U.S. Department of Education
Washington, D.C. 20202-5335

APPLICATION FOR GRANTS UNDER THE

Education Stabilization Fund-Rethink K-12 Education Models (ESF-REM)

CFDA # 84.425B

PR/Award # S425B200011

Gramts.gov Tracking#: GRANT13153281

OMB No. , Expiration Date:

Closing Date: Jun 29, 2020

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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 06/26/2020

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Maryland State Department of Education

* b. Employer/Taxpayer Identification Number (EIN/TIN): [redacted]

* c. Organizational DUNS: [redacted]

d. Address:

* Street1: 200 W. Baltimore Street
Street2:
* City: Baltimore
County/Parish:
* State: MD: Maryland
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 21201-2595

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:
* First Name: Val
Middle Name:
* Last Name: Emrich
Suffix:

Title: Director of Instructional Technology

Organizational Affiliation:

* Telephone Number: [redacted]
Fax Number:

* Email: [redacted]

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.425

CFDA Title:

Education Stabilization Fund

*** 12. Funding Opportunity Number:**

ED-GRANTS-050120-001

* Title:

Office of Elementary and Secondary Education (OESE): Education Stabilization Fund-Rethink K-12 Education Models (ESF-REM) Discretionary Grant Program CFDA Number 84.425B

13. Competition Identification Number:

84-425B2020-1

Title:

Education Stabilization Fund-Rethink K-12 Education Models (ESF-REM) Discretionary Grant Program

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Education Stabilization Fund - Rethink K-12 Education Models (ESF-REM)

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Tracking Number:GRANT13153281 Funding Opportunity Number:ED-GRANTS-050120-001 Received Date:Jun 26, 2020 02:26:26 PM EDT

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant MD007 * b. Program/Project MD007

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 07/31/2020 * b. End Date: 07/30/2023

18. Estimated Funding ($):

* a. Federal [redacted]
* b. Applicant
* c. State
* d. Local
* e. Other
* f. Program Inco
* g. TOTAL

*** 19. Is Applicati [redacted] Order 12372 Process?**

☒ a. This application was made available to the State under the Executive Order 12372 Process for review on 07/06/2020.

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☐ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name: Karen

Middle Name: B.

* Last Name: Salmon

Suffix: Ph.D.

* Title: State Superintendent of Schools

* Telephone Number: [redacted] Fax Number:

* Email: [redacted]

* Signature of Authorized Representative: [redacted] * Date Signed: 06/26/2020

Tracking Number:GRANT13153281 Funding Opportunity Number:ED-GRANTS-050120-001 Received Date:Jun 26, 2020 02:26:26 PM EDT

U.S. DEPARTMENT OF EDUCATION
BUDGET INFORMATION
NON-CONSTRUCTION PROGRAMS

OMB Number: 1894-0008
Expiration Date: 08/31/2020

Name of Institution/Organization

Maryland State Department of Education

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION A - BUDGET SUMMARY
U.S. DEPARTMENT OF EDUCATION FUNDS

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
[redacted]						
2. Fringe Benefits	0.00	0.00	0.00	0.00	0.00	0.00
3. Travel	0.00	0.00	0.00	0.00	0.00	0.00
4. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
5. Supplies	0.00	0.00	0.00	0.00	0.00	0.00
6. Contractual	3,664,553.00	3,583,817.00	2,969,090.00			10,217,460.00
7. Construction	0.00	0.00	0.00	0.00	0.00	0.00
8. Other	0.00	0.00	0.00	0.00	0.00	0.00
[redacted]						
11. Training Stipends	0.00	0.00	0.00	0.00	0.00	0.00
[redacted]						

Indirect Cost Information *(To Be Completed by Your Business Office):

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government? ☒ Yes ☐ No

(2) If yes, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement: From: 07/01/2019 To: 06/30/2020 (mm/dd/yyyy)

Approving Federal agency: ☒ ED ☐ Other (please specify):

The Indirect Cost Rate is [redacted] %.

(3) If this is your first Federal grant, and you do not have an approved indirect cost rate agreement, are not a State, Local government or Indian Tribe, and are not funded under a training rate program or a restricted rate program, do you want to use the de minimis rate of 10% of MTDC? ☐ Yes ☐ No If yes, you must comply with the requirements of 2 CFR § 200.414(f).

(4) If you do not have an approved indirect cost rate agreement, do you want to use the temporary rate of 10% of budgeted salaries and wages?

☐ Yes ☐ No If yes, you must submit a proposed indirect cost rate agreement within 90 days after the date your grant is awarded, as required by 34 CFR § 75.560.

(5) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

☒ Is included in your approved Indirect Cost Rate Agreement? Or, ☐ Complies with 34 CFR 76.564(c)(2)? The Restricted Indirect Cost Rate is ____ %.

Name of Institution/Organization	Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.	
Maryland State Department of Education		

SECTION B - BUDGET SUMMARY
NON-FEDERAL FUNDS

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	0.00	0.00	0.00	0.00	0.00	0.00
2. Fringe Benefits	0.00	0.00	0.00	0.00	0.00	0.00
3. Travel	0.00	0.00	0.00	0.00	0.00	0.00
4. Equipment		0.00	0.00	0.00	0.00	0.00
5. Supplies	0.00	0.00	0.00	0.00	0.00	0.00
6. Contractual	0.00	0.00	0.00	0.00	0.00	0.00
7. Construction	0.00	0.00	0.00	0.00	0.00	0.00
8. Other	0.00	0.00	0.00	0.00	0.00	0.00
9. Total Direct Costs (lines 1-8)	0.00	0.00	0.00	0.00	0.00	0.00
10. Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00
11. Training Stipends	0.00	0.00	0.00	0.00	0.00	0.00
12. Total Costs (lines 9-11)	0.00	0.00	0.00	0.00	0.00	0.00

SECTION C - BUDGET NARRATIVE (see instructions)

ED 524

Tracking Number:GRANT13153281 Funding Opportunity Number:ED-GRANTS-050120-001 Received Date:Jun 26, 2020 02:26:26 PM EDT

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013
Expiration Date: 02/28/2022

1. * Type of Federal Action:

- [ ] a. contract
- [x] b. grant
- [ ] c. cooperative agreement
- [ ] d. loan
- [ ] e. loan guarantee
- [ ] f. loan insurance

2. * Status of Federal Action:

- [ ] a. bid/offer/application
- [x] b. initial award
- [ ] c. post-award

3. * Report Type:

- [x] a. initial filing
- [ ] b. material change

4. Name and Address of Reporting Entity:

[x] Prime [ ] SubAwardee

** Name* Maryland State Department of Education

** Street 1* 200 W. Baltimore Street *Street 2*

** City* Baltimore *State* MD: Maryland *Zip* 21201-2595

Congressional District, if known: MD007U

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency:

U.S. Department of Education

7. * Federal Program Name/Description:

Education Stabilization Fund

CFDA Number, *if applicable:* 84.425

8. Federal Action Number, *if known:*

9. Award Amount, *if known:*

$

10. a. Name and Address of Lobbying Registrant:

Prefix ** First Name* N/A *Middle Name*

** Last Name* N/A *Suffix*

** Street 1* N/A *Street 2*

** City* N/A *State* *Zip*

b. Individual Performing Services (including address if different from No. 10a)

Prefix ** First Name* N/A *Middle Name*

** Last Name* N/A *Suffix*

** Street 1* N/A *Street 2*

** City* N/A *State* *Zip*

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

*** Signature:** Michial A Gill

***Name:** *Prefix* ** First Name* Karen *Middle Name* B.

** Last Name* Salmon *Suffix* Ph.D.

Title: State Superintendent of Schools **Telephone No.:** 4[redacted] **Date:** 06/26/2020

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL (Rev. 7-97)

Tracking Number:GRANT13153281 Funding Opportunity Number:ED-GRANTS-050120-001 Received Date:Jun 26, 2020 02:26:26 PM EDT

NOTICE TO ALL APPLICANTS

The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America's Schools Act of 1994 (Public Law (P.L.) 103-382).

To Whom Does This Provision Apply?

Section 427 of GEPA affects applicants for new grant awards under this program. **ALL APPLICANTS FOR NEW AWARDS MUST INCLUDE INFORMATION IN THEIR APPLICATIONS TO ADDRESS THIS NEW PROVISION IN ORDER TO RECEIVE FUNDING UNDER THIS PROGRAM.**

(If this program is a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 statement as described below.)

What Does This Provision Require?

Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs. This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct description of how you plan to address those barriers that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?

The following examples may help illustrate how an applicant may comply with Section 427.

(1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.

(2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.

(3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls, to encourage their enrollment.

(4) An applicant that proposes a project to increase school safety might describe the special efforts it will take to address concern of lesbian, gay, bisexual, and transgender students, and efforts to reach out to and involve the families of LGBT students.

We recognize that many applicants may already be implementing effective steps to ensure equity of access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

Estimated Burden Statement for GEPA Requirements

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit (Public Law 103-382). Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20210-4537 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1894-0005.

Optional - You may attach 1 file to this page.

1235-GEPA_Statement.pdf | Add Attachment | Delete Attachment | View Attachment

General Education Provisions Act (GEPA)

The Maryland State Department of Education

Office of Elementary and Secondary Education (OSESE): Education Stabilization Fund – Rethink K-12 Education Models (ESF-REM) Program CFDA Number 84.425B

General Education Provisions Act (GEPA)

The Maryland State Department of Education does not discriminate on the basis of race, color, sex, age, national origin, religion, disability, or sexual orientation in matters affecting employment or providing access to programs and activities and provides equal access to the Scouts and other designated youth groups. Additionally, educational materials and online resources created with grant funds to support achievement for students with and without disabilities will be readily accessible using Accessible Educational Materials (AEM) guidelines. Print and technology-based educational materials will be designed to be usable across the widest range of individual variability. The online courses developed with grant funding will align with Web Content Accessibility Guidelines 2.1, Level AA and incorporate Universal Design for Learning Principles.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION

Maryland State Department of Education

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: | * First Name: Karen | Middle Name: B.

* Last Name: Salmon | Suffix: Ph.D.

* Title: State Superintendent of Schools

* SIGNATURE: Michial A Gill | * DATE: 06/26/2020

Tracking Number:GRANT13153281 Funding Opportunity Number:ED-GRANTS-050120-001 Received Date:Jun 26, 2020 02:26:26 PM EDT

U.S. DEPARTMENT OF EDUCATION
SUPPLEMENTAL INFORMATION
FOR THE SF-424

1. Project Director:

Prefix:	First Name:	Middle Name:	Last Name:	Suffix:
	Val		Emrich	

Address:

Street1: 200 W. Baltimore Street
Street2:
City: Baltimore
County:
State: MD: Maryland
Zip Code: 21201-2595
Country: USA: UNITED STATES

Phone Number (give area code) [redacted]

Fax Number (give area code)

Email Address: [redacted]

2. Novice Applicant:

Are you a novice applicant as defined in the regulations in 34 CFR 75.225 (and included in the definitions page in the attached instructions)?

☐ Yes ☐ No ☒ Not applicable to this program

3. Human Subjects Research:

a. Are any research activities involving human subjects planned at any time during the proposed Project Period?

☐ Yes ☒ No

b. Are ALL the research activities proposed designated to be exempt from the regulations?

☐ Yes Provide Exemption(s) #: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

☐ No Provide Assurance #, if available:

c. If applicable, please attach your "Exempt Research" or "Nonexempt Research" narrative to this form as indicated in the definitions page in the attached instructions.

Add Attachment | Delete Attachment | View Attachment

Abstract

The abstract narrative must not exceed one page and should use language that will be understood by a range of audiences. For all projects, include the project title (if applicable), goals, expected outcomes and contributions for research, policy, practice, etc. Include population to be served, as appropriate. For research applications, also include the following:

- Theoretical and conceptual background of the study (i.e., prior research that this investigation builds upon and that provides a compelling rationale for this study)
- Research issues, hypotheses and questions being addressed
- Study design including a brief description of the sample including sample size, methods, principals dependent, independent, and control variables, and the approach to data analysis.

[Note: For a non-electronic submission, include the name and address of your organization and the name, phone number and e-mail address of the contact person for this project.]

You may now Close the Form

You have attached 1 file to this page, no more files may be added. To add a different file, you must first delete the existing file.

* Attachment: 1237-Project_Abstract.pdf | Add Attachment | Delete Attachment | View Attachment

Abstract

Goal: Maryland will expand the existing Maryland Virtual Learning Opportunities (MVLO) program by increasing the number of high-quality online courses to meet the needs of Maryland's public and non-public students. The Maryland State Department of Education (MSDE) anticipates that COVID-19 will change the future of education and recognizes that students and educators need to adapt and evolve.

Project objectives and activities: (1) Transform teaching and learning for "future schools." (2) Use evidence-based research, workforce needs, and student data to support the selection and development of a wide range of high-quality online and/or blended courses for Maryland's public and non-public students. (3) Address the needs of all student subgroups by designing accessible courses based on Universal Design for Learning principles and WCAG 2.1 guidelines. (4) Provide the professional learning needed for Maryland educators to facilitate the delivery of courses that incorporate social emotional learning (SEL) opportunities. (4) Expand advanced learning opportunities for students in rural and urban areas. (5) Provide access to the State Learning Management System for Local Educational Agencies that do not have the funds to purchase their own. (6) Ensure timely and transparent communication with stakeholders.

Project Plans: Develop sixteen high-quality online and/or blended courses, including foreign language, mathematics, data science, cybersecurity, fourth and fifth grade science and social studies courses that incorporate computer science. Provide deep content and pedagogy professional learning modules and courses for educators to support the delivery of student courses/modules. Utilize funding to contract with an instructional design team consisting of diverse expertise such as content, accessibility, online instructional design, and industry experts. The instructional design team will develop interactive courses that include SEL, ensure accessibility, and align with Maryland standards and curriculum.

Project Narrative File(s)

*** Mandatory Project Narrative File Filename:** 1234-Project_Narrative.pdf

Add Mandatory Project Narrative File | Delete Mandatory Project Narrative File | View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File | Delete Optional Project Narrative File | View Optional Project Narrative File

Tracking Number:GRANT13153281 Funding Opportunity Number:ED-GRANTS-050120-001 Received Date:Jun 26, 2020 02:26:26 PM EDT

Rethinking
Maryland Virtual Learning Opportunities Program

Application for New Awards Under

Education Stabilization Fund –
Rethink K-12 Education Models
CFDA: 84.425B

Submitted to:

The United States Department of Education
Office of Elementary and Secondary Education
Department of Education
Washington, DC 20202

Closing Date: June 29, 2020

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Rethinking Maryland Virtual Learning Opportunities Program

Maryland has a strong record of educational success; however, through state assessment results and the complications of delivering high quality instruction during the COVID-19 pandemic, the Maryland State Department of Education (MSDE) recognizes the need to adapt and evolve. Lessons learned include determining how to best provide more high-quality virtual options for students. To increase student success, these virtual options must include research-based Social Emotional Learning (SEL) and relationship building in all content courses. This proposal for **Absolute Priority 2** (*Statewide Virtual Learning and Course Access Program*) will expand the existing Maryland Virtual Learning Opportunities (MVLO) program to increase the number of high-quality online courses that address the needs of Maryland's public and non-public students and prepare them for the workforce. These courses accommodate both online and blended (i.e. a combination of synchronous and asynchronous teaching and learning) environments.

