identify effective policies and programs *already being used in Maryland* that can be scaled to other schools and districts.

In Maryland, chronic absenteeism (defined as missing 10% or more of school days for any reason) doubled from 15% to 31% between 2018 and 2022 due to Covid-related school disruptions. It remained distressingly high at 29% in 2023. Chronically absent students risk falling behind academically, getting suspended, and dropping out (Aucejo & Roman 2016; Gershenson, et al., 2017; Goodman, et al., 2014). The Maryland State Department of Education (MSDE) is committed to reducing the percentage of students who are chronically absent to 15% by 2026 (Attendance Works, 2024).

In addition, MSDE strives to limit the use of exclusionary discipline for truancy (MSDE, 2019). Maryland law distinguishes unlawful (unexcused or truant) from lawful (excused) absences (COMAR,



2025a, 2025b). The default code for absences is unexcused (also referred to as truancy), and school staff recode absences to excused once the parent/guardian provides a legitimate excuse. The law allows schools to apply exclusionary discipline to unexcused absences, including the denial of credit for make-up work after an unexcused absence, detention, Saturday school, in-school suspension, and after students are habitually truant (defined as 8 unexcused absences in a grading period, 15 in a semester, and 20 in a year), a truancy court petition (McNeely et al., 2025). Maryland schools disproportionately code as unexcused the absences of economically disadvantaged, Black, Native American, and Hispanic students (e.g., 81% of Black students' absences vs. 51% of White students' absences in 2023) (McNeely et al., 2025). The disproportionate coding of absences as unexcused leads to the disproportionate use of exclusionary discipline (McNeely et al., 2021). Students describe how disproportionate discipline for truancy makes them feel "wanted but not welcomed." They too often oblige to this message by not showing up to school (Edwards et al., 2023).

In preliminary analyses of school-level MSDE data, we found several Maryland schools that achieve the twin goals of 1) low chronic absence and 2) low and equitable use of exclusionary discipline. We call these schools "bright spots" and assert they can inform policies and practices at other Maryland schools. First, however, we need to determine if bright spot schools actively achieve these positive outcomes via their attendance practices or if the outcomes are due to the self-selection of high-attending students into the school.

The proposed research will describe the attendance patterns for all K-12 students. We will then focus on middle and high schools to test the hypotheses that (1) some middle and high schools in Maryland are "bright spots," i.e., they equitably reduce chronic absence and exclusionary responses to absenteeism, and (2) these "bright spot" schools also equitably improve academic achievement and reduce early school-leaving.

Attendance Works (2024). [States participating in the 50% challenge](#).

Aucejo, E.M., & Romano, T.F. (2016) [Assessing the effect of school days and absences on test score performance](#). *Economics of Education Review*, 55, 70-87.

Code of Maryland Regulations (COMAR) (2025a). Sec. 13a.08.01.04. [Unlawful Absence](#), Chapter 13A.08.01. General Regulations, Subtitle 08. STUDENTS, Title 13A. Maryland State Board of Education, Code of Maryland Regulations.

Code of Maryland Regulations (COMAR) (2025b). Sec. 13a.08.01.05. [Student Attendance Policy](#), Chapter 13A.08.01. General Regulations, Subtitle 08. STUDENTS, Title 13A. Maryland State Board of Education, Code of Maryland Regulations.

Edwards, E.B., Singer, J., & Lenhoff, S.W. (2023). [Anti-Blackness and attendance policy implementation: Evidence from a Midwestern school district](#). *Educational Researcher*.

Gershenson, S., Jackowitz A., & Brannegan, A. (2017). [Are student absences worth the worry in U.S. primary schools?](#) *Education Finance & Policy*, 12(2), 137-165.

Goodman, J. (2014). [Flaking out: Student absences and snow days as disruptions of instructional time](#). National Bureau of Economic Research Working Paper No. w20221.

Maryland State Department of Education (MSDE) (2019) [Reducing and eliminating disproportionality in school discipline guidance document](#). October.

McNeely, C., Chang, H., Fothergill, S., & Smith, I. (2025, January 29) *Unpacking unexcused absences in Maryland*. Presentation to the MSDE Task Force on Education.

McNeely, C.A., Alemu, B., Lee, W.F., & West, I. (2021) [Exploring an unexplored source of racial disparities in juvenile court involvement: Unexcused absence policies in U.S. schools.](#) *AERA Open*, 7(1), 1-17.

