

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

APPLICATION FOR GRANTS
UNDER THE

Application for New Grants Under the Competitive Grants for State Assessment Program

CFDA # 84.368A

PR/Award # S368A200004

Grants.gov Tracking#: GRANT13154530

OMB No. , Expiration Date:

Closing Date: Jun 30, 2020

PR/Award # S368A200004

****Table of Contents****

Form	Page
1. Application for Federal Assistance SF-424	e3
2. Standard Budget Sheet (ED 524)	e6
3. Disclosure Of Lobbying Activities (SF-LLL)	e8
4. ED GEPA427 Form	e9
<i>Attachment - 1 (1239-GEPA_Final)</i>	e10
5. Grants.gov Lobbying Form	e11
6. Dept of Education Supplemental Information for SF-424	e12
7. ED Abstract Narrative Form	e13
<i>Attachment - 1 (1234-MA CGSA Project Abstract)</i>	e14
8. Project Narrative Form	e16
<i>Attachment - 1 (1236-MA CGSA Project narrative)</i>	e17
9. Other Narrative Form	e78
<i>Attachment - 1 (1237-MA CGSA resume attachment)</i>	e79
<i>Attachment - 2 (1238-MA Pearson letter of commitment)</i>	e139
10. Budget Narrative Form	e141
<i>Attachment - 1 (1235-MA CGSA Budget Narrative)</i>	e142

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
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

06/29/2020

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:

Massachusetts Dept. of Elementary and Secondary Education

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

046002284

* c. Organizational DUNS:

7995381780000

d. Address:

* Street1:

75 Pleasant Street

Street2:

* City:

Malden

County/Parish:

* State:

MA: Massachusetts

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

02148-4906

e. Organizational Unit:

Department Name:

Office of Planning & Research

Division Name:

Innovative Assessments

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

Prefix:

* First Name:

Matt

Middle Name:

* Last Name:

Deninger

Suffix:

Title: Acting Chief of Strategy and Research Officer

Organizational Affiliation:

* Telephone Number:

781-338-3117

Fax Number:

* Email: Matthew.J.Deninger@mass.gov

PR/Award # S368A200004

Page e3

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:

84.368

CFDA Title:

Competitive Grants for State Assessments (formerly Grants for Enhanced Assessment Instruments)

* 12. Funding Opportunity Number:

ED-GRANTS-050120-002

* Title:

Office of Elementary and Secondary Education (OESE): Competitive Grants for State Assessments
Program CFDA Number 84.368A

13. Competition Identification Number:

84-368A2020-1

Title:

Office of Elementary and Secondary Education (OESE): Competitive Grants for State Assessments
Program CFDA Number 84.368A

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

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Massachusetts Implementation of Innovative Science Assessment

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:**

* a. Applicant

MA

* b. Program/Project

MA-a11

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

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

10/01/2020

* b. End Date:

09/30/2024

18. Estimated Funding (\$):

* a. Federal

2,891,504.00

* b. Applicant

0.00

* c. State

0.00

* d. Local

0.00

* e. Other

0.00

* f. Program Income

0.00

* g. TOTAL

2,891,504.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☒ a. This application was made available to the State under the Executive Order 12372 Process for review on

06/29/2020

☐ 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:

Jeffrey

Middle Name:

* Last Name:

Riley

Suffix:

* Title:

Commissioner

* Telephone Number:

781-338-3100

Fax Number:

* Email:

Jeffrey.Riley@mass.gov

* Signature of Authorized Representative:

Julia Jou

* Date Signed:

06/29/2020

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

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

Name of Institution/Organization

Massachusetts Dept. of Elementary and Secondary 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)
1. Personnel	83,333.00	104,000.00	108,160.00	112,486.00		407,979.00
2. Fringe Benefits	32,400.00	40,435.00	42,053.00	43,735.00		158,623.00
3. Travel	1,000.00	1,000.00	1,000.00	1,000.00		4,000.00
4. Equipment	1,500.00	0.00	0.00	0.00		1,500.00
5. Supplies	0.00	0.00	0.00	0.00		0.00
6. Contractual	520,800.00	478,000.00	504,000.00	620,000.00		2,122,800.00
7. Construction	0.00	0.00	0.00	0.00		0.00
8. Other	0.00	0.00	0.00	0.00		0.00
9. Total Direct Costs (lines 1-8)	639,033.00	623,435.00	655,213.00	777,221.00		2,694,902.00
10. Indirect Costs*	37,180.00	43,191.00	49,993.00	66,238.00		196,602.00
11. Training Stipends	0.00	0.00	0.00	0.00		0.00
12. Total Costs (lines 9-11)	676,213.00	666,626.00	705,206.00	843,459.00		2,891,504.00

***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 24.40 %.

(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 %.