Maryland Virtual Learning Opportunities Program

The MVLO program was established in 2002 through COMAR §7-1002 to provide virtual learning to public school students. The MVLO program is managed by the MSDE, which maintains a list of courses that have been approved for content and accessibility. Content reviews are performed by a third party, a Local Education Agency (LEA), or the MSDE while accessibility reviews are conducted at the MSDE. Currently, there is a total of 227 asynchronous (i.e. learning that occurs online without real-time interaction or instruction by an educator) credit-bearing courses offered by multiple vendors. Online providers include Edmentum, Connections/Pearson, Florida Virtual, Edgenuity, APEX, the MSDE, and others. Students may enroll in a course through the MVLO program with the permission of the LEA and the school

principal. Courses are delivered by a vendor content certified facilitator in the facilitator's home state or by a content certified Maryland public school facilitator who has received training on how to effectively teach the online course. LEAs offer students approved asynchronous courses, or they supplement asynchronous courses with synchronous instruction (i.e. learning that happens in real time with interaction between the teacher and students that occurs in a face-to-face environment or in a virtual classroom setting) provided by a content certified LEA educator using the blended delivery model.

Due to the pandemic and the increased focus on distance learning, it has become clear that Maryland needs to transform teaching and learning to adapt to the future of school. Maryland's existing program was acceptable in the past, but with the distance learning delivery and the identified teaching gaps highlighted during COVID-19, the MSDE must seek additional opportunities to offer customized courses that meet our students' needs and build the capacity of our Maryland educators to deliver effective asynchronous and synchronous instruction.

Vendor online courses provide basic global content developed to address general curriculum and standards for LEAs nationwide. As a result, these courses do not always align directly with the standards and curricula taught in Maryland schools that will be assessed or are required for graduation. Asynchronous vendor courses provide limited opportunities for student-to-student and student-to-teacher relationship building. Amidst the pandemic, an increased need for SEL connections has become evident. The MSDE proposed courses will incorporate synchronous sessions with classmates and their teacher to address the SEL needs.

Maryland recognizes that digital resources and courses that are accessible and include Universal Design for Learning (UDL) principles benefit students with and without disabilities. Accessibility reviews conducted by the MSDE Accessibility Specialist have revealed that, to

date, only the Maryland-developed courses meet Web Content Accessibility Guidelines (WCAG) 2.1 Level AA. In order to correct this situation, online vendors are required to submit a timeline indicating when they will be making necessary revisions to meet the accessibility needs of students. Without the submission of an agreed upon timeline, a vendor course may not be included on MSDE's approved online course listing. Building accessible content during the development phases of proposed courses will ensure the equity all students deserve.

COVID-19 Burden

Maryland's Governor, Larry Hogan, adopted a cautious and conservative approach while dealing with the outbreak of COVID-19. As a result, Maryland may reflect a lower percentage of COVID cases than other states, but the impact on teaching and learning was just as great. During the pandemic, there were student subgroups who were unable to access rigorous online teaching and learning. Approximately 39.4% of Maryland public school students needed access a device with Internet connections and only seven of the twenty-five LEAs reported that 80% to 100% of their students had adequate and reliable Internet access at home. Furthermore, a majority of Maryland educators had not received the professional development necessary to provide effective asynchronous and virtual synchronous instruction. Seven of the twenty-five LEAs lack an online learning management system (LMS) to effectively manage the resources needed to deliver online instruction. LEAs were not prepared for the extended school closures due to the national pandemic. Additionally, parents were frustrated by trying to work from home and provide educational support to their children. Due to health uncertainties, the communications to families were not always as timely as expected, and it was impossible for LEAs or the MSDE to predict future learning conditions. These factors exacerbated the strain on the emotional well-

being of many students who were unable to connect effectively with schoolmates and educators. The MSDE has the responsibility to do a better job.

Project Services

Maryland is committed to ensuring equal access and participation for all student groups, including race, color, national origin, gender, age, and disability. There are several issues related to access and participation of Maryland students particularly those who live in urban and rural locations. These students are directly impacted when remote learning is required such as during the COVID-19 pandemic.

Impact on Maryland Student Groups

- Many of Maryland's LEAs were not prepared for a 1:1 device allocation (2 out of 25 LEAs are 1:1 and 5 LEAs report partial 1:1 coverage). This could be attributed to LEAs identifying how they ideally plan to deliver curriculum and instruction or how dependent the planned instruction is on the use of devices. Or, in other cases, funding demands for LEAs with high percentages of socioeconomically disadvantaged students are tapped for other pressing priorities and are unable to accommodate a 1:1 student to device environment.
- Maryland free and reduced meals (FARMS) students include African American (30%), White (30%) and Hispanic (19%) students who reside in urban or rural locations. The percentage of female (44%) and male (46%) FARMS students reflects a fairly even split. Some rural and urban locations lack access to broadband, WiFi, and other public services. Rural and urban schools also experience situations where students could benefit from advanced studies but do not have the capacity to offer these courses.

- When students are being instructed in the traditional brick and mortar school, assistance is available for students who require accessible digital resources and/or assistive technologies. Extra measures need to be taken to meet these students' needs when instruction is delivered virtually. The proposed courses will be developed based on WCAG 2.1 Level AA guidelines.

Immediate Measures Taken by Maryland

As the State invests efforts into extending Internet access for all families by supporting the purchase of additional devices and expanding broadband coverage, flexible options are critical to meet the need for advanced studies, graduation requirements, and the workforce shortage areas in Maryland and nationwide. These opportunities must include options for students and educators to participate in distance learning environments that include rigorous online coursework that is aligned to Maryland standards and is delivered asynchronously or synchronously by trained Maryland educators who can also support SEL, build relationships, and address accessibility concerns.

During summer 2020, various professional learning opportunities are available to Maryland teachers. Currently, over 300 educators are enrolled in sections of the Online Teaching in Maryland (OTM) course. The North Carolina University's Friday Institute is customizing a *Teaching in the Blended Classroom during Distance Learning* MOOC (Massive Open Online Course) for Maryland teachers. A Remote Teaching Platform was developed that hosts over sixty modules designed to support the gaps our educators identified while delivering learning virtually during the COVID-19 pandemic in the spring. These gaps range from the instructional development and planning for remote teaching to more specific topics such as: how to communicate effectively with students and parents, how to meet the SEL students, how to

provide accessible digital resources, how to design and conduct formative assessments, and more. Parallel to these efforts is the adoption of a new State LMS that offers the advanced features desired to host online courses and modules based on Maryland's needs. Additional user licenses for this new LMS, as proposed in this project, will allow for partitioned access to seven LEAs who are unable to purchase their own system.

Exceptional Approach

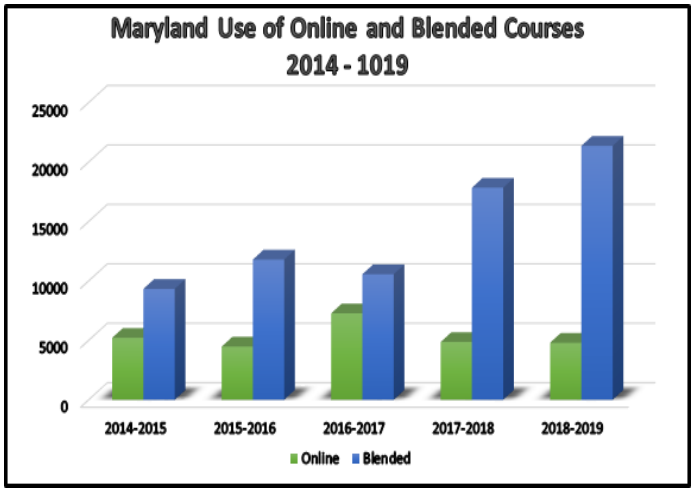
Preparing for what education will look like in the future will require a transformation in teaching and learning. The lessons learned during COVID-19 provide opportunities to re-envision what "school" will look like going forward. As a plan for the future, this proposal provides instructional delivery options for face-to-face, virtual synchronous, virtual asynchronous, and blended learning. The proposed courses in this project:

- range from advanced studies, to elementary and middle school level courses, and include a course previously not offered to Maryland PreK-12 students;
- will integrate computer science throughout the elementary courses;
- are aligned with workforce needs;
- incorporate the ability to deliver both asynchronous and synchronous instruction in a variety of environments. Course modules may be used for synchronous teaching and learning;
- include measures to develop connections and relationships to meet students' SEL needs;
- will be completely aligned with Maryland standards and curriculum;
- utilize Maryland content certified teachers to deliver the courses - teacher of record will be the Maryland educator;

- customize timely communications using a variety of tools that meet the needs of parents and caregivers who span three generations;
- continue discussions with the learning education reporting (LER) network to help guide the metatag schema; and
- will expand the ability of LEAs to provide professional learning, conduct discussions, host resources, collaborate with instructional lessons through the use of the State LMS.

Virtual schools have a history of independent learning experiences in K-12 education. Students enrolled in these types of virtual schools have been shown to perform worse than their traditional public and charter school peers on achievement tests across at least 20 states, and the research reports the need for more human interaction to support learning (Ahn & McEachin, 2017; CREDO, 2015; Fitzpatrick et al., 2020). In addition to the type of course, other factors to consider are the types of students who enroll in the course and the purpose of offering the online course. Research by Hart et al. (2019) found that both students taking a course for the first time and students retaking a course were more likely to pass an online course than a course taken face-to-face. Maryland LEAs frequently select a blended learning model (vendor course and synchronous instruction by a Maryland certified teacher) or utilize Maryland created online courses that are facilitated by content certified Maryland educators (See Figure 1.) MSDE believes that using Maryland facilitators

Figure 1



allows for more SEL, better connections with students and parents, direct alignment to the LEA curriculum, appropriate accessibility supports, and adherence to Maryland policies.

Project Plan

The MSDE is proposing to expand the existing MVLO program with online courses/modules that are accessible, offer curriculum and assessments designed to align with state standards, and include SEL. It is intended that these courses be delivered by trained Maryland educators. This expansion project will enable the MSDE to:

- Develop online courses that can be used asynchronously and synchronously to support student learning regardless of environmental or social situations. (See course descriptions below.):
    - Courses will be built as a compilation of modules so that students may enroll in an asynchronous course; or educators will be able to access the modules separately for use in synchronous or blended instruction;
    - Course content will be meta-tagged in alignment with globally used schema; and
    - Course content and platform will comply with WCAG 2.1 Level AA guidelines.
- Develop professional learning courses and modules that provide educators with an understanding of the pedagogy involved in asynchronous and synchronous instruction, deepen teacher knowledge of content, and align with the content of each student course;
    - Courses that include supports for SEL and activities that build relationships between teacher to student and student to student;
    - Provide professional learning opportunities to Maryland educators that demonstrate how classroom teachers and special education teachers can collaborate and deliver instruction that accommodates student IEPs and 504 plans;

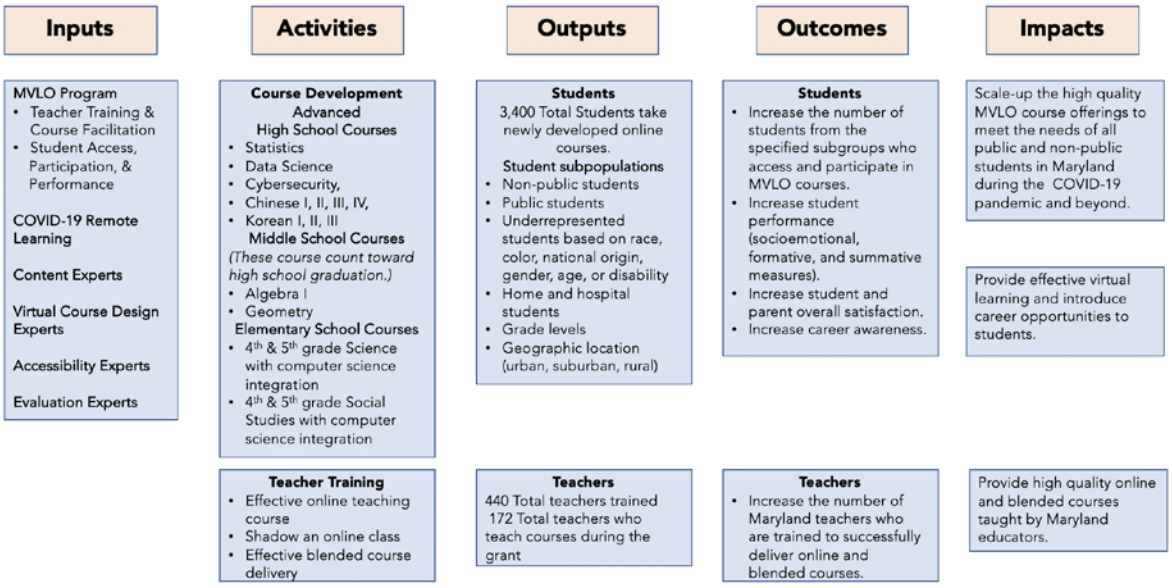
- Courses that include introductory modules for parents and teachers to provide an opportunity for them to understand the various features, expectations, and discover learning in a different environment; and
- Courses that expand the capabilities of Maryland educators to provide instruction through varied and flexible delivery methods.

- The funding received will also be utilized to support the LEAs who lack the capacity to purchase and manage their own LMS.
- Students will be able to utilize the ePortfolio function of MSDE's LMS to provide exportable learning records that allow for student work and accomplishments to be recorded as they move through courses.

Logic Model

This project begins with an established virtual program for students. As shown in Figure 2, the planned activities will result in measurable outcomes and impacts beyond the proposed three years of funding.

Figure 2



Proposed Online Courses

The MVLO program will expand to include online courses with a wide range of advanced accessible coursework for students that will be developed in a modular fashion to support both online and blended teaching and learning. Courses were selected at each level (high school, middle school, and elementary) and for specific student and/or workforce needs. Justification for which courses will be developed varies and are further detailed below.