### Research Project Questions

- 1) What are the trends over time (2022 – 2024) in excused absences, unexcused absences, in-school suspensions, and out-of-school suspensions? How do these trends vary across student characteristics and between schools and districts?
- 2) What are potential measures of equitable reduction in absenteeism combined with the equitable reduction in exclusionary responses to absenteeism? How do these measures compare in terms of ease of measurement, sensitivity to detecting change over time, and ease of interpretability?
- 3) Which “bright spot” Maryland middle and high schools equitably reduced absenteeism and responses to absenteeism (use of the unexcused code, in-school suspensions, and court truancy adjudications) between 2022 and 2024?
- 4) Does attending a “bright spot” school improve academic achievement and reduce early school leaving compared to a matched sample of students who do not attend a bright spot school?

### Research Methods

**(Please include information for: Sample/Cohort and Justification; Definition of Measures and Constructs; Analysis Approach)**

#### Sample

The sample for RQ1 and RQ2 will include all K-12 students attending a public Maryland school during the 2022–2024 school years. The samples for RQ3 and RQ4 will be all 6<sup>th</sup> or 9<sup>th</sup>-grade students in the 2023-2024 school year. When 2025 data become available, we will include it in the analysis for RQ3 and RQ4. The proposed research will not be a cohort analysis. To help ensure stable estimates, we will restrict analyses to students in schools that 1) enroll at least 10 students in each demographic subgroup and 2) report at least 10 total days absent for students in each group.

#### Measures

**Student characteristics:** These variables will be used for all research aims.

- **School enrollment, attendance, and dropout/early school leaving:** membership, entry and exit from each school, the reason for entry and exit, attendance, and type of absence (excused, unexcused, suspended).
- **Demographic data:** special education, race/ethnicity, geo ID, gender, ELL, immigrant, FARMS; month and year of birth, homeless, foster care status, disability status.
- **Academic data:** State assessment scores and proficiency levels on assessments, e.g., enrolled in advanced placement (high school students), 9<sup>th</sup>-grade courses and completions, GPA of 3.0.
- **Promotion data:** Repeated grade level, on track for graduation, and promotion codes.
- **School discipline data (MSDE):** Date and reason for discipline, type of discipline.

**School characteristics:** These variables will be used to create matched samples for RQ3 and RQ4. We will use existing variables (e.g., NCES type, school census tract, year-round school, Title 1) and create school-level variables from individual student characteristics.

**Department of Juvenile Justice data:** Adjudication (type and date) and dispositions (type and date) will be used to describe patterns of exclusionary discipline for habitual truancy (RQ1) and as dependent variables in the multivariable analyses for RQ2.

### **Analyses**

**Research Question 1 (RQ1).** We will describe trends over time in our focal constructs: absenteeism, the percentage of absences coded unexcused, in-school suspensions, and truancy adjudications and dispositions. We will then conduct simple mixed models to describe how these trends in the focal constructs vary within and between school districts and across student groups (e.g., economic disadvantage, FARMS, disability status, race/ethnicity). The analytic sample will include all K-12 students.

**Research Question 2 (RQ2).** We will create and compare several measures of “bright spot” schools that achieve the twin goals of equitably improving attendance and equitably reducing the use of the unexcused code and exclusionary discipline for unexcused absences. For example, one definition of bright spot schools could be schools with above-average attendance overall, below-average use of the unexcused absence label, and between-group disparities in attendance and unexcused absences of less than 0.5 standard deviations in all three years. This definition focuses on levels of achievement. Another definition of bright spot schools could capture equitable reductions over time in absenteeism, the percentage of absences coded unexcused, and exclusionary discipline for absenteeism. We will compare measures following the process laid out by Girvan et al. (2019) to select the most parsimonious (policy-relevant) and robust indicator. RQ2 will include schools serving students in grades K-12.

**Research Question 3 (RQ3).** To determine whether the “bright spot” schools equitably reduced absenteeism and exclusionary responses to absenteeism, we will create matched samples of students who entered 6<sup>th</sup> or 9<sup>th</sup> grade in Fall 2021. We focus on middle and high schools because the reasons for and responses to absenteeism differ between elementary and older students. The intervention group will be all students transitioned into 6<sup>th</sup> or 9<sup>th</sup> grade at a bright spot school. The comparison group will be a demographically similar sample of students who transitioned into demographically-similar schools that were not bright spots. We will follow a two-stage matching procedure for data tractability due to the large number of students, first matching schools and then matching students within the matched samples of schools.