PR/Award # S368A200004

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.	
Massachusetts Dept. of Elementary and Secondary 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						
2. Fringe Benefits						
3. Travel						
4. Equipment						
5. Supplies						
6. Contractual						
7. Construction						
8. Other						
9. Total Direct Costs (lines 1-8)						
10. Indirect Costs						
11. Training Stipends						
12. Total Costs (lines 9-11)						

SECTION C - BUDGET NARRATIVE (see instructions)

ED 524

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: <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance		2. * Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input checked="" type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award		3. * Report Type: <input checked="" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change	
4. Name and Address of Reporting Entity: <input checked="" type="checkbox"/> Prime <input type="checkbox"/> SubAwardee * Name <input type="text" value="Massachusetts Dept. of Elementary and Secondary Education"/> * Street 1 <input type="text" value="75 Pleasant Street"/> Street 2 <input type="text"/> * City <input type="text" value="Malden"/> State <input type="text" value="MA: Massachusetts"/> Zip <input type="text" value="02148-4906"/> Congressional District, if known: <input type="text"/>					
5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime: 					
6. * Federal Department/Agency: <input type="text" value="U.S. Department of Education"/>			7. * Federal Program Name/Description: <input type="text" value="Competitive Grants for State Assessments (formerly Grants for Enhanced Assessment Instruments)"/> CFDA Number, if applicable: <input type="text" value="84.368"/>		
8. Federal Action Number, if known: <input type="text"/>			9. Award Amount, if known: \$ <input type="text"/>		
10. a. Name and Address of Lobbying Registrant: Prefix <input type="text"/> * First Name <input type="text" value="N/A"/> Middle Name <input type="text"/> * Last Name <input type="text" value="N/A"/> Suffix <input type="text"/> * Street 1 <input type="text" value="N/A"/> Street 2 <input type="text"/> * City <input type="text" value="N/A"/> State <input type="text"/> Zip <input type="text"/>					
b. Individual Performing Services (including address if different from No. 10a) Prefix <input type="text"/> * First Name <input type="text" value="N/A"/> Middle Name <input type="text"/> * Last Name <input type="text" value="N/A"/> Suffix <input type="text"/> * Street 1 <input type="text" value="N/A"/> Street 2 <input type="text"/> * City <input type="text" value="N/A"/> State <input type="text"/> Zip <input type="text"/>					
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: <input type="text" value="Julia Jou"/> * Name: Prefix <input type="text"/> * First Name <input type="text" value="Jeffrey"/> Middle Name <input type="text"/> * Last Name <input type="text" value="Riley"/> Suffix <input type="text"/> Title: <input type="text" value="Commissioner"/> Telephone No.: <input type="text" value="781-338-3100"/> Date: <input type="text" value="06/29/2020"/>					
Federal Use Only:			Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)		

NOTICE TO ALL APPLICANTS

OMB Number: 1894-0005
Expiration Date: 04/30/2020

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.

1239-GEPA_Final.pdf

Add Attachment

Delete Attachment

View Attachment

Part 7: General Education Provisions Act

The General Education Provisions Act (GEPA) requires applicants to include a description of steps we will take to ensure equitable access to, and participation in, our proposed programs. Equity is foundational to our innovative assessment and professional development plans. We believe that redesigning assessment tasks to reflect desired instructional approaches will ultimately result in more students – particularly those who are disproportionately underserved in schools – receiving improved instruction for deeper learning. Furthermore, we will include guidance and support measures to ensure that this initiative provides equitable access to and participation for all students. These ideas are incorporated throughout the application, and the following sections detail how we will ensure equitable access and opportunities:

- (c)(1) Specific, measurable objectives and outcomes – Outlines the goals for our project, including targets for student achievement broken out by student sub-group (i.e., race/ethnicity, economic status, English language status, and disabilities status).
- (c)(4) Project rationale – Describes our plans for professional development that focus on building the capacity of educators, schools, districts, and the state to be more equity-driven and culturally relevant and competent. These efforts are further detailed in (4)(a) Need for Project, (4)(b) Significance, and (f)(2) Personnel commitments.
- (d)(1) Strategies for equal access – Describes the steps we will take to: (1) ensure equitable access to assessments for students with disabilities and English learners; and (2) ensure the assessments and professional development are culturally relevant and mitigate risk of bias.