Foreign Language Courses

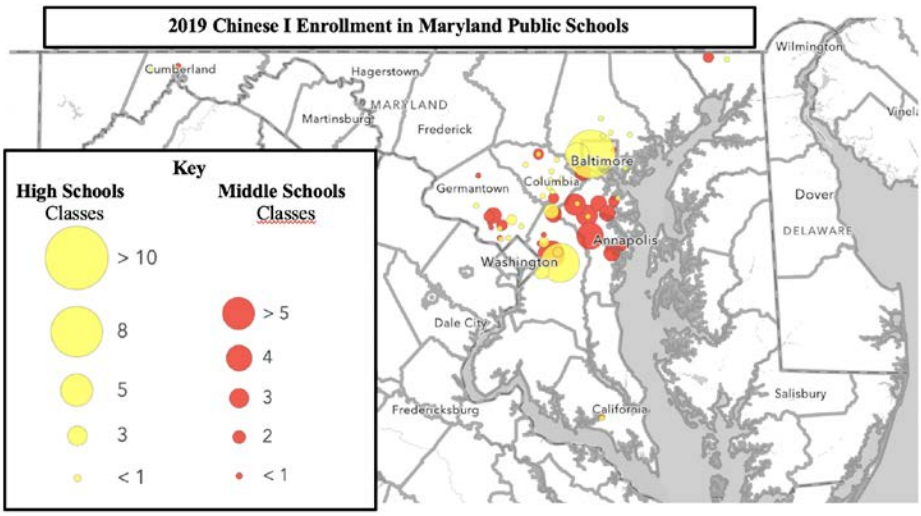
While there is a growing need for bilingual and biliterate graduates for our changing global workforce, there has also been a concerning decline in world language education throughout the country. Language support is integral to all major industries that support our society, including education, healthcare, cybersecurity and translation services. Yet, language programs are being eliminated in K-12 schools and college enrollment in language courses is dropping.

The need to expand world language education is critical. Maryland has a tremendous potential to be a leader in world language education as it prepares its students to be college- and career-ready for the challenges of the 21st century. As Maryland's cultural and linguistic diversity continues to evolve, there are increasing opportunities for lucrative careers in both the public and private sectors for employees with highly proficient language skills. The U.S. Department of Labor projects employment of interpreters and translators to grow 17% by 2026, much faster than the average for all occupations. The global language services industry market size reached over 43 billion U.S. dollars in 2017, and is forecasted to rise to almost 47.5 billion by 2021. Similar projections are also forecasted in the growing cybersecurity and intelligence fields. The National Security Agency (NSA), one of the largest federal agencies in Maryland, has

an urgent need for highly proficient language analysts in the critical languages of Arabic, Chinese, Farsi, Korean and Russian. With that in mind, NSA recently partnered with the MSDE to provide outreach to Maryland's world language educators, parents, and students to increase awareness of the importance of these languages to our nation's security. Activities being planned include school visits to discuss job opportunities with language students, language analysts serving as conversation partners for students, internships for language students, collaboration with teachers to create lesson plans and inter-school language competitions. Most, if not all, of these activities could be successfully adapted to online courses.

The MSDE hopes to expand this unique partnership opportunity by increasing enrollment in two of NSA's designated critical languages (Chinese and Korean). There are currently only 10 LEAs in the state of Maryland that offer Chinese courses, and only one school with 34 students enrolled in a Korean course. In 2019, 93% of the students enrolled in Chinese I attended the six largest LEAs. Most of the LEAs are located in the middle technology corridor of the state between the Washington, D.C. and Baltimore metropolitan areas. (See Figure 3.) Teacher capacity, scheduling conflicts, budget issues, and a lack of awareness of the importance of critical languages for our future workforce are some

Figure 3



Note: Classes are based on the number of students enrolled.

of the reasons why Chinese is not widely available in Maryland public schools. For these reasons, the availability of high-quality sequential online Chinese courses that are aligned to Maryland's World-Readiness Standards for Learning Languages and that focus on listening, speaking, reading and writing would be a beneficial alternative to serve the needs of those LEAs which are currently unable to offer Chinese courses. Likewise, offering these courses to both middle and high school students enables them to study the language in more depth over a longer time period and satisfy high school graduation requirements while in middle school.

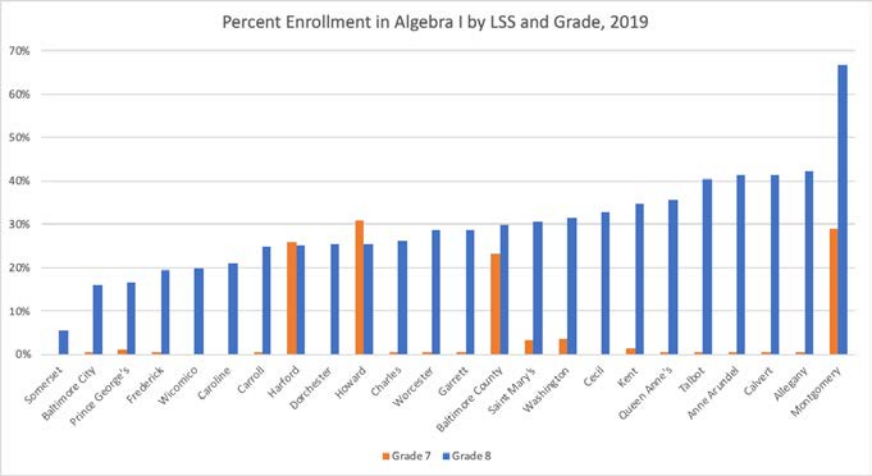
Mathematics Courses

To earn a Maryland high school diploma, public students must meet enrollment requirements, obtain a minimum of three mathematics credits, complete the course assessments, and fulfill service learning requirements as defined in Maryland regulations. Two particular courses, Algebra and Geometry, are required, and all public students must earn a passing score on the Maryland Algebra I assessment. Students have struggled with Algebra I as evidenced in the 2019 state assessment scores where 50.2% of students failed to pass and required remediation.

There have always been students for whom meeting these requirements via the traditional face-to-face classroom experience was problematic. Non-traditional instructional options are often needed for students with medical or SEL issues as well as for advanced middle school students in schools who are unable to offer these advanced courses. Students in eighth grade who took Algebra I online were twice as likely to participate in advanced high school course sequences than their peers in schools where Algebra I is not offered at this grade level (Heppen et. al., 2011). As shown in Figure 4, twenty of the twenty-five LEAs enrolled less than 4% of their seventh grade students in Algebra I, and only one LEA enrolled more than half of their

eighth students in Algebra I in 2019. The access to Geometry is even worse for the majority of middle school public students in Maryland. Five LEAs enrolled more than 5% of Grade 8 students in Geometry, and fifteen LEAs did not enroll any students in the course in 2019. The number of students falling into this group is expected to increase dramatically due to health concerns associated with the COVID-19 pandemic.

Figure 4



In an effort to better meet the needs of these students, the goal is to offer virtual learning opportunities that would allow students to earn Algebra I and Geometry credits by taking MVLO courses. While online Algebra I and Geometry courses do exist, they are not specifically designed to align with Maryland standards. The additional requirement that Maryland students must pass an Algebra I assessment for graduation heightens the need for learning experiences specifically aligned to the rigor of the Maryland College and Career Ready Standards for Mathematics.

Another goal related to increasing the virtual learning opportunities for Maryland's students is to be able to offer more upper-level mathematics course options. As stated previously, Maryland students must earn three mathematics credits for graduation. While two of the three credits are specified as Algebra I and Geometry, the decision as to what the third mathematics course would be is left to student choice. There is much discussion in the

mathematics community recently about the need to modernize high school mathematics offerings. The world that schools are preparing students to enter has changed dramatically in the last twenty-five years, but the mathematics courses that students take typically follow a pathway leading to Calculus. Additional high school mathematics pathways are being developed in response to innovations being made to college mathematics pathways. Anytime new courses are introduced, that all students are not required to take, it takes a while for these courses to be selected by large enough groups of students to make it viable for a school to offer.

There are two courses that are increasing in importance to students' future goals: Statistics and Data Science. Currently, there is not an equitable structure across the state of Maryland related to the availability of these courses. A student attending a large school in a large school district may have the option to take a Statistics course where a student from a small rural school may not have that option. In 2019, 46% of the students enrolled in AP Statistics in Maryland public schools in 2019 were from only two LEAs, and two-thirds of students enrolled in non-AP Statistics courses were in five of the six largest LEAs. With online offerings, the availability of these courses would no longer be determined by a student's zip code. Students who learn mathematics and statistics in context, with emphasis on logic, reasoning, and critical thinking, are more adept mathematical thinkers, and can apply mathematics to solve problems during their everyday lives.

Data science, modeling, and problem-based learning can be particularly powerful mechanisms for integrating mathematics contextually. The job opportunities in data science also outpace the supply of workers and are driven by demands in rapidly expanding fields, such as Artificial Intelligence (Dignan, 2019; Holak, 2019). In addition to introducing students to a field with impressive job growth opportunities, offering data science makes good pedagogical sense.

In Charting a Course for Success: America's Strategy for STEM Education (Executive Office of the President of the United States, 2018 pp 17-22) it is noted that of "particular importance for workforce development is the need to train future STEM workers in digital ethics and digital privacy around the use of data." Maryland intends to create a rigorous data science course which will be the first data science course offered in the state and can be delivered online or in a blended format to all Maryland students.

Cybersecurity

The Maryland State Board of Education approved Maryland's K-12 Computer Science (CS) Standards in September 2018. The Maryland CS standards include a greater emphasis on cybersecurity than the national standards in part due to the numerous cybersecurity innovation centers in Maryland including the National Security Agency, National Institute of Standards and Technology, Defense Information Systems Agency, Intelligence Advanced Research Projects Activity, USCYBERCOM and DoD Cyber Crime Center. As of June 19, 2020, there were over 45,000 employees in the cybersecurity workforce in Maryland, and over 20,000 open cybersecurity jobs (National Initiative for Cybersecurity Education, 2020). The demand for workers in these fields continues to grow and the education infrastructure has struggled to keep pace with the demand. Maryland has 16 nationally recognized colleges designated as Cyber Centers of Excellence, more than any other state. Eight of these centers are community colleges providing a relatively quick entry point into a career. Despite the concentration of high quality cyber programs at Maryland institutions of higher education, the development of cybersecurity high school programs lags behind. A total of 324 students were enrolled in Cybersecurity courses in Maryland public schools and only eleven of the LEAs offered such courses. However, most of

these courses are embedded in Career Technology Education programs of study and are not usually available to all students.

Elementary Social Studies

The MSDE Social Studies content standards for fourth and fifth grades include content knowledge in five key disciplines (Civics, Peoples of the Nation and World, Geography, Economics, and History) and the skills and processes needed for students to apply their knowledge. Modules will be created specifically to offer online blended learning and to integrate computer science and computational thinking. For example, fourth grade students are expected to explain the effect that regional interests have on shaping government policy in and around Maryland, such as Chesapeake Bay issues for civics and to construct and interpret a variety of maps using map elements for geography. A module can be created to address each of these standards while also increasing students' skill and processes in both social studies and computing. Students can interpret and create layered maps to show change over time in the Chesapeake Bay.

Elementary Science

Similar to the social studies modules that will be developed, MSDE will develop science modules centered on the fourth and fifth grade Maryland Next Generation Science Standards (NGSS). On June 25, 2013, the Maryland State Board of Education adopted the Next Generation Science Standards (NGSS), a set of rigorous and internationally benchmarked standards for K-12 science education that include three dimensions (Science and Engineering Practices, Crosscutting Concepts, and Disciplinary Core Ideas). Modules will be developed to address each dimension integrated with computing. For example, fifth grade students will develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

This model would be designed to demonstrate the cycle of matter and energy transfer in the ecosystem. There are online simulation resources in which students would modify existing models or develop new models, such as the research-based NetLogo, with rich content discussions of model affordances (Wilensky, 2019). Utilizing these resources in a blended module, would allow teachers and students to apply both science and computing skills and processes to examine specific science ecosystem content. By embedding computing into content disciplines, students would be introduced earlier to how computing is used in possible future careers. This is important in order for students to find value in and eventually opt into taking additional computing courses in high school.

Course Development

The instructional design methodology for online course development will include a multi-phase model (Analysis, Design, Development, Implementation, and Evaluation). This is an iterative process enabling time for reflection between implementations and continuous improvement. During each phase, a cross-functional team of project managers, subject matter experts (K-12 teachers, professors, and industry personnel), online instructional designers, writers, digital media producers, and copy editors collaborate in an iterative way to create effective content for each course.

Analysis Phase

In this phase, the team collects the data and details that will become the framework of the course, including the course outline, scope and instructional goals. Based on a needs analysis of the course, the team relies on subject matter experts to obtain critical information about course requirements and define instructional goals, length of the course, course materials, and

supplemental resources. The team will also use best practices in UDL guidelines and accessibility.

Design Phase

The team uses the approved outline and curriculum map for each course to align course goals with measurable course objectives, determine course content, complete content writing, and plan for formative and summative course assessment activities. The curriculum map allows the instructional designer to sequence the lesson content to meet UDL and accessibility guidelines, and storyboard a course prototype for online development.

Development Phase

In this iterative phase, the team is guided by the storyboards to establish the look and feel of the course graphics, organize content in the LMS, and create content assets and interactives. Lessons will progress through a predictable navigation sequence to create a consistent online learning environment and minimize students' cognitive load. Each lesson sequence includes these sections: Video Introduction - Learn It - Try It - Review It - Talk About It/Share It - Conquer It - Exit Ticket.

The design and development team takes an intentional approach to instructional interactives and develops features that motivate students to think, analyze, reflect, and effectively apply what they learn. The team will build the course using the built-in LMS features to help students build a community of inquiry as they:

- Build content knowledge with video segments and interactive questions.
- Engage with skills-based learning interactives (such as drag and drop, short answer, fill in the blank, "What would you say?" scenarios).

- Collaborate in class discussions forums and build community in peer-to-peer support forums.
- Engage with the teacher through direct messaging features.
- Customized scenarios, animated videos, comic strips, and case studies to increase students' level of control and engagement.
- Participate in formative assessment through quizzes, surveys, and interactive polling features.

In consultation with UDL and accessibility experts, the team will develop additional interactive learning tools and templates that can be used throughout world language, algebra, and data science courses. These components give students the opportunity to interact with the content by thinking or doing. Video and audio are used to reduce textual overload and allow students to retain information easily. The learning goal is for students to evaluate situations, apply their acquired knowledge, and make decisions.