Next, we will use dynamic difference-in-differences (DD) methods to compare the trajectories over time for three outcomes: 1) absenteeism, 2) the percentage of absences coded unexcused, 3) in-school suspensions for truancy, and 4) truancy adjudications. We hypothesize that the trajectories between the intervention group (students who enroll in a bright spot school in 6<sup>th</sup> or 9<sup>th</sup> grade) and the matched comparison group will be parallel during the two years before the intervention. Evidence of parallel trends gives us confidence that any divergence in the trajectories after the intervention is due to the practices and policies of the bright spot schools. After the intervention group enters a bright

spot school, we hypothesize that absenteeism, the percentage of absences coded unexcused, the use of in-school suspensions, and truancy adjudications will equitably decrease more in the bright spot schools than in the comparison group. We have used this method to test the causal effects of other school interventions on attendance (McNeely et al., 2019; Lee et al., 2020).

Dynamic DD analysis requires at least two years of data before and after the intervention is implemented. Thus, we will need data from the 2025 school year when it becomes available to answer this research question (see proposed timeline).

**Research Question 4 (RQ4).** We will use dynamic DD methods to assess the effect of bright spot schools on two additional outcomes: academic achievement (proficiency on standardized exams) and early school leaving. This research question tests the hypothesis that bright spot schools produce academic growth as well as reduce absenteeism, in-school suspensions, and truancy adjudications. We will test whether improvements in academic performance and school leaving are similar for all students or whether they (1) differ by race/ethnicity, economic disadvantage, and multilingual learner status and (2) differ by the extent to which disparities in exclusionary approaches are reduced in the schools (i.e., a dose-response relationship).

Girvan, E.J., McIntosh, K., & Smolkowski, K. (2019). [Tail, tusk, and trunk: What different metrics reveal about racial disproportionality in school discipline.](#) *Educational Psychologist*, 54(1), 40-59.

Lee, W.F., McNeely, C.A. Alemu, B., Rosenbaum, J., Renner, L. (2020) [Does a Common Intervention Strategy Improve Attendance in Elementary School? Evaluation of the Family Truancy Intervention Program.](#) *Journal of Research on Educational Effectiveness*, 13(4), 625-551.

McNeely, C.A., Lee, W.F., Alemu, B., Rosenbaum, J., Renner, L. (2019) [Long-Term Effects of Truancy Diversion on School Attendance: A Quasi-Experimental Study with Linked Administrative Data.](#) *Prevention Science*, 20, 996-1008.

**How will this research benefit the State of Maryland in terms of state or local policy and/or practice?**

Maryland state law requires all schools to develop schoolwide strategies to promote school attendance. Our preliminary review of district-level policies and practices in Maryland suggests that districts provide limited guidance to schools on evidence-based schoolwide strategies or how to implement them. The proposed research allows Maryland’s educators to identify and take to scale policies and practices that *work in practice*—not just in theory—in their districts and schools.

**Explain why this research requires longitudinal cross-sector data.**

The study will use data from K-12 education and DJS (truancy adjudication and disposition data).

**Proposed Center Output**  
(Typical products for the MLDS Center include a research series presentation to stakeholders and a research brief in the MLDS Center template).

Project Approval - Detailed Application

MLDS research series presentation and research brief in the recommended template.

Project Approval - Detailed Application

Timeline for the proposed project (identify major deliverables and approximate dates)	
Months 1 & 2	MLDS proposal and feedback
Month 3	Presentation to MLDS RPB for input and approval
Month 4	Receive access to data, prepare codebook, data management plan
Months 5-8	Describe trends and disparities in absenteeism-related variables (RQ1)
Months 9-14	Identify “bright spot” schools (RQ2)
Month 16	Share findings with MLDS, MSDE, and DJS for input and approval before dissemination
Months 17-21	Matched sampling and DD analysis to estimate the causal effect of bright spot schools on absenteeism, the percentage of absences coded unexcused, ISS, and truancy adjudications (RQ3)
Months 22-26	Matched sampling and DD analysis to estimate the causal effect of bright spot schools on academic achievement and early school leaving (RQ4)
Months 27-31	Share findings with MLDS, MSDE, and DJS for input and approval before dissemination
Months 32-33	Draft MLDS research series presentation and research brief
Months 34 forward	Further development
Plans for further development (i.e., journal submission, etc.)	
Academic publication and dissemination through reports developed in partnership with Attendance Works.	