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

Massachusetts Dept. of Elementary and Secondary Education

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: * First Name: Middle Name:
* Last Name: Suffix:
* Title:

* SIGNATURE:

* DATE:

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

OMB Number: 1894-0007
Expiration Date: 09/30/2020

1. Project Director:

Prefix:	First Name:	Middle Name:	Last Name:	Suffix:
<input type="text"/>	<input type="text" value="Sam"/>	<input type="text"/>	<input type="text" value="Ribnick"/>	<input type="text"/>

Address:

Street1:	<input type="text" value="75 Pleasant Street"/>
Street2:	<input type="text"/>
City:	<input type="text" value="Malden"/>
County:	<input type="text"/>
State:	<input type="text" value="MA: Massachusetts"/>
Zip Code:	<input type="text" value="02148-4906"/>
Country:	<input type="text" value="USA: UNITED STATES"/>

Phone Number (give area code)	Fax Number (give area code)
<input type="text" value="781-338-3135"/>	<input type="text"/>

Email Address:

<input type="text" value="sam.ribnick@mass.gov"/>

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:

<input type="text"/>

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.

<input type="text"/>	<input type="button" value="Add Attachment"/>	<input type="button" value="Delete Attachment"/>	<input type="button" value="View Attachment"/>
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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:

Part 3: Two-Page Project Abstract

Massachusetts is applying for the Competitive Grants for State Assessments (CGSA) opportunity under Absolute Priority 1 to support the implementation of the state's approved IADA plan. Under this project, Massachusetts will: (1) develop an innovative science test that uses computer-simulated, authentic performance tasks to measure students' mastery of science knowledge and practices and (2) provide professional development and support to participating schools on practices for deeper learning.

While Massachusetts's overall student outcomes lead the nation, we recognize that some students, especially those historically marginalized (i.e., students of color, students with disabilities, and ELs), continue to be underserved by our education system. We believe that the current system of high standards and rigorous assessments has contributed to Massachusetts's top performance on NAEP (National Assessment for Educational Progress) and improved graduation rates, but it has also had unintended negative consequences.

We commonly hear feedback from teachers, especially those working in schools with high levels of poverty, that it is difficult to cover all the standards when so much time is dedicated to formative assessment and preparation for MCAS (Massachusetts Comprehensive Assessments System). While standards-based instruction and data use are powerful approaches and used effectively in many districts, teachers have seen these concepts become distorted into an emphasis on coverage and test scores that deprives students of high-quality learning experiences. Our path forward requires that we support deep learning for all students that is rigorous, relevant and engaging.

As we work to promote deeper teaching and learning, we will need a context of state assessment and accountability that is aligned. We have begun work on a new, innovative assessment, and this grant will enable us to accelerate and deepen our work. In early 2020, we

applied and received approval for the Innovative Assessment Demonstration Authority (IADA), with a proposal to create a new assessment for Science and Technology/Engineering (STE). The innovative assessment will feature more in-depth, computer-based performance tasks in which students engage with simulations of authentic scientific phenomena via deep application of both science knowledge and practices.

DESE has contracted with top experts in science instruction and assessment from WestEd, Pearson and Concord Consortium to create performance tasks for a May 2021 pilot, using cycles of rapid prototyping with input from teachers and students. We have multiple goals for this assessment: to serve as a model of deeper learning tasks and illustrate the desired shift in classroom instruction; to measure more of what matters, potentially including mastery of science practices or 21st-century skills; to be more engaging and relevant for students; to create more equitable opportunities for all students to demonstrate what they know and are able to do.

We plan to support schools taking part in the assessment pilot with professional development and tools in partnership with the state's science curriculum team and the Kaleidoscope Collective for Learning (a closely related initiative working with demographically representative cohort of schools to further refine the state's model of deeper learning). Professional development will focus on three areas: deeper learning, high-quality science instruction, and assessment literacy.