Implementation and Evaluation Phases

In these phases, the team will conduct a thorough quality assurance review before the pilot phase is implemented with students. The course pilot will evaluate if the learning goals and objectives were met as set out in the analysis and design phases. The evaluation process will identify a report of actionable changes to improve or revise the content particularly between the course pilot and the second implementation.

Management Plan and Resources

Maryland intends to develop a team of stakeholders (students, parents, educators, content specialists, administrators, experts in the fields, industry, and university representatives) to work with the MSDE to develop the courses and evaluate course effectiveness. (See Table 1.)

Table 1

The Management Team and Plan

Program Personnel	Responsibilities
MSDE Project Manager –**in-kind**	Oversee the project, responsible for financial requirements, maintain schedule of work in collaboration with contractors, monitor the development, implementation, and evaluation of project
MSDE Online Course Program Manager – **in-kind**	Work with course developer, develop Online Tutorials and Course Reflections, collect student achievement data
Contracted Course Designer	Work with subject matter experts to identify course content and assessments , develop interactives, collaborate with the Project Manager, submit deliverable and milestone plan
Contracted K-12 Subject Matter Experts	Develop course content
Contracted University Level Subject Matter Experts	Professors will develop course content and deliver select pilot courses
Contracted Accessibility Course Reviewers	Collaborate with Course Developer to ensure equity content and interactive assets of courses
MSDE Accessibility Platform Reviewer – **in-kind**	Ensure compliance with WCAG 2.1 Level AA guidelines
Contracted Facilitators	MSDE approved educators, under contract, facilitate course delivery
MSDE Content Specialists – **in-kind**	Review content submitted for courses
Contracted Evaluator	Develop evaluation plan and work collaboratively with MSDE's accountability office
MSDE Learning Management Administrator – **in-kind**	Ensure functionality of courses and the creation of course sections
LEA Learning Management System Administrators – **in-kind**	Upload resources and ensure the functionality of resources in their partitioned LMS area
Non-public Stakeholder Input	Non-public representative will work directly with Project Manager and Online Course Program Manager, provide input, and ensure a communication avenue is in place for their stakeholders.
Students and parents	Provide feedback throughout the pilot course phase to Online Course Program Manager to inform course revisions
Learning Education Reporting Network	Continued consultation to address interoperable learning records

Costs are reasonable in relation to the objectives, design, and potential significance of the proposed project:

- During Race to the Top (7 - 9 years ago), Federal funds were used to develop student and professional development courses and modules. Depending upon the interactives required for each course, the costs at this time ranged from $275,000 per course to $400,000. The level of accessibility at the time was limited to ADA 508. With today's need to meet higher accessibility standards that include ensuring that content will render correctly for various devices, specific coding is required.

- It is anticipated that these courses may require updating over the next 5 years. MSDE specialists and coordinators will be responsible for content revisions and the Office of Instructional Technology will address any broken links or issues with interactive assets.

The extent to which the costs are reasonable in relation to the number of persons to be served and the anticipated results and benefits are described below:

- Students will wish to continue their progression in the World Language courses.
- More students will enroll in the Data Science course as it will qualify as an advanced course.
- Opportunities will be provided for middle school students to participate in advanced mathematics courses when schools cannot offer them.
- Computer science will be integrated into the elementary courses to provide early exposure and spark interest in further pursuit in this area.
- Courses will remain on the approved course list beyond Year 3 with any revisions completed by the MSDE staff.
- It is anticipating that a 10% annual enrollment growth will occur over the next 10 years and will reduce expenditures from this grant of $3,140 per student to $191.60.
- Expenses for this grant will include costs related to personnel are listed in the Management table as not in-kind.

Timeline

If funded, this project will begin on July 31, 2020 and conclude on July 30, 2023. For the 36 months, the project team will complete the milestones listed in Table 2. The team will monitor progress as they complete course development, pilot courses, and fully implement each course.

Table 2

The Proposed Project Timeline

Timeline	Year 1			Year 2			Year 3		
	FA	SP	SU	FA	SP	SU	FA	SP	SU
Course Development Year 1 Courses									
Accessibility consultation									
Pilot Year 1 Courses									
Full Implementation of Year 1 Courses									
Development of Year 2 Courses									
Pilot Year 2 Courses									
Course Development Year 3 Courses									
Evaluation Planning and Implementation									
Discussion regarding LERs									
Stakeholder Communications									
Teacher Training									
LEA Access to the State LMS									

Evaluation Plan

Our approach to the evaluation plan will be a mix of two frameworks, Stufflebeam's (1983) CIPP model (Context-Input-Process-Product) and Kirkpatrick's (1994) training evaluation model. Specifically, we will be using the process and product evaluation stages from CIPP wherein we determine whether the components of the proposed activities have been implemented according to plan, and if not, why, and whether the program outcomes were as anticipated. Specifically, the process evaluation will be conducted across the courses in the pilot years via three strategies: interviews with key stakeholders, utilization of LMS data to determine the student and instructor usage of online content, and surveys of randomly selected teachers and students (and their parents) across the courses to gauge satisfaction, and usability of the course

materials. Findings from this process, or formative, evaluation stage will inform tweaks to the course offerings and professional development. Secondly, in terms of product evaluation, we will incorporate Kirkpatrick's four levels of evaluation: reaction, learning, behavior, and results for both the teachers who are receiving professional development as well as the students in the content courses. In terms of reaction and learning, the experience of the teachers to the OTM and the students to the content courses will be assessed via self-report questionnaires during the full implementation years for the courses that were piloted prior to the last year of the project. These questionnaires will be designed and tested during the second year of grant activities and will include pre-course measures of knowledge of the content topic, interest in the topic, and intention to pursue additional training, as well as post-course measures of the same constructs.

To examine behavior and results, we will plan to utilize data from the Maryland Longitudinal Data System, a statewide administrative data repository of unit-record level data on PK-12 enrollment and outcomes, postsecondary enrollment and outcomes, and earning from the state department of labor. First, a simple examination of enrollments in the online course offerings will be undertaken to verify that the courses have led to increased access in the key content courses of interest, especially within key subgroups of interest. Next, utilizing a propensity-score matched sample as a control group (Rickles & Seltzer, 2014), we will determine whether course-taking patterns for those students enrolled in the online offerings differ from those of the matched control group. Similarly, we will examine postsecondary enrollment and major as outcomes and median earnings in the year following high school graduation. Although time series methods will be considered to examine the potential influence of the online course offerings on the workforce shortages, confounds of the COVID19 pandemic and the time

required to show cumulative effects of the online courses may limit any conclusions that we might be able to make in this area.

Sustainability

During and beyond this proposed project, the MSDE will seek additional funding sources to continue to offer and maintain high-quality virtual course options. The MSDE will apply for additional grant offerings and request state-level funding, and utilize non-public and public for the creation of new courses and payment of online facilitator stipends. The MVLO program will update the content within the created courses reducing maintenance fees and will create course copies for the LEAs to utilize within their systems. The MSDE will continue to provide online professional development opportunities for Maryland educators. These approved virtual educators, who are already have a contract with their systems, can facilitate online and blended course offerings within their LEA or across LEAs and ultimately, lower course costs by negating the need to pay per pupil registration fees for the MSDE facilitator stipend. This consequently will allow LEAs with limited budgets to be able to increase their student course enrollments via the MVLO courses.

References

Ahn, J. & Mceachin, A. (2017). Student enrollment patterns and achievement in Ohio's online charter schools. *Educational Researcher, 46*(1).

Dignan, L. (2019, December 10). Data science dominates LinkedIn's emerging jobs ranking. Retrieved from https://www.zdnet.com/article/data-science-dominates-linkedins-emerging-jobs-ranking/.

Hart, C., Berger, D., Jacob, B., Loeb, S., Hill, M. (2019). Online Learning, Offline Outcomes: Online Course Taking and High School Student Performance. *AERA Open, 5*(1).

Heppen, J. B., Walters, K., Clements, M., Faria, A. M., Tobey, C., Sorensen, N., & Culp, K. (2011). Access to Algebra I: The Effects of Online Mathematics for Grade 8 Students. NCEE 2012-4021. *National Center for Education Evaluation and Regional Assistance*.

Holak, B. (2019). Demand for data scientists is booming and will only increase. https://searchbusinessanalytics.techtarget.com/feature/Demand-for-data-scientists-is-booming-and-will-increase.

Kirkpatrick, D. L. (1994). Evaluating training programs: the four levels. San Francisco, CA: Berrett-Koehler.

National Science Technology Council (2018). *Charting a Course for Success: America's Strategy for STEM Education*. https://www.whitehouse.gov/wp-content/uploads/2018/12/STEM-Education-Strategic-Plan-2018.pdf.

Rickles, J. H., & Seltzer, M. (2014). A two-stage propensity score matching strategy for treatment effect estimation in a multisite observational study. *Journal of Educational and Behavioral Statistics, 39*(6), 612-636.

Stufflebeam, D.L. (1983) The CIPP model for program evaluation. In: Madaus, F.F., Scriven, M. and Stufflebeam D.L., Eds., *Evaluation Models: Viewpoints on Educational and Human Services Evaluation*, Kluwer, Norwell, 117-141.

Wilensky, U. (2019). NetLogo. http://ccl.northwestern.edu/netlogo/. Center for Connected Learning and Computer-Based Modeling, Northwestern University. Evanston, IL.

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APPENDIX 1

STATE OF MARYLAND
OFFICE OF THE GOVERNOR

LARRY HOGAN
GOVERNOR

June 23, 2020

Dr. Karen Salmon
Superintendent
Maryland State Department of Education

Dear Dr. Salmon,

I am pleased that the Maryland State Department of Education is pursuing the Rethink grant. I recognize that, during the COVID-19 pandemic, educational disruptions occurred due to necessary requirements that directly impacted students' well-being and learning. The resulting shift to remote learning highlighted the existence of inequitable access to the Internet and necessary devices and a teacher workforce that was not fully prepared for this method of instructional delivery. Most educators were learning how to deliver instruction remotely as they were creating lessons for their students. It is my understanding that, over the summer, the Maryland State Department of Education and local educational agencies will be offering many professional opportunities to build educator capacity to support student learning regardless of environmental or social situations.

With funding from the Education Stabilization Fund-Rethink K-12 Education Models Absolute Priority 2, Maryland is proposing to expand the existing Maryland Virtual Learning Opportunities Program. The State is currently investing in efforts to address inequities and increase the access to the Internet for all students and their families. It is critical that flexible options are available during school closures. One of the important options is to develop online coursework that addresses the need for advanced studies, graduation requirements, and the workforce shortage content areas in Maryland and nationwide. These opportunities must include options for students and educators to participate in distance learning environments that include rigorous online coursework that is aligned to Maryland standards and is delivered asynchronously or synchronously by trained Maryland educators. In addition, educators can support social and emotional learning, build relationships, and address accessibility concerns. Courses will be available to both public and non-public students and educators that will incorporate frequent communications with students and families, encourage relationship building, address special education needs, and are completely accessible to all students.

Expanding the Maryland Virtual Learning Opportunities Program will increase the rigorous remote learning opportunities for Maryland students, and this effort is to be commended. As the Governor of the State of Maryland, I support the work being proposed to ensure our teachers are prepared to educate our children when providing remote instruction and applaud the Maryland State Department of Education for proactively addressing the educational needs for today and tomorrow.

[redacted]

Governor

STATE HOUSE, ANNAPOLIS, MARYLAND 21401
[redacted]
TTY USERS CALL VIA MD RELAY

Val Emrich

[redacted]

Objectives

- To support the transformation of teaching and learning with digitally-related resources
- To provide a cohesive and comprehensive vision for instructional technology and library media that prepares students, administrators, and teachers for the future
- To provide collaborative opportunities for liaisons from all Maryland districts for planning and sharing
- To prepare students in the state of Maryland as they pursue career and college opportunities to attain globally competitive status
- To develop a self-sustaining distance learning system that offers both student and professional online learning opportunities
- To share knowledge and expertise in using technology to advance instructional changes necessary for educators in the 21st century and beyond

Experience

Director of Instructional Technology, School Library Media and Online Programs, and Mathematics
Maryland State Department of Education February 2012 to present

- Serve as the lead for the Rethink grant proposal team
- Develop the professional development opportunities for distance learning
- Serve as a member of the Maryland Data Privacy Council and the Distance Learning Advisory Committee
- Serve as a member of the State Board of Education Work Group
- Lead the State #GoOpen Federal movement
- Manage four Race to the Top Projects
- Oversee the State learning management system
- Administer and oversee online courses for students and for professional learning
- Supervise five educational specialists, one support staff members, and an accessibility specialist
- Serve as a liaison between Local School Systems and the Maryland State Department of Education
- Serve as Chairperson for Maryland Instructional Technology Advisory Council
- Represent the State Department as an active member of the State Educational Technology Directors Association
- Support school efforts to offer blended instruction in student centered environments
- Other responsibilities include; legislative collaboration, convening work groups to address various initiatives

Instructional Technology Manager March 2003 to February 2012
Anne Arundel County Public Schools (AACPS)

- Oversaw professional development for 6,000 educators in the area of integration of technology into instruction
- Supervised seven resource specialists, including a distance learning specialist
- Explored and initiated the use of mobile devices in instruction
- Served as a liaison between curriculum/instruction and the technology division
- Managed ARRA Maryland STEM Portfolio Project grant - $5.5 million dollars
- Managed Ed Tech grants
- Developed the school system's eCoach program

- Administered grant and program related system budgets
- Co-wrote and delivered Maryland State Department of Education hybrid course, Integration of Technology for K – 12
- Initiated, developed, implemented and/or administered the AACPS eCoach Program, the Administrator's Technology Program, Blackboard Community Portal, Distance Learning Program, Digital Citizenship curriculum K-12, Online Professional Development Courses, Integration of mobile devices, tiered professional development for interactive technologies and applications, Discovery Education Streaming integration K-12
- Other responsibilities include; grant administration, management of the County's distance learning program, learning management system administration

Instructional Technology Resource Specialist, Anne Arundel County Public Schools – 2 years

- Provided professional learning opportunities for elementary and middle school educators

Media Specialist - Anne Arundel County Public Schools
Severna Park Middle School – 3.25 years
Corkran Middle School – 4 years

Elementary School Teacher – Prince Georges County Public Schools
Pointer Ridge Elementary – 3 years, Team Leader for 2nd, 3rd, and 4th grades
Greendale Elementary – 2 years

Education

Online Facilitator PBS Course	James Madison University
Administrator I Certification	University of Towson
Graduate Certification – Leadership in Technology Integration	Johns Hopkins University
M.S. Instructional Technology	University of Towson
B.S. Elementary Education	University of Maryland