**Section 3. MLDS Center [Research Agenda](#)**

Does your project relate to one of the following areas which the General Assembly has specifically directed the MLDS to study:	Yes	No
The impact of a State or federal education program? <sup>1</sup>	x	
The performance of educator preparation programs?		x
Best practices regarding classroom instruction?		x
The impact of child welfare programs on the educational and economic outcomes of students?		x
An analysis of social determinants, provided by State agencies <sup>2</sup> and appropriate local agencies, that impact education performance of students and indicate the need for wraparound services for students.	x	
Does your project use State or Federal financial aid <sup>3</sup> data?		x
<b>If you are requesting to use FAFSA data, please explain how this research will benefit the administration of Title IV federal financial aid.</b>		

<sup>1</sup> All projects must relate to a state or federal education program. If you are not sure, please contact [ross.goldstein@maryland.gov](mailto:ross.goldstein@maryland.gov).

<sup>2</sup> State agencies include: Maryland Department of Health, Department of Human Services, and Department of Juvenile Services

<sup>3</sup> Financial aid data derived from the FAFSA may only be used in research to improve the administration of federal financial aid programs.

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We do not propose to use FAFSA data.
<b>Research Agenda Category (page 2 of the <a href="#">Research Agenda</a>) – Which category does the project address? Please explain.</b>
Educational, Service, and Workforce Outcomes. We examine trends in students’ attendance-related outcomes, identify schools that positively shift those trends, and examine the impact of shifting those trends on student achievement and school leaving.
<b>Research Agenda Themes (pages 2-3 of the <a href="#">Research Agenda</a>) - Which cross cutting theme is incorporated in the project? Please explain.</b>
Equity and Inclusion. The proposed study will provide <i>actionable evidence</i> for how schools can reduce racial, ethnic, and socioeconomic inequality in students’ experience of exclusionary responses to absenteeism.

**Section 4. Data and Cross Sector Analysis**

Please review the MLDS Center [Data Inventory](#) and the MLDS Center [Data Gap Analysis](#) prior to completing this section.

<b>Sectors*</b> <b>*The data falling within each sector is outlined below. The purpose of this section is to ensure the project is cross sector. Projects will not necessarily use all data elements within the sector (see methods section for definitions of measures).</b>	<b>X</b>
Early Childhood Education Sector	
K-12 Education Sector	X
Adult Education Sector	
Justice Involved Youth Sector	X
Child Welfare Sector	
Postsecondary Education Sector	
Other Completions and Credentials Sector	
Workforce Sector	

*Put an ‘x’ next to each data sector your project will include. You must have at least two sectors.*

<b>Do you plan to request to include <a href="#">external data</a> as part of your project?</b>
No

**\*Sectors**

**Early Childhood Education Sector**

- PreK Academic Engagement

**K-12 Public School Education Sector**

- Enrollment and attendance
- Assessments
- Courses and grades
- Completions
- Discipline
- Public School Characteristics

**Child Welfare Sector**

- Out-of-Home Placements

**Postsecondary Education Sector**

- College and University Enrollment
- College and University Courses, Credits and Grades
- College and University Degrees
- College and University Workforce Training
- Financial Aid

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### **Adult Education Sector**

- GED/NEDP Exam Results
- Apprenticeship
- Adult Education
- Correction Education

### **Juvenile Justice Sector**

- Juvenile Justice Records
- Juvenile Education Records

### **Other Completions and Credentials Sector**

- Industry Certifications
- Licenses

### **Workforce Sector**

- Public School Teachers
- Public School Staff
- Workforce visibility/participation
- Workforce Earnings
- Workforce Industry