Throughout this work, we must keep our central goal at the forefront: bringing about greater equity for students in Massachusetts. We have already built a diverse team of state leaders for this work and a broad coalition of stakeholder groups, schools, districts, and charter management organizations. As we develop the innovative assessment and supportive professional development, we will draw on their expertise and perspectives to ensure that we create culturally relevant materials and instructional practices with equitable access, so that we make an impact for the students who need this change the most.

Project Narrative File(s)

* Mandatory Project Narrative File Filename:

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



CGSA Funding Application: MA Implementation of Innovative Science Assessment

June 29, 2020

MA CGSA Application for Innovative Assessments

Part 4: Main Narrative

Massachusetts is applying for the Competitive Grants for State Assessments (CGSA) opportunity under Absolute Priority 1 to support the implementation of the state’s approved IADA plan. Under this project, Massachusetts will: (1) develop an innovative science test that uses computer-simulated, authentic performance tasks to measure students’ mastery of science knowledge and practices and (2) provide professional development and support to participating schools on practices for deeper learning.

(a) Need for project (up to 10 points).

The Secretary considers the need for the proposed project. In determining the need for the proposed project, the Secretary considers the extent to which specific gaps or weaknesses in services, infrastructure, or opportunities have been identified and will be addressed by the proposed project, including the nature and magnitude of those gaps or weaknesses.

Since the Massachusetts Education Reform Act (MERA) passed in 1993, the Commonwealth has made notable progress. Over the last 25 years, graduation rates increased. Students have earned top scores on the National Assessment of Educational Progress (NAEP) and achieved results comparable to top nations around the world on the Programme for International Student Assessment (PISA). The Commonwealth’s comprehensive system of standards, assessment, and accountability—which MERA hastened—played an instrumental role in propelling Massachusetts to its “first in the nation” status on many educational measures.

While we are proud of this progress, many students remain underserved by the current system, especially those who are historically marginalized (i.e., Black, Latinx, and Indigenous students; students with disabilities; students who are economically disadvantaged; and English

learners). A recent report, *#1 For Some*¹, highlights these disparities, many of which are stark. For instance, while Massachusetts ranked 8th in the country in 2016 for our four-year graduation rate for white students, we ranked 43rd for Latinx and 19th for Black students. On the 2019 NAEP 8th grade mathematics exam, 31% of low-income students scored proficient or advanced compared to 78% of their higher-income peers; 4% of ELs scored at these levels compared to 69% of non-ELs; and 20% of students with disabilities were proficient or advanced vs. 75% of students without disabilities.

Educational measures also reveal a concerning trend of overall stagnation or decline in some cases. Although Massachusetts has largely held its top rankings, since 2017 its results have declined faster than national averages in every subject and grade tested on the NAEP. For example, on the 2019 NAEP mathematics exam, fourth-graders today performed at about the same level as fourth-graders in 2005 after years of consecutive increases in results according to one report, *Moving Forward with a Focus on Equity*.²

¹ The Massachusetts Education Equity Partnership, “#1 for Some: Opportunity and Achievement in Massachusetts,” *Massachusetts Education Equity Partnership*, 2018. <https://number1forsome.org/wp-content/uploads/sites/16/2018/09/Number-1-for-Some-9.25-18.pdf> (accessed on June 8, 2020).

² The Massachusetts Education Equity Partnership, “Troubling Trends, Promising Opportunity: Moving Forward with a Focus on Equity,” *Massachusetts Education Equity Partnership*, 2020. <https://masseduequity.org/wp-content/uploads/sites/20/2020/02/Troubling-Trends-Promising-Opportunities-February-2020.pdf> (accessed on June 9, 2020).

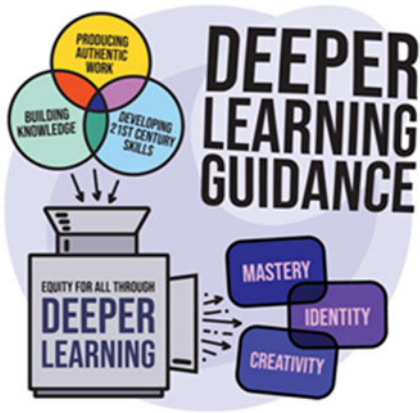


Figure 1 Massachusetts's working definition of deeper learning is defined as the intersection of content mastery, 21st-century skills and authentic work.