Presentations

- GoOpen presentation for Legislative staffers – Capital Hill
- Maryland Assessment Group – 2013, 2014, 2015, 2016
- iNACOL – 2013, 2014
- Common Ground – 2013, 2014, 2015, 2016, 2017
- Fall 2011 –Maryland's Open Educational Resources Summit
- 2011 ISTE Conference– Discovery Education Connections
- Consultant for Louisiana Parishes and Dr. Harvey Perkins
- MAESP conference – Multiple Intelligences and Technology
- Elementary, Middle, High School Principal meetings: Building Potential for Interactive Technologies, H.E.A.T.
- AACPS Curriculum and Community presentations
- NSDC Conference – Philadelphia, Administrator Technology Program
- NMSA Conference – Encouraging Reading through Book Discussions
- Panasonic Kid Witness News

Committee Involvement

- Board member for SETDA (State Educational Technology Directors' Association) 2018 to present
- CEASOM Executive Board Member
- MSET Member
- Maryland State Department of Education (MSDE) STEM Advisory
- Connector for three Anne Arundel County Public School Central Office RTTT Transitions Teams

- Anne Arundel County Liaison to MSDE Instructional Technology Office

Memberships

- State Educational Technology Directors' Association - SETDA
- International Society for Technology Education (ISTE) – Making It Happen Award Winner
- Maryland Society for Educational Technology (MSET)
- Learning Forward
- International Association for K-12 Online Learning Aurora Institute (formerly iNACOL)

Erin Elizabeth Senior

[redacted]

WORK HISTORY:

Digital Learning Specialist II, Maryland State Department of Education (MSDE) 2013-present

- Manages the Maryland Virtual Learning Opportunities (MVLO) Program for students and for educators.
- Coordinates and oversees the content and accessibility evaluation processes for online student courses.
- Maintains Maryland's database of approved online courses.
- Communicates with and provides information to all stakeholders: course providers, parents, students, school system educators/ administrators/ leaders, online facilitators, MSDE staff and Board members.
- Coordinates meetings, provides support, and communicates regularly with local school system Online Points of Contact, Instructional Technology Coordinators and liaisons, and other stakeholder groups.
- Plans, prepares, and presents professional development on digital learning, OERs, and various other topics.
- Manages facilitator and shadow payment for the online student and professional learning program.
- Serves as MSDE liaison on the Digital Learning Advisory Committee and the Board of Education work group
- Collects, prepares, and presents local school system online student and course enrollment data.
- Oversees Maryland's required facilitation process and shadowing experience and maintains a current listing of local school system online facilitators.
- Oversees MVLO Professional Learning program.
- Creates LMS accounts for Maryland educators, oversees the enrollment process, and assists with concerns.
- Provides professional learning and guidance to systems regarding Openly-licensed Educational Resources.
- Assists with the updating of current MSDE student and professional learning online courses.
- Provide assistance with digital learning grant opportunities and other duties as assigned.

Online Campus Teacher Specialist, Anne Arundel County Public Schools (MD) 2009- 2013

- Served as liaison between the MVLO Program and Anne Arundel County Public Schools.
- Facilitated the coordination of online and hybrid student course offerings and services at the system level.
- Provided guidance in the development and implementation of practices/policies at the school system level including:
    - Worked with curriculum staff and central office staff on the approval process for course offerings;
    - Developed and evaluated effective practices for successful implementation of the online campus.
- Managed budget items related to the delivery of online student courses.
- Communicated with and provided information regarding online course offerings to all stakeholders: administrators, guidance, students, parents/guardians, vendors, and staff.
- Assisted school staffs in the planning, implementing, and evaluating of online course offerings at the local school level.
- Provided training, support, and communicated regularly with Online Support and Broadcast Teachers.
- Facilitated the development of student courses.
- Promoted professional development opportunities for teachers to become certified in online teaching.
- Communicated with the MVLO Program Coordinator to:
    - Manage student participation and performance and to collect data and prepare reports.
    - Provide report card and interim dates to ensure that the school data office will receive critical information in a timely fashion.
- Coordinated broadcast class schedules with all stakeholders and oversaw and trained Broadcast teachers.
- Explored emerging technologies and their instructional applications.
- Performed other duties as assigned.
    - Provided county professional development on instructional technology topics and equipment to teachers, administrators, senior staff members, and resource personnel.
    - Instructional Technology Resource Teacher for Elementary Schools and Middle Schools.
    - Investigated and evaluated blocked website requests for the county using Remedy.
    - Helped to maintain AACPS' Middle and High School Technology Connections and Digital Citizenship lessons.

Right Start Advisor, Anne Arundel County Public Schools (MD) 2006- 2009

- Planned, prepared, and presented afterschool PD for middle and high school teachers.
- Demonstrated how to integrate effective instructional strategies and technology into daily lessons.
- Planned lessons with educators.
- Compiled, completed, and submitted required data and documentation relevant to the program budget.

Middle School Teacher and Science DC , Marley Middle School (MD) 2001- 2006

- **Science Department Chair** (2004- 2006)
- **Interdisciplinary Team Leader** (2003- 2005)
- **E-Coach for MMS** (2004-2006)
- **Beginning Teacher Liaison** (2004- 2006)
- **Lead teacher** (for Science) in modeling lessons for teaching in the block.
- Helped to create technology connections for Anne Arundel County's Science curriculum.
- Planned and implemented lessons to meet state standards and individual needs.

Elementary Teacher, Grades: 1,2, and 5 (FL) 1999-2001

- Planned and implemented lessons to meet state standards and individual needs
- Modified the curriculum on a continual basis to assure success in the classroom

High School Alternative Education Program Teacher's Aide Grade 9-12, (PA) 1998- 1999

- Created curriculum and tests, aided students, and evaluated assignments in multiple content areas

EDUCATION AND CERTIFICATES:

Capella University, MA in Leadership and Administration, June 2009

Dickinson College, BA 1999, GPA 3.36 (cum laude)

- *Major: Psychology (GPA: 3.5), inductee National Psychology Honor Society*

Gettysburg College, Elementary Education Certification 1999

- Students Teacher, Grade 5, Carlisle School District (PA)
- Reading Internship, Grade 2, Carlisle Area School District (PA)

Pennsylvania Instructional I Certificate

Maryland Advanced Professional Certificate

- Certification Areas: Administrator 1, Elementary Education 1-6, and Middle School

PROFESSIONAL ORGANIZATION AFFILIATIONS

.

- Maryland Society for Educational Technology (MSET)
- State Educational Technology Directors Association (SETDA)
- International Association for K-12 Online Learning (iNACOL)
- International Society for Technology in Education (ISTE)

Megean E. Garvin, Ph.D.

[redacted]

Current Appointment:

Director of Research and Assessment
Maryland Center for Computing Education
University System of Maryland, Adelphi, MD

Education:

University of Maryland, College Park, MD
Ph.D. in Science Education Curriculum and Instruction, *2012*
Dissertation Title: Utilizing the Team Effectiveness Framework to Examine How Science Education Curriculum Development Groups Create Technology-Infused Curriculum
Johns Hopkins University, Baltimore, MD
Master of Science in Environmental Science and Policy, *5/21/02*
Towson State University, Towson, MD
Bachelor of Science, Elementary Education, *5/28/95*,
Summa Cum Laude

Relevant Research Experience:

2014-2019 **University of Maryland, Baltimore County** Baltimore, MD
University of Maryland, College Park
National Science Foundation Grant, *CS 10K: Collaborative Research: A Structured CS Principles Approach to Professional Development for Maryland High School Teachers*
Principal Investigator, Dr. Marie desJardins (UMBC)
Principal Investigator, Dr. Jan Plane (UMD)
-Research Associate 2017-2018
-Co-Principle Investigator 2019
University of Maryland, Baltimore County Baltimore, MD
National Security Agency Grant, 2017 *Mind, Body, Coding Girls Summer Camp at UMBC*
Principal Investigator, Dr. Marie desJardins
-Research Associate

2014-2018 **University of Maryland, Baltimore County** Baltimore, MD
National Science Foundation Mini-Grant, *ECEP: Expanding Computing Education Pathways in Maryland*
Principal Investigator, Dr. Marie desJardins
-Research Associate

Relevant Work Experience:

2007-Present **Curriculum Education Consultant** Bethesda, MD
The American Association of Immunologists High School Teachers Program

-Provide guidance and editing to the teachers during the curriculum writing process and presentation for an annual conference

2007-2018 **Discovery Education, LLC** Silver Spring, MD
-Develop and write items for Discovery Science Techbook
-Review and edit items for Discovery Science Techbook

2013 **Connected Chemistry** Chicago, IL
-Edited Connected Chemistry Workbooks

Teaching Experience:

Spring 2020 **University of Maryland** College Park, MD
Interpersonal Cyber Communications

Summer 2010 **University of Maryland** College Park, MD
Applications of Computers in Instructional Settings

Fall 2006 **University of Maryland** College Park, MD
Teaching Curriculum and Instruction in Elementary Education Science

Spring 2006 **University of Maryland** College Park, MD
Elementary Education Supervisor

2003-2006 **Harford Community College** Bel Air, MD
Adjunct Lecturer, Earth Science

1995-2000 **North Harford Middle School** Pylesville, MD
Seventh Grade Life Science Teacher
-Living Classrooms Foundation, Nitrate Net Master Teacher *1998-1999*
-Mentor to a Student Teacher *1998*
-School Improvement Team Member *1997-1998*
-Student Assistance Team (drug use intervention) *1996-1998*
-Ecology Club Advisor *1995-1998*
-Interdisciplinary Team Leader *1996-1997*
-Wetlands Construction Project Coordinator *1996*

Relevant Publications and Presentations:

Garvin, M., Hendrickson, K., Dunton, S., Zinth, J., & Goldsmith, L. (In Press). Teacher focused policies to broaden participation in K–12 computer science education in the United States. In Mouza, Yadav, Leftwich (Eds.), *Preparing Teachers to Teach Computer Science: Models, Practices and Policies.* Charlotte, NC: Information Age Publishing.

Garvin, M., Zarch, R., Xavier, J., & Dunton, S. (2020). Maximizing BPC through Maryland's annual state summits . *In Proceedings of RESPECT (Research on Equity and Sustained Participation in Engineering, Computing, and Technology)*. IEEE. Portland, OR.

Garvin, M., Neary, M., & desJardins, M. (2019). State case study of computing education governance. *ACM Transactions in Computing Education (TOCE)*, *19*(4), 35.

Garvin, M., Killen, H., Plane, J. & Weintrop, D. (2019). Primary school teachers' conceptions of computational thinking. In *Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE'19)*. ACM.

Brandon Riesett [redacted]

Professional Profile

Eager to increase the effective integration of accessibility standards into online learning environments to enhance the equity and usability of online learning resources. Ensuring better staff access to and knowledge of these accessibility standards, to ensure future success in applying understanding to further educational, professional and personal settings.

- Bimonthly trainings focused on the accessible design within Word, PowerPoint and other products
- Statewide presentations on accessibility standards and purchase and use of accessible teaching and learning materials including the VPAT
- Agency wide support on accessible procurement and accessible design of websites
- Instruction, presentation of various BCPS Professional Developments as well as development of instructional materials through the programs at the Office of eLearning, Baltimore County Public Schools
- Completion of Masters Degree with Honors in Instructional Technology and Bachelors Degree in Social Studies and History Education.
- Proficient in incorporating various technologies and use of various learning management platforms, for synchronous and asynchronous efforts, into lessons and activities. Eager to ensure the best education for all students, especially those in Career and Technical Education.
- Knowledgeable in the application of accessibility laws/regulations, *Web Content Accessibility Guidelines 2.0* and application of assistive software and hardware as an educational resource.
- Piloted a streaming classroom program for a home bound student through Microsoft Lync in Harford County
- Dedicated to continual application of all necessary methods into all learning environments as a means of ensuring future student success.

Education, Honors, and Certifications

Master of Education (MEd) in Instructional Technology
University of Maryland University College
Adelphi, Maryland 20783
Graduated Summa Cum Laude 2012 (Cumulative GPA 3.9)

Bachelor of Science - Social Studies and History Concentration in Secondary Education
Towson University
Towson, Maryland 21252
Graduated with Honors in 2005

AP Summer Institute: Preparing Students for Advanced Placement Economics

Goucher College 2012

Professional Certifications

Maryland Advanced Professional Certificate: Social Studies 7-12
Validity Dates: 7/1/2017 to 6/30/2022

College Board AP Certified Teacher: Economics (Micro and Macro)

Key Qualifications

- Evaluate online courses to ensure that minimum accessibility standards; monitor vendor accessibility timelines and progress
- Provide agency wide accessibility training for Maryland State Department of Education
- Provide technical support to the Local School Systems on accessibility and accessibility specific COMAR
- Working as member of a larger team in order to ensure that Maryland State Department internal and external products meet the current accessibility standards
- Responsible for development of lesson instructional design and effective use of available online technologies, ensuring accessibility for all students, coordination of all needs, and working to achieve project goals within the e-Learning Office
- Approved to teach MSDE Online Courses and approved by MSDE to review Student Online Courses as a Content Matter Expert
- Supervised student teachers enrolled in Towson University's Secondary Education as well as Harford Community College Intern enrolled in Education Program
- Provided county wide professional development for BCPS in 2018 on *Understanding and Designing a Blended Learning Experience*, as well as for BCPS Social Studies office during the 2016-2017 and 2017-2018 School Year (Improving Student Learning, Creating Interactive Assignments in BCPSone for Social Studies, Understanding Blended Learning experiences in secondary social studies)
- Provided Staff Wide Professional Development during the 2011-2012 school year pertaining to using Wikispaces in the classroom to create digital student portfolios
- Site Testing Coordinator for the High School students at the Office of eLearning during the 2016-2017 School Year
- Experience with Government Bridge Plan Monitoring and Scoring for Office of Social Studies

Employment

Maryland State Department of Education
Technology Accessibility Specialist
July 2018 to Present

Baltimore County Public Schools
eLearning Teacher
eLearning Center
August 2014 to June 2018

Teaching Experience

- Economic and Public Issues – EPI (Blended) – 3 Years
- World History (Blended) – 4 Years
- American Government and EPI Credit Recovery (Online)
- Mentor FLVS Student
- World Cultures 6 – 1 Year
- American History 8 – 2 Years

Harford County Public Schools
High School Social Studies Teacher
Bel Air High School
October 2005 to July 2014

Teaching Experience

- American Government - 9 Years
- AP Economics (Micro and Macro) - 2 Years
- Economics - 4 Years
- United States History - 2 Years
- Mastery Government - 2 Years
- Psychology - 2 Years
- World Geography - 1 Year

Kim R. Bellinger

[redacted]

PROFESSIONAL OBJECTIVE

To secure a professional position within the Maryland State Department of Education that will enhance my technical and customer service skills, and contribute to meeting agency goals.