**Section 5. Financial Information**

<p><b>The MLDS Center incurs costs for every project related to: (a) IT support and infrastructure; (b) assistance from subject matter experts, (c) criminal history background checks; and (d) creation of an analytic data set. Average project costs are between \$1,000 and \$3,000. A detailed, customized estimate will be provided prior to project initiation. (Please indicate your answer with an "X")</b></p>							
<table border="1"> <tr> <td style="width: 50px; text-align: center;">x</td> <td>I will reimburse MLDS for all applicable fees.</td> </tr> <tr> <td></td> <td>I will only be able to provide partial reimbursement.</td> </tr> <tr> <td></td> <td>I will need a waiver.</td> </tr> </table>	x	I will reimburse MLDS for all applicable fees.		I will only be able to provide partial reimbursement.		I will need a waiver.	
x	I will reimburse MLDS for all applicable fees.						
	I will only be able to provide partial reimbursement.						
	I will need a waiver.						
<p><b>Grant Funding (indicate with an 'X')</b></p>							
<table border="1"> <tr> <td style="width: 50px; text-align: center;">x</td> <td>This project has already received funding</td> </tr> <tr> <td style="text-align: center;">x</td> <td>I plan to apply or am in the process of applying for grant funding</td> </tr> <tr> <td></td> <td>No grant funding is planned</td> </tr> </table>	x	This project has already received funding	x	I plan to apply or am in the process of applying for grant funding		No grant funding is planned	
x	This project has already received funding						
x	I plan to apply or am in the process of applying for grant funding						
	No grant funding is planned						
<p><b>Name of Grantor</b></p>							
<p>Attendance Works We are seeking additional funding from the William T. Grant Foundation on an invited proposal based on submission of an LOI.</p>							
<p><b>RFP or Grant Program Information (you may provide a link to the grantor's website)</b></p>							
<p>Attendance Works (<a href="http://www.attendanceworks.org">www.attendanceworks.org</a>) provided funding as a subcontract from a larger grant from the Open Society Institute to understand unexcused absenteeism in Maryland.</p>							
<p><b>Amount of grant funds sought or awarded.</b></p>							
<p>Awarded: Attendance Works (\$26,000) Sought: William T. Grant Foundation, \$600,000. Invited proposal.</p>							
<p><b>Grant Application Date</b></p>							
<p>The William T. Grant proposal is due April 4, 2025.</p>							
<p><b>Do you intend to proceed without grant funding?</b></p>							
<p>Yes.</p>							
<p><b>Are you receiving other funding for this proposed project? If yes, how much?</b></p>							
<p>No.</p>							

## Section 6. Special Considerations

**Principal Investigators NOT affiliated with a Maryland College or University – please provide information on:**

- a. Your familiarity with Maryland policies affecting your research topic; and
- b. How your project meets a specific Maryland research need?

**Please also upload (with this form) any letters of reference or endorsement from a Maryland researcher or a State or local agency that vouches for your qualifications and expertise.**

### **Familiarity with Maryland school attendance policies and attendance data**

Dr. McNeely has conducted an exhaustive review of all district attendance and truancy policies along with Maryland education laws and regulations related to attendance. Dr. McNeely has conducted preliminary analyses of school-level attendance data provided by MSDE to document the feasibility of the proposed project. We have shared these initial findings with the MSDE Student Attendance Task Force and district leaders.

### **How the project meets a specific Maryland research need**

MSDE Superintendent Wright is interested in the proposed study because it may provide actionable information on how Maryland can reduce chronic absence. MSDE Student Attendance Task Force members asked for examples of bright spot schools that successfully reduce chronic absence and exclusionary discipline for truancy for all groups of students. This study will answer that question.

**For projects that involve a small population, please confirm that you are aware of the MLDS Center’s [data suppression policy](#) and explain how you will report your findings while conforming to the suppression requirements.**

We are aware of and will abide by the MLDS Center’s data suppression policy.

**For projects that involve a single school system, university, or program, please explain the statewide implications of the project.**

**Please also upload (with this form) any letters of support from the subject (i.e. school system or university) of the study.**

The proposed study is statewide.

**Section 7. Project Team**

<p><b>Project Team</b></p> <ul style="list-style-type: none"> <li>- Please list all members of the research team and indicate roles and responsibilities.</li> <li>- If the Principal Investigator listed in Section 1 above is NOT the primary point of contact for the project (including research, data access, and presentations to stakeholders), please indicate which team member is the primary point of contact and provide that individual's contact information.</li> </ul>		
Name and Organization	Role	Is system access needed? (Yes/No)
Clea McNeely, Research professor, University of Tennessee, Knoxville	PI	Yes
Won Fy Lee, PhD, Econometrician, First 5 California	co-I	No
Hedy Chang, Executive Director, Attendance Works	Advisor	No
Sue Fothergill, Senior Fellow, Attendance Works	Advisor	No

**Section 8. Submission**

Once this form is completed, please complete the online application ([here](#)) and upload this form, CVs for all members of the research team, and any other supporting materials.