To address achievement stagnation and disparities, Massachusetts is embarking on a process to integrate deeper learning into all classrooms. The state has defined “deeper learning” as learning experiences at the intersection of content and knowledge mastery, 21st-century skills, and authentic work. This definition is grounded in the ideas proposed by Jal Mehta and Sarah Fine’s book, *In Search of Deeper Learning*, and refined based on input from stakeholder focus groups, school-based pilots, and professional learning communities.³ Building on

our system of standards, assessment, and accountability that marked the current era, we are now reimagining our support of districts, schools, and educators to deliver instruction that is distinguished by deeper learning for all students.

Assessments play an instrumental role in shaping instruction. The tasks on summative assessments influence the tasks teachers design for classroom instruction. Reshaping instruction that fosters deeper learning will thus require the state to: (1) change the type of tasks modeled on the state assessments; and (2) provide training and resources to support teachers in their creation of higher-quality classroom tasks. Innovative state assessments paired with equally innovative educator professional development and support are vital to our deeper learning strategy.

³ Jal Mehta and Sarah Fine, *In Search of Deeper Learning: The Quest to Remake the American High School* (Cambridge, MA: President and Fellows of Harvard College, 2019), 363-366.

In early 2020, we applied and received approval for the Innovative Assessments Demonstration Authority (IADA). Our proposal was to create a new assessment for Science and Technology/Engineering (STE) that will feature more in-depth, computer-based performance tasks. We recruited schools to take part in the innovative assessment pilot, including schools that are members of the Kaleidoscope Collective for Learning (KCL), a cohort of schools collaboratively rethinking classroom instruction around deeper learning. Our initial pilot group also includes schools that are not part of the KCL, so that we can understand the challenges and supports we must provide to schools who are earlier in their journey toward deeper learning. We have now procured an outstanding team of vendors with talent and capability to build our innovative assessments. Finally, we have further refined the vision for performance tasks based on input from various stakeholders across the Commonwealth. Funds from the CGSA under Absolute Priority 1 will enable us to accelerate and deepen this work.

We plan to support schools taking part in the assessment pilot with professional development and tools in partnership with the KCL and DESE's Center for Instructional Support, a team that includes STEM curriculum experts. Professional development will focus on three areas: deeper learning, high-quality science instruction, and assessment literacy. This CGSA grant will help support the development and delivery of professional development to schools in the pilot, including exploration of innovative new models for the state to support teacher-to-teacher learning across districts.

There is growing awareness in our schools that we must more closely match students' daily experience in school with the expectations they will encounter in college, in their careers, and as citizens navigating a complex world. This sentiment is further affirmed by research. According to data from the National Association of Colleges and Employers (NACE), employers highly

value competencies such as critical thinking, problem solving, and collaboration – but these skills are not explicitly reflected in our current assessments.⁴ A 2013 report from Gallop found that only 33% out of 600,000 students found to be “success ready” vis a vis these skills.⁵ These factors illustrate the need for students to work in ambiguous contexts, on meaningful projects with larger purpose, both independently and in teams—all while connecting these activities to our rigorous state content standards.

By changing the state assessment to exemplify this form of deeper learning, and providing support for teachers to incorporate deeper learning into their classroom practice, we will raise the bar for all students and improve the learning experiences of students currently underserved.

⁴ National Association of College and Employers, “Employers Identify Four ‘Must Have’ Competencies for College Graduates,” 2018, <https://www.nacweb.org/career-readiness/competencies/employers-identify-four-must-have-career-readiness-competencies-for-college-graduates/#:~:text=Employers%20deemed%20their%20top%20four,they%20are%20looking%20to%20hire>. (accessed June 10, 2020).

⁵ Gallop, Inc. "State of America's Schools Report," 2013, <https://www.gallup.com/education/269648/state-america-schools-report.aspx> (accessed on June 10, 2020).

(b) Significance (up to 10 points).

The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.