PROFESSIONAL EXPERIENCE

Maryland State Department of Education **May 2012 – Present**
Baltimore, MD

Management Associate
Instructional Technology & School Library Media

- Provide administrative and technical assistance to the Director, Coordinator, and Specialists of the Instructional Technology & School Library Media, and Mathematics Offices
- Maintain fiscal accountability: create and approve purchase orders, grants, contracts, invoices, and payments as appropriate; reconcile credit card statements, grant payments, and expense accounts
- Process and monitor new and amended Robotics Program grants for the local school systems and non-profit organizations
- Manage the location and condition of 1,200+ items in the divisions inventory as the Accountability Officer

Program Responsibilities

- Implement, administer, and maintain MSDE's Learning Management System with major emphasis on the Maryland Virtual Student Learning Opportunities (MVSLO) Program, and the Maryland Virtual Professional Learning Opportunities (MVPLO) Program
- Liaison between Accessibility Specialist and accessibility review contractors
- Review, evaluate and assist in the development of program procedures
- Research, compile information, and recommend new ideas, software, procedures, or methods in the daily operation of the LMS or program
- Collaborate with and train MSDE staff and local school system stakeholders to create and navigate online courses and ecommunities
- Provide technical support for LMS facilitators to include: course reviews and evaluation, instructional design, content management, course edits, help-desk services, etc.
- Manage queue of assigned service requests and inquires and ensure timely processing and resolution
- Manage the LMS maintenance to include: enroll and delete users, copy courses, import and export courses, generate reports, identify and assign user roles, open and close courses, prepare courses for the upcoming semester, etc.
- Manage the registration system through Go Sign Me Up and the NIC Payment Engine to include: create course registration, monitor enrollments, process refunds, monitor credit card payments for discrepancies, ensure functionality between programs, research and resolve system errors, generate reports, etc.

Office Secretary III **July 2004 – May 2012**
Office of Mathematics *Baltimore, MD*

- Provided administrative and technical assistance to the Coordinator and specialists of Mathematics and the Office of STEM Initiatives with major emphasis on Curriculum, Professional Development, and STEM Initiatives
- Developed and/or maintained office projects related to the State Curriculum, the Governor's Academy for Algebra/Data Analysis, the on-line Algebra/Data Analysis Course, the Presidential Awards Program, and STEM Education Initiatives
- Coordinated the Financial Management Information System (FMIS) including procurement purchases, STEM grants ($1.3 million), and MBRT grant payments ($2 million)
- Coordinated administrative and fiscal account procedures for the Governor's Academy
- Processed and monitored new and amended STEM grants for the local school systems ($1.3 million)

Kim R. Bellinger
[redacted]

OTHER EXPERIENCE

University of Maryland University College **April 2014 – June 2015**
Peer Mentor, Allies Mentoring Program *Adelphi, MD*

- Mentored new undergraduate students by providing assistance with course material and technical assistance within the learning management system, provided guidance and support with personal challenges in student life via remote communication.

Maryland Council of Directors of Volunteer Services **September 2003 - 2005**
Webmaster *Baltimore, MD*

- Provided maintenance to the MCDVS organization website including: web design, web development and web content management using HTML.

EDUCATION

University of Maryland University College **May 2015**
Major: Bachelor of Science in Business Administration *Adelphi, MD*
Minor: Contract Management and Acquisition
GPA: 3.87 **Honors:** Cum Laude, Alpha Sigma Lambda Honor Society

Community College of Baltimore County **May 2013**
Major: Associate of Arts in Business Administration *Baltimore, MD*
GPA: 3.43 **Honors:** Cum Laude

SKILLS AND TRAINING

- ***Professional Training:*** Introduction to CSS3/HTML5, Accessible Document Training, Introduction to Web Accessibility WCAG and Section 508 Compliance, and Blackboard Learning Management System Administrator

- ***Software*:** Microsoft Office Suite, Financial Management Information System (FMIS), Adobe Acrobat Professional, Blackboard Learning Management System, Go Sign Me Up Registration System, NIC, and Workflow Control System

- ***Professional Skills*:** Excellent problem solving skills and good verbal/ written communication skills, demonstrated customer service skills, strong organizational skills, detail-oriented, ability to learn new applications and tools, project management, office management, and Internet Research

- ***MSDE Committees:*** DOit Statewide Learning Management System Evaluation, Robotics Program Grant, and various interview panels

- ***Volunteer History:*** Provided classroom support to the lead teacher, tutored individual students or small groups, assisted with lesson preparation by getting materials ready and setting up equipment, supervised students during non-classroom times including in-between classes, during lunch, on field excursions, and ensured the classroom environment was safe and clean

References Available Upon Request

Bonnie M. Pechulis

[redacted]

Education

- BA (Secondary Education and Spanish), Towson University, 1970
- Semester abroad, Universidad Iberoamericana, Mexico City, 1969
- MEd (Secondary Education), Towson University, 1976

Certificates

- Advanced Professional Certificate (Master's + 60), Spanish, grades PreK-12
- Administrator I

Present Employment

Specialist, World Languages and ESOL, Maryland State Department of Education, 2013-present

Previous Employment

- Instructor, Methods of Teaching World Languages, Towson University, 2004-2014
- Instructor, Methods of Teaching World Languages, Notre Dame of Maryland University, 2008-2014
- Instructor, Advanced Methods of Teaching Spanish, Notre Dame of Maryland University, 2012
- Instructor, Methods of Teaching World Languages, Loyola University, 2007
- World Languages Mentor, Howard County Public Schools, 2014-2016 (part-time)
- World Languages Mentor, Baltimore County Public Schools, 2000-2013
- Spanish Teacher and Department Liaison, Baltimore County Public Schools, 1990-2000
- Spanish Teacher and Department Liaison, Baltimore County Public Schools, 1970-1979

Curriculum Development Activities

- World Language/STEM modules for Grades K-5 for Arabic, Chinese, Spanish and ESOL – Maryland State Department of Education
- Spanish I, II, III and IV, Baltimore County Public Schools
- Reading in the World Language Classroom, Baltimore County Public Schools

Professional Development Activities

- Statewide workshops and presentations to world language supervisors and teachers, Maryland State Department of Education, 2013-present
- Coordinator for online world language and pedagogy CPD courses by outside vendors and embassies, Maryland State Department of Education, 2013-present
- Instructor of the online CPD course, *Teaching World Languages to Young Learners*, 2014-16
- Instructor of the hybrid course, *Teaching World Languages to Young Learners*, Howard County Public Schools, 2015
- Instructor of world language pedagogy and mentoring CPD courses and workshops, Baltimore County Public Schools, 1995-2013

Presentations

- Maryland Foreign Language Association, The Maryland Seal of Biliteracy Program
- Maryland Foreign Language Association, Maryland's World Language Standards for Learning Languages
- Maryland Foreign Language Association, Best Practices for Mentoring the New World Language Teacher
- Northeast Conference on the Teaching of Foreign Languages, Mentoring the New World Language Teacher
- American Council on the Teaching of Foreign Languages, Mentoring the New World Language Teacher
- American Council on the Teaching of Foreign Languages, Maryland's Seal of Biliteracy Program
- Archdiocese of New York City, Best Practices for World Language Instruction

Committees and Affiliations

- Governor's Subcabinet for International Affairs, MSDE's representative
- World Artists Experiences International Education Team
- NCSSFL – National Council of State Supervisors for Languages
- ACTFL – American Council on the Teaching of Foreign Languages
- MFLA – Maryland Foreign Language Association
- Sigma Delta Pi, National Spanish Honor Society, Towson University Chapter (charter member)

[redacted]

Debra L. Ward

Profile: A Sampling of Individual Skills Associated with this Position

- Skilled at managing the planning and development of effective professional development on the Common Core State Standards for mathematics teachers across the state of Maryland.
- Honed and tested expertise in writing curricular documents both at the state and county levels.
- Leadership skills coupled with effective teaching methods developed and employed at all educational levels across both local and state platforms.
- Solid understanding of national and local professional development standards necessary for Continuing Professional Development
- Instructor of Teacher Leadership Course for UMBC which includes lessons on Adult Learning Theory and Mentoring Teachers.
- Experience in class scheduling, calendar management, and personnel management for one of the largest mathematics departments in Anne Arundel County, as well as handling the day-to-day "crisis management" needs of a very diverse workforce.
- Drive and imagination that brought about several unique programs of special recognition for scholastic achievement when implemented at the high school level

Professional Experience

October 2014- present
Coordinator of Mathematics – Maryland State Department of Education
Duties

- Coordinate all activities of the Office of Mathematics for PreK-high school
- Represent the state in all matters pertaining to mathematics
- Represent Maryland's interests in the development of the state mathematics assessments
- Collaborate with mathematics coordinators from Maryland's LEAs on issues related to mathematics
- Collaborate with other divisions within the department on initiatives related to mathematics.
- Collaborate with other members of Division of Curriculum, Assessment and Accountability on various initiatives.

January 2014 – September 2014
Mathematics Instructional Support Teacher- Howard County Public School System
Duties:

- Provide professional development for teachers on the High School Mathematics Common Core State Standards
- Provide support to teachers as they implement the Common Core State Curriculum for High School Mathematics

January 2011 – January 2014
Education Specialist, Secondary Mathematics – Maryland State Department of Education
Duties:

- Review online courses and digitally submitted modules aligned to the High School Mathematics Common Core State Standards

- Planning and implementing professional development for teachers on the Common Core State Curriculum for Mathematics
- Development of curricular materials to support the Common Core State Curriculum for Mathematics
- Development of an on-line toolkit to support mathematics instruction
- Selection of materials to support a Common Core State Curriculum for Mathematics toolkit

June 2009 – Present
Adjunct Faculty – University of Maryland Baltimore County (UMBC)
Adjunct Instructor for the following graduate level courses:
- Teacher Leadership
- Advanced Methods in Teaching Secondary Mathematics
- Pre-calculus
- Calculus

September 2009 – June 2010
Adjunct Faculty – Anne Arundel Community College (AACC)
Adjunct Instructor for the following courses:
- College Algebra

June 2005 – January 2011
Mathematics Teacher Specialist – Anne Arundel County Public Schools Central Office
Duties:
- Plan and deliver all aspects of Professional Development for secondary mathematics teachers
- Assist Mathematics Coordinators in the development and implementation of the mathematics program for Anne Arundel County Public Schools
- Write curriculum guides for Anne Arundel County Public Schools
- Write district mathematics assessments
- Assist in selection of Materials of Instruction for Anne Arundel County Public Schools
- Advise schools on various aspects of their mathematics programs and initiatives

Sept 1999 – June 2005
Professional Development Instructor – Anne Arundel County Staff Development Office
- **"Teachers as Instructional Leaders"-** A 15 week, 3 credit course to train teachers to become team leaders or department chairs

Sept 1995 – June 2005
Mathematics Department Chairman – Old Mill High School
Duties:
- Supervise 22 teachers covering all secondary mathematics areas
- Create teaching assignments and manage daily operation of the department
- Manage annual $20,000 departmental budget
- Develop and provide in-service training to faculty

Sept 1978 – June 1995
Mathematics Teacher (Secondary Level) – Old Mill High School
Teaching assignments at all levels of mathematics, including:
- Algebra I, Algebra II and Algebra III
- Analytic Geometry
- Pre-calculus
- Geometry
- AB and BC Calculus

Sept 1975 – June 1978
Mathematics Teacher – (Middle School Level) – Magothy River Middle School

Additional Specialized Experience

Member-PARCC Operational Working Group

- (April 2014-2019)

Member - PARCC State Educator Content Review Committee for Mathematics

- (October 2012 – Present)

Member – PARCC Performance Level Descriptor Development Committee for Mathematics

- (June 2012 – Present)

College Board Consultant – EXCELerator Project

- Assist school systems with the writing of curriculum to incorporate the Spring Board Program (July 2006-July 2007)

College Board Consultant- "Vertical Team" Workshop - Maryland

- Deliver Workshop on Vertical Teaming for College Board (June 2004)

Education and Professional Development

Masters of Education Towson State University-Towson, MD	1981
BS in Mathematics and Education Towson State College – Towson, MD	1975
International Baccalaureate Training Atlanta, GA	2006
Administrative I Certification Cohort McDaniel College – Towson, MD	2007
College Board Instructor Certification Dallas, Texas	2004
Reading Strategies Level II Notre Dame of Maryland	2004
International Baccalaureate Training Myrtle Beach, SC	2003
Department Chair Workshop AA County Workshop	1995
Additional Graduate Level Courses (Linear Algebra, Computer Programming, Introduction to Special Education, Supervision of Student Teachers) University of Maryland	1983-1991
Strategies for Helping the Exceptional Child Loyola College – Baltimore, MD	1987

Professional Activities with MSDE (October 2004 – January 2011)

- Gap Analysis Between Maryland VSC and Common Core Standards
- Set standards for Maryland High School Assessment Testing
- Write Bridge Projects for Maryland State Department of Education
- Pilot Bridge Projects for Maryland State Department of Education
- Algebra Data Analysis Item Review

Professional Activities at Old Mill High School & Others

- Renaissance Committee Chair - Old Mill High School 2002- 2005
- Member of the Old Mill High School Technology Committee 2000 – 2005
- Planned and orchestrated Academic Pep Rallies for Old Mill HS 2003, 2004, 2005.
- Member of a Countywide Committee to study the 4-period day 1999
- Member of Faculty Council 1998/99, 1997/98, 1999/2000
- Class Advisor of the Class of 1985, Class of 1997 and the Class of 2002, coordinated 4 years of activities, helped raise over $20,000 for each class, and planned all graduation related activities.
- National Career Connections Convention in Columbia, MD 1998
- Meeting Room Committee NCTM National Convention 1998
- Citizen's Advisory Committee, Old Mill Middle North 1993/1994
- PTA Vice President, Southgate Elementary School 1992/1993

Awards

- "Certificate of Honor" - Presidential Awards for Excellence in Mathematics and Science Teaching- National Science Foundation, May 2000
- "Teacher of the Week" Capital Newspaper June 2002
- "Distinguished Teacher Award" Hood College 1999
- "Teacher of the Month Award" Anne Arundel County 1996
- "Teacher of the Semester Award" Old Mill High School 1995
- Who's Who Among America's Teachers (various times)

[redacted]

ELISSA HOZORE

[redacted]

EXPERIENCE

Computer Science Content Specialist 2019-present
Maryland State Department of Education, Baltimore, MD

- Provide computer science technical assistance and support local school systems in long range planning for Computer Science sustainability.
- Collaborate with content specialists and Maryland educators to develop annotated standards that align with the approved Maryland K-12 Computer Science Standards and to build develop a crosswalk between existing content standards, the Computer Science standards and the problem solving strategies involved in computational thinking.
- Serve on the Division of Career and College Readiness Information Technology Career Cluster.
- Collaborate with Maryland Center for Computer Education to increase the capacity of local school systems to offer Computer Science content and courses and to design, deliver, and evaluate professional learning opportunities.
- Monitor alignment to ESSA well-rounded requirements, implementation progress, and other local school system data.

Elementary Instructional Technology Teacher 2018-2019
Howard County Public School System, Howard County, MD

- Teach standards-based technology curriculum to students in grades PK-5 including instruction in computer science, computational thinking, digital citizenship, and the use of computer applications and Canvas learning platform
- Collaborate with other technology teachers, special area teachers, and classroom teachers to develop lessons that utilize technology, computational thinking, and computer science to reinforce and extend concepts taught in curricular areas

Director of Instructional Technology 2015-2018
Beth Tfiloh Dahan Community Lower School, Baltimore, MD

- Developed and implemented technology curriculum for students in grades K-4 aligned with CSTA and ISTE standards; taught computer science, coding, computational thinking, and robotics as part of the curriculum
- Collaborated with classroom teachers to ensure the technology curriculum complemented their curriculum

Education Program Manager, Elementary STEM Certification 2011-2014
Maryland State Department of Education, Baltimore, MD

- Developed, managed, coordinated and presented Elementary STEM Certification Network training and professional development activities
- Managed communication and collaboration with and among Elementary STEM Certification Network members including representatives from universities, school districts, and community organizations.

- Guided development of Elementary STEM certification requirements consistent with existing regulations
- Evaluated proposals and supported partner programs in developing Elementary STEM preparation programs and in adhering to standards, requirements, regulations, budgets and schedules
- Managed, monitored and reported on fiscal and programmatic aspects of Elementary STEM Certification project

Educational Technology Professional Development Science Specialist
Maryland Public Television, Owings Mills, MD 2005-2011

- Developed and presented professional development institutes and experiences to train educators in the implementation of a variety of educational technology resources
- Collaborated with teachers and developers to plan, create, pilot, and launch educational technology resources
- Wrote proposals to and managed grants from funders including NOAA, NIH, and the Verizon Foundation

Adjunct Faculty, Instructor in Education
Goucher College, Towson, MD Fall, 2017
Instructional Technology: graduate blended (online and in person) course
Towson University, Towson MD Fall 2014- Spring 2015
Early Childhood Science Methods: undergraduate course

Prior Teaching Experience
Piedmont Virginia Community College-Lab instructor in Biology and Microbiology
Louisa County Public Schools—Eighth grade science teacher
Wyncote Academy-Science teacher and coordinator, grades 6-11

PROFESSIONAL ACTIVITIES AND AWARDS

- Howard County Public School System--Curriculum Writer, Elementary Instructional Technology-developed standards- based Cornerstone Tasks; Instructional Technology and Library Media Steering Committee;
- Co-recipient of 2018 Bright Mind Foundation Grant award (with David Floyd)
- Recipient of 2017-2018 Kohelet Prize in Interdisciplinary Education (with Elana Weissman). Submission available online
- Beth Tfiloh Lower School Teacher of the Year 2016-2017

VOLUNTEER ACTIVITIES

- Maryland Food Bank SNAP volunteer
- Treasurer, Sudbrook Park, Inc. (current) and Western Tech PTSA (2015-2017)
- Webmaster (current), President (2010-2012), Chevrei Tzedek Congregation

EDUCATION

Tufts University Medford, MA, Certificate in Early Childhood Technology
Drexel University Philadelphia, PA, Teaching certification in Biology, Elementary Education
Cornell University Ithaca, NY, M.S. in Agronomy
Yale University, New Haven, CT, B.S. in Biology

NANCY S. SHAPIRO, PHD
Associate Vice Chancellor for Education and Outreach
University System of Maryland,
[redacted]

PROFESSIONAL PREPARATION

Institution	*Major*	*Degree*	*Year*	*Honors*
Brandeis University	History	BA	1969	Magna Cum Laude Phi Beta Kappa
University of Delaware	Secondary Education	MEd	1972	Highest Honors
University of Maryland	Education, Curriculum and Instruction	PhD	1984	

APPOINTMENTS

2000-Present Associate Vice Chancellor, Academic Affairs, Education and Outreach — University System of Maryland
Special Assistant to Chancellor for P-20 Education
Responsibilities: Lead and manage the USM P-20 agenda high priority policy issues: high quality teacher preparation, system-wide strategic planning, student learning outcomes assessment, collaboration with K-12 and community colleges to develop articulation policies; and undergraduate educational reform initiatives for the USM public four-year colleges and universities in the areas of general education, student learning outcomes and accountability, curriculum alignment with K-12 and community colleges. Lead and facilitate Maryland Education Deans Council, including all public and private four-year colleges of education. Lead and facilitate the AAT (Associate of Arts in Teaching) Oversight Council. The position reports to the Senior Vice Chancellor for Academic Affairs and the Chancellor of the University System of Maryland. Additional responsibilities include senior staff to Board of Regents committees, statewide task forces, and higher education oversight panels. Fiscal responsibility for state teacher education grants, USM K-16 funds, and federal and foundation external funds. Supervise a staff of five direct reports.

2010-present Research Professor, College of Education, Department of Teaching and Learning, Policy and Leadership. — University of Maryland
1997-2000 Director, K-16 Teaching and Learning Partnership — University System of Maryland
1994-1997 Executive Director, College Park Scholars — University of Maryland
Faculty, English Department
1991-1994 Director, Freshman Writing Program — University of Maryland
Faculty, English Department
1986-1994 Assistant Director, Professional Writing Program — University of Maryland
Faculty, English Department

RECENT RELEVANT PUBLICATIONS AND PRESENTATIONS

Shapiro, N., Morgan, D. & Feagin, K. "Minding Curricular Change: Sustaining Mathematics Reforms at Maryland Colleges and Universities," presented at the Hawaii International Conference on Education, January 2020.

Shapiro, N., Morgan, D., Feagin, K. Short, F. (Towson University) & Hamman J. (Montgomery College) "Mathematics Pathways and The Paradox of Choice," at the AACU Annual Conference, Washington, DC, January 2020.

Shapiro, N. & Morgan, D. "Connections Between Dual Enrollment Experiences and Science Degree Attainment: An Examination of Longitudinal Evidence," presented at the Hawaii International Conference on Education, January 2019.

Shapiro, N. & Morgan, D. . "Better Together: Improving Educational Opportunities Through Collaborative P-20 Networks," ppresented at the Carnegie Summit, San Francisco, April 2019.

Morgan, D., Shapiro, N. & Feagin, K. "Using Logic Models to Understand Collaborative Network Development, Growth, and Sustainability," at the American Evaluation Association Annual Conference, Minneapolis, November 2019. May, D., Susskind, D., and Shapiro, N. (2013). Faculty Grassroots Leadership in Science Education Reform: Considerations for Institutional Change, Culture, and Context. *Creative Education,* 4(*7A*), July.

Shapiro, N.S (2008)**.** Powerful Pedagogy: Learning Communities at Historically Black Colleges and Universities. *The Journal of Negro Education*, 77 (*3*) (Summer 2008)

Laufgraben, J.L. & Shapiro, N. S. (2004*) Sustaining and Expanding Learning Communities.* San Francisco: Jossey Bass Publishers.

Shapiro, N.S. (1999) & Levine, J.H. *Creating Learning Communities*. San Francisco: Jossey Bass Publishers.

Shapiro, N. S. (1999). Creating a Seamless Educational System K-16—The Role of Higher Education in School Reform. *Metropolitan Universities,* 10 (2), 7-10.

Shapiro, N. S., & Haeger, J. (1999). Maryland's K–16 Model. *Metropolitan Universities*, 10 (2), 25-32.

Langenberg, D.N., Marx, G.L., Shapiro, N. S. (1999). Coordinating Efforts for System-wide Change: K-16 Partnerships. *High School Magazine, NASSP*, 6(4), 8-13.

Shapiro, N. S. (1998). Learning Communities: Moving Beyond the Classroom Walls. *Metropolitan University,* 9 (1), 25-34.

PROFESSIONAL ACTIVITIES

Governing Board Member, Maryland Longitudinal Data System (2010-present).
Baltimore Maryland. The purpose of the Maryland Longitudinal Data System (MLDS) is to generate timely and accurate information about student performance that can be used to improve the State's education system and guide decision makers at all levels. Currently serving as Vice Chair of MLDS.

Staff Director, Governor's Task Force on STEM (2008-2009). Annapolis, Maryland.
As project director, worked with co-chairs William E. Kirwan and June Streckfus to complete the research, analysis and state-wide collaboration that led to seven recommendations that will guide state STEM education and research policy for the next five years.

P-20 Director, University System of Maryland (2000-2012).
Lead partnerships between K-12 public schools and state universities and colleges in service of school reform, including teacher preparation and professional development, and alignment of standards to improve student learning outcomes.

PI/Co-PI on six National Science Foundation Grants

- **CCEP** $1,149,948/2 years. "Maryland Delaware Climate Education, Assessment and Research" planning grant (2010-2013) Award DUE-1043262.
- **CCEP** $6,249,739/5 years. "Maryland Delaware Climate Education, Assessment and Research" implementation grant (2012-2017) Award DUE-1239578
- **MSP-STEM-C** $500,000/3 years. "Computer Science Education Expansion to the Minority Student Pipeline project,
- **MSP** $12,396,945/5 years. "Minority Student Pipeline Math Science Partnership" (MSP)2 (2008-2013)Award DUE-0831970
- **MSP *Supplemental Grant*** $499,999/3 years. Principal Investigator and Project Director. "Change and Sustainability in Higher Education (*CASHÉ*)" (2004-2007). Award EHR-0227325.
- **MSP** $7,500,000/5 years. Principal Investigator and Project Director. "Vertically Integrated Partnerships K-16, (*VIP*)" (2002-2007). Award EHR 0227325

PI and Project Director on three U.S. Department of Education Grants

- **FIPSE-First in the World** $3,000,000/5 years. "Maryland Mathematics Reform Initiative (2015-2020). Award # P116F150201
- **TQE** $6,000,000/5 years. "Education Equals Mentoring, Coaching and Cohorts ($E=MC^2$)" (2003-2010). Award # P336B030082.
- **TQE** $4,187,000/5 years. "Learning in Communities, (*LINC*)" (2000-2005). Award # P336B000005.
- **FIPSE $**211,875/4 years. "Discovery Projects: Contextualized research experiences for second year undergraduates. Award # P116B961181.

HONORS AND AWARDS

Phi Beta Kappa, Magna Cum Laude, Brandeis University, 1969.
M. Ed. with Honors, University of Delaware, 1972.
Phi Kappa Phi, University of Maryland, 1984.
Pan-Hellenic Teaching Award Nomination, University of Maryland, 1993.
Institute for Women in Higher Education Administration, Bryn Mawr College, 1996.
Summer Institute for Women in Higher Education Administration (Bryn Mawr), 1996.
University of Maryland Parents Council Outstanding Teaching Award Nomination, 1997.
Leadership Maryland, Class of 2002.
Harry S. Levitan Education Prize, Brandeis University Alumni Association, 2004

APPENDIX 3

Karen B. Salmon, Ph.D.
State Superintendent of Schools

October 7, 2019

U.S. Department of Education
OFO / OGA / ICD
Attention: Frances Outland, Rm. 6059
550 12th Street, SW
Washington, DC 20202-4450

RE: Agreement No. 2019-118

Dear Ms. Outland,

Enclosed please find the countersigned Indirect Cost Rate Agreement for the Maryland State Department of Education. This reflects MSDE's acceptance of the approved Indirect Cost Rates for fiscal year 2020, per your letter dated September 27, 2019.

Thank you again for your assistance and please extend our thanks to Anthony Johnson as well.

Sincerely,

[redacted]

Amalie E. Brandenburg
Deputy Superintendent/COO
Office of Finance

Enclosure

cc: Steve Brooks

UNITED STATES DEPARTMENT OF EDUCATION
OFFICE OF FINANCE OPERATIONS

September 27, 2019

Ms. Amalie Brandenburg
Deputy Superintendent / Chief Operating Officer
Maryland State Department of Education
200 West Baltimore Street
Baltimore, MD 21201

Reference: Agreement No. 2019-118

Dear Ms. Brandenburg:

The original and one copy of the Indirect Cost Rate Agreement are enclosed. These documents reflect an understanding reached by your organization and the U.S. Department of Education. The rates agreed upon should be used for computing indirect cost grants, contracts and applications funded by this Department and other Federal Agencies.

After reviewing the Rate Agreement, please confirm acceptance by having the original signed by a duly authorized representative of your organization and returned within thirty (30) calendar days from the date of this letter to:

U.S. Department of Education
OFO / OGA / ICD
Attention: Frances Outland, Rm. 6059
550 12th Street, SW
Washington, DC 20202-4450

The enclosed copy of this agreement should be retained for your files. If there are any questions, please contact Anthony Johnson at [redacted]

The next indirect cost rate proposal based on actual data for the year ended June 30, 2019 is due by December 31, 2019. This proposal should be sent to the above address.

Sincerely,

[redacted]

Frances Outland
Director, Indirect Cost Division
Office of Grants Administration

Enclosures

INDIRECT COST RATE AGREEMENT
STATE EDUCATION AGENCY

Organization:

Maryland State Department of Education
200 West Baltimore Street
Baltimore, MD 21201

Date: September 27, 2019

Agreement No: [redacted]

Filing Reference: This replaces previous Agreement No. [redacted]
Dated: 10/12/2018

The approved indirect cost rates herein are for use on grants, contracts, and other agreements with the Federal Government. The rates are subject to the conditions included in Section II of this Agreement and regulations issued by the Office of Management and Budget (OMB) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards under 2 CFR 200.

[redacted]

Distribution Base:

MTDC	Modified Total Direct Cost - Total direct costs excluding equipment, capital expenditures, participant support costs, pass-through funds and the portion of each subaward (subcontract or subgrant) above $25,000 (each award; each year).

Applicable To:

Unrestricted	Unrestricted rates apply to programs that do not require a restricted rate per 34 CFR 75.563 and 34 CFR 76.563.
Restricted	Restricted rates apply to programs that require a restricted rate per 34 CFR 75.563 and 34 CFR 76.563.
DDS	For use on Disability Determination Services programs.

Treatment of Fringe Benefits:
Fringe benefits applicable to direct salaries and wages are treated as direct costs. Pursuant to 2 CFR 200.431, (b), (3), Paragraph (i), unused leave costs for all employees are allowable in the year of payment. The treatment of unused leave costs should be allocated as an indirect cost except for those employee salaries designated as a direct cost for the restricted rate calculation.

Capitalization Policy: Items of equipment are capitalized and depreciated if the initial acquisition cost is equal to or greater than $5,000.

Section II – Particulars

Limitations: Application of the rates contained in this Agreement is subject to all statutory or administrative limitations on the use of funds, and payments of costs hereunder are subject to the availability of appropriations applicable to a given grant or contract. Acceptance of the rates agreed to herein is predicated on the following conditions: (A) that no costs other than those incurred by the Organization were included in the indirect cost pools as finally accepted, and that such costs are legal obligations of the Organization and allowable under the governing cost principles; (B) the same costs that have been treated as indirect costs are not claimed as direct costs; (C) that similar types of information which are provided by the Organization, and which were used as a basis for acceptance of rates agreed to herein, are not subsequently found to be materially incomplete or inaccurate; and (D) that similar types of costs have been accorded consistent accounting treatment.

Accounting Changes: The rates contained in this agreement are based on the organizational structure and the accounting systems in effect at the time the proposal was submitted. Changes in organizational structure or changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rates in this agreement, require the prior approval of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowance.

Provisional/Final/Predetermined Rates: A proposal to establish a final rate must be submitted. The awarding office should be notified if the final rate is different from the provisional rate so that appropriate adjustments to billings and charges may be made. Predetermined rates are not subject to adjustment.

Fixed Rate: The negotiated fixed rate is based on an estimate of the costs that will be incurred during the period to which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to a subsequent rate calculation to compensate for the difference between the costs used to establish the fixed rate and the actual costs.

Notification to Other Federal Agencies: Copies of this document may be provided to other Federal agencies as a means of notifying them of the agreement contained herein.

Audit: All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based may be compensated for in a subsequent negotiation.

Reimbursement Ceilings/Limitations on Rates: Awards that include ceiling provisions and statutory/ regulatory requirements on indirect cost rates or reimbursement amounts are subject to the stipulations in the grant or contract agreements. If a ceiling is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.

Section III - Special Remarks

Alternative Reimbursement Methods: If any federal programs are reimbursing indirect costs by a methodology other than the approved rates in this agreement, such costs should be credited to the programs and the approved rates should be used to identify the maximum amount of indirect costs allocable.

Submission of Proposals: New indirect cost proposals are necessary to obtain approved indirect cost rates for future fiscal years. **The next indirect cost rate proposal is due six months prior to the expiration dates of the rates in this agreement.**

Section IV – Approvals

For the State Education Agency:

Maryland State Department of Education
200 West Baltimore Street
Baltimore, MD 21201

[redacted]

AMALIE BRANDENBURG
Name

COO
Title

10/7/19
Date

For the Federal Government:

U.S. Department of Education
OFO / OGA / ICD
550 12th Street, SW
[redacted]

Signature

Frances Outland
Name

Director, Indirect Cost Division
Title

September 27, 2019
Date

Negotiator: Anthony Johnson
Telephone Number: ([redacted]

APPENDIX 4

Not Applicable

APPENDIX 5

Assurance Document: Education Stabilization Fund: Rethink K-12 Education Models

The Maryland State Department of Education assures the U. S. Department of Education that programmatic information will be submitted for evaluation purposes, as requested.

[redacted]

6/26/2020

Karen B. Salmon, Ph.D.
State Superintendent of Schools
Maryland State Department of Education

Date

APPENDIX 6

Additional Letters of Support:

- Maryland State Department Superintendent of Education
- National Security Agency
- University System of Maryland

MARYLAND STATE DEPARTMENT OF EDUCATION
EQUITY AND EXCELLENCE

Karen B. Salmon, Ph.D.
State Superintendent of Schools

June 25, 2020

Dear Sir or Madam,

As State Superintendent for Maryland Public Schools, I support the proposed efforts as they are outlined in this grant proposal. I believe these efforts will provide flexible instructional delivery models for our Maryland students and educators. During the COVID-19 pandemic, many issues arose that affected students, families, and educators. It was quickly discovered that students' and families' access to computer devices and the Internet was inadequate. In addition, educators had not received sufficient professional learning on instructing students in a virtual learning environment. Local school systems had to be transparent and timely in communicating with families across the State. The knowledge gained throughout the past few months will help guide Maryland's future paths for education. While Maryland has made some progress, there continues to be much room for more improvement.

This well thought out proposal is a strong beginning for the State of Maryland to expand the current virtual course offerings by adding Maryland developed courses and modules that are aligned with the standards and curricula. Having this consistency allows for movement in or out of the school building, between local school systems, and it meets the transient nature of the Home/Hospital program. Offering courses to non-public students will provide access to courses that are currently unavailable to them and will support the continuity of learning throughout our State. As you will see, professional learning is a strong and necessary component of this proposal. Most importantly, built into these courses will be components that address students' social and emotional needs, assist in developing relationships among students, and aids in developing relationships between students and teachers.

The development of these courses and those that follow, will support both the delivery of accessible asynchronous courses, and support synchronous teaching by allowing educators to utilize modules from the courses for instructional enrichment. Beyond expanding our secondary courses, Maryland's future goals include the design and offering of courses that will align with the middle and elementary school curriculum.

200 West Baltimore Street • Baltimore, MD 21201 • [redacted]
MarylandPublicSchools.org

The Education Stabilization Fund – Rethink K-12 funding will jumpstart our efforts to create multiple environments in which our teachers can teach and our students can learn. Maryland values its stakeholders and wishes to provide the highest quality education possible. Thank you for your consideration.

Best Regards,

[redacted]

Karen B. Salmon, Ph.D.
State Superintendent of Schools
Maryland State Department of Education

NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND 20755-6000

25 June 2020

SUBJECT: Education Stabilization Fund-Rethink K-12 Education Models Discretionary Grant Program/Maryland Virtual Learning Opportunities (MVLO) program

To Whom It May Concern:

As the Senior Language Authority for the National Security Agency/Central Security Service (NSA/CSS), I am writing today to express support for the Maryland State Department of Education's (MSDE) proposal to expand its ability to teach Chinese and Korean. Located in the heart of Maryland, the NSA/CSS is one of the state's largest employers. We have a vested interest in Maryland's education programs, to which our Agency provides extensive support; our K-12 academic outreach programs provide a wide variety of enrichment activities, particularly in the areas of STEM, world languages, analysis and cybersecurity.

In today's academic environment, in which K-12 institutions are striving to expand their distance learning opportunities, world languages must be a component of that expansion. Foreign language skills are critical to our country's national security, and are increasingly required in the business community. According to a 2019 report issued by the American Council on the Teaching of Foreign Languages (ACTFL), "For U.S. employers, the demand for foreign language skills is greater than ever before. Whether it's in the boardroom, in the field, with customers and partners, or on social media, companies today are increasingly more likely to conduct business in a language other than English. Consequently, a command in multiple languages is a valuable asset for U.S. students and employees – not only in boosting their marketability in the workplace, but in helping them thrive in a global economy."

Relatedly, the 2018 National Defense Strategy of the United States of America calls out inter-state strategic competition as a primary concern in U.S. national security. In order to address these international challenges, the U.S. must, among other things, increase its foreign language capacity. For the NSA/CSS, Chinese and Korean are among the highest priority languages. We are therefore wholly supportive of MSDE's efforts to expand their ability to develop high-quality, synchronous Chinese and Korean online courses that align with Maryland's world language standards and that provide the skills needed for a pathway to high proficiency. Additionally, through our K-12 academic outreach program, we would be in a position to support both teachers and students along this path.

The NSA/CSS could specifically offer MSDE institutions the following services: language tutoring; career talks with students; networking opportunities with future employers; mentorship; expert advisors in the area of online language learning curriculum development. To reiterate, as NSA/CSS Senior Language Authority, I whole-heartedly endorse MSDE's efforts to expand its offerings of Chinese and Korean language courses and I pledge our Agency's support to this endeavor.

[redacted]

NSA/CSS Senior Language Authority

UNIVERSITY SYSTEM of MARYLAND

3300 METZEROTT ROAD // ADELPHI, MD 20783
WWW.USMD.EDU // [redacted]

OFFICE OF THE CHANCELLOR

June 25, 2020

Dear Madam or Sir:

I write to endorse the state of Maryland's *Education Stabilization Fund—Rethink K–12* grant proposal, which will greatly expand and improve flexible instructional delivery models for all Maryland K–12 students.

As Maryland learned with its swift transition to remote learning this spring (in response to COVID-19), uneven, unequal access to high-quality education—without question, a longstanding K–12 challenge—is often exacerbated in an online environment. We are well aware that what happens early in a child's education has a significant effect on later learning, as he or she moves from elementary to secondary education, and into postsecondary education. Addressing educational disparities—in both quality and access—should be a priority of all public sectors, and the University System of Maryland (USM) strongly supports the Maryland State Department of Education's (MSDE's) proposal to close *both* equity gaps by expanding online, remote, and blended learning.

The proposal is focused on two key areas in need of strengthening: 1) ensuring that all courses required for a Maryland high school diploma are available in flexible formats (online, blended, remote); and 2) expanding access to courses that will lead directly to postsecondary education pathways (algebra, geometry, statistics) and majors, and that fill Maryland's workforce needs (data science, Chinese III and IV).

The USM is proud to partner with MSDE to develop curricula for the necessary expansion of course availability, and to facilitate teachers' professional development. Additionally, USM faculty will collaborate with the Maryland Longitudinal Data Center to provide ongoing project research and evaluation, ensuring that the state learns from the development and implementation processes, as part of its commitment to continuous improvement.

This proposal is a strong beginning for Maryland to expand its virtual course offerings by adding Maryland-developed courses and modules aligned with our standards and curricula.

The *Education Stabilization Fund—Rethink K–12* funding will prove key to building flexible learning environments, thereby expanding access to high-quality education for *all* students in Maryland. I thank you for your consideration.

Sincerely,

[redacted]

Jay A. Perman, MD
Chancellor

Budget Narrative File(s)

*** Mandatory Budget Narrative Filename:** 1236-Budget_Narrative.pdf

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Budget Narrative Attachment Form

[redacted] over th
of the funding will be allocated to contractors for: the instructional design of sixteen online courses;
assessments, and assets in these courses; educator training; the facilitation of pilot and full implemer
evaluation. Additional support will be provided by the Maryland State Department of Education (MS

	Year 1	Year 2	Year 3	
[redacted]				
3. Travel	In-kind	-	-	
4. Equipment	0	0	0	
5. Supplies	0	-	-	
6. Contractual	3,664,553	3,583,817	2,969,090	
7. Construction	0	0	0	
8. Other	0	0	0	
[redacted]				
10. Indirect Costs [redacted]	8,850	8,850	4,425	
11. Training Stipends	0	-	-	
[redacted]				
13. Sub-Grantee Allocations	0	-	-	
[redacted]				
[redacted]				

Line 3 indicates that there will be no need for travel expenses as all work and communications will b

Line 6 Contractual Year 1 includes: **Instructional Design and Development** (including K12 Subjec
$2,380,200 for the development of six student courses and $765,500 for the development of five sup
one educator course: **Accessibility Review and Consultation** is $10,500 for a workshop with desig
for work with six student courses and $16,418 for work with five educator modules and Data Scienc
level Subject Matter Expert costs for content creation for Data Science student course and Data Sc
$16,000: **Access to and Use of MSDE's Learning Management System** for seven LEAs cost is $4
Online Teaching in Maryland course for 160 educators is $20,000 and required **shadowing exper**
$40,000: **Evaluation** costs are spread evenly across the three years at $309,135 per year: **Indirect C**

Line 6 Contractual Year 2 includes: **Instructional Design and Development** (including K12 Subjec
$2,380,200 for the development of six student courses (and $672,600 for the development of six su
Accessibility Review and Consultation is $58,800 for work with six student courses and $4,582 fo
modules: **University level Subject Matter Expert** costs for content creation for Chinese III and Chi
$16,000: **Access to and Use of MSDE's Learning Management System** for seven LEAs cost is $4
Online Teaching in Maryland course for 140 educators is $17,500 and required **shadowing exper**
$35,000: Cost to **facilitate 14 sections of pilot courses** (3 sections each for Chinese I, Chinese II, A
each for brand new course contents Korean I and Data Science) is $42,000: **Evaluation** costs are spr
at $309,135 per year. **Indirect Cost** is $[redacted]

Line 6 Contractual Year 3 includes: **Instructional Design and Development** (including K12 Subjec
$1,600,000 for the development of four elementary level student courses (Social Studies and Science
for the development of four supporting teacher modules: **Accessibility Review and Consultation** is
student courses and $3,055 for work with four educator modules: **Access to and Use of MSDE's Le**
for seven LEAs cost is $48,000: **Facilitation of the Online Teaching in Maryland course** for 140
required shadowing experience for 140 educators is $35,000: Cost to **facilitate 26 sections of pilot**
Chinese III and Korean II, 8 sections of Cybersecurity and Geometry, 2 sections of Korean III and Cl
implementation of 130 sections of student courses (15 sections of Chinese I and Korean I, 10 secti
Science, 40 sections of Algebra and Statistics) is $390,000 Evaluation costs are spread evenly across
year. **Indirect Cost** is $[redacted]

Line 10 reflects the negotiated costs between US Ed and MSDE is [redacted]

Line 14 indicates total costs for year 1, year 2, and year 3.

[redacted]

the accessibility of all content,
ıtation phases; and project
SDE) staff members.

	Total
	-
	-
	-
	0
	-
	10,217,460
	0
	0
[redacted]	
	22,125
	-
[redacted]	
	-
[redacted]	

[redacted]

ɔe conducted virtually.

:t Matter Experts) costs are
porting educator modules and
ners and MSDE staff, $58,800
e educator course: **University**
ience educator course is
8,000: **Facilitation of the**
ience for 160 educators is
ost is $8,850.

:t Matter Experts) costs are
pporting teacher modules:
r work with six educator
inese IV student courses is
8,000: **Facilitation of the**
ience for 140 educators is
lgebra, and Statistics, 1 section
ead evenly across the three years

:t Matter Experts) costs are
e, grades 4 and 5) and $448,400
$40,000 for work with four
earning Management System
educators is $17,500 and
courses (3 sections each for
hinese IV) is $78,000: **Full**
ions of Chinese II and Data
the three years at $309,135 per