Massachusetts has the opportunity to lead the nation into a new era of deeper teaching and learning that serves all students by transforming how we assess student learning and instruction. We will build capacity to develop and deliver a groundbreaking, world-class science assessment that measures not only students' knowledge of standards, but also their application of science and engineering practices in greater depth than ever before. Through highly interactive computer simulations, students will engage in performance tasks to conduct investigations, create and explore models, and solve science and engineering problems. Our forward-thinking assessments will call on the students of Massachusetts not only to learn science content, but to think and act like scientists.

In partnership with districts and technical providers, DESE will build local teacher capacity for improved deeper learning practices. As we create more purposeful and relevant assessments for all students across the Commonwealth, professional development and support must likewise evolve. Challenges related to COVID-19 underscore this notion; for example, it will likely be at least a year until we are able to safely gather hundreds of teachers in a conference space to conduct a training from the old playbook. Therefore, we will deliver and scale teacher professional development through innovative approaches such as virtual coaching, virtual learning communities, and district-to-district support.

The professional development will equip teachers to design tasks and deliver instruction in ways that support all students to flourish. DESE's STEM team already provides PD to support a science curriculum, OpenSciEd, that is well-aligned to the deeper learning practices outlined here. The Kaleidoscope Collective for Learning (KCL) has already begun to capture and

disseminate best practices, lessons learned, and resources related to deeper learning with an equity-based approach. Specifically, KCL has integrated diversity, equity, and inclusion strategies and resources into its trainings including culturally responsive teaching and how to use data to ensure all students are being served. We anticipate that this training, with an emphasis on equity, will build district capacity to provide richer learning experiences for students, particularly those who have been underserved by the system. Within our ultimate goal to raise the achievement of all students in Massachusetts, this project specifically aims to narrow or close achievement gaps for Black and Latinx students, English learners, students who are economically disadvantaged, and students with disabilities through improved instruction.

The Commonwealth is well-positioned to set a new bar for cutting-edge assessments and support. During this process, we will explore questions such as: What types of science instructional practices, assessment tasks, and teacher professional development result in meaningful changes in student experience and learning outcomes? Is the approach to professional development we employ a viable model for other content areas? How do we collaboratively engage the many relevant stakeholder groups to deepen our understanding of the needs of underserved communities? What infrastructure and support distinguish successful districts conducting innovative assessments and professional development? This project can set a new standard for assessments and provide a model and roadmap for other states, while building local capacity within districts and DESE to better serve our students.

(c) Quality of the project design (up to 20 points)

The section (c) criteria are addressed here, but re-ordered for clearer narrative flow.

The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:

- (4) The extent to which the proposed project demonstrates a rationale (as defined in this notice). (5 points)
- (3) The extent to which the proposed project is part of a comprehensive effort to improve teaching and learning and support rigorous academic standards for students. (5 points)
- (1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable. (5 points)
- (2) The extent to which the proposed project will establish linkages with other appropriate agencies and organizations providing services to the target population. (5 points)

(c)(4) Project rationale

“Task predicts performance” – Richard Elmore

The rationale for this project is grounded in two understandings: that the depth and quality of tasks assigned to students predict their performance; and that educators often design tasks or select curricular materials that resemble the tasks on the summative assessment used to measure performance (MCAS). Therefore, we believe that reshaping student instruction throughout the state will require us to change the type of tasks modeled on the state’s assessments and provide training and resources to support teachers in creation of higher quality tasks.

Our theory of action for this change can be described as follows:

IF DESE...

- Creates state assessments with tasks that focus on deeper learning and send a message about the importance of deeper learning, and
- Provides training, models and examples on deep learning task design via professional development and tools, and
- Aligns our state-level resources and policies toward deeper learning,

THEN...

- School and district leaders will reshape their systems and educators will redesign their instruction in support of deeper learning, and

- Student engagement will increase and remain higher into middle and high school years,

SO THAT...

- All students will gain skills and knowledge that will prepare them for life beyond school in the 21st century, and
- Students who have not been fully served by our existing education systems will get more opportunities for deeper learning leading to reduced achievement gaps.

Summary of IADA Project Design Components

This grant application is for funds to support the implementation of our IADA proposal under Absolute Priority 1. While our work on deeper learning at the state level includes all grades and subjects, the innovative assessment project proposed in our IADA application and for this grant focuses specifically on science and technology/engineering, initially in grades 5 and 8 with high school included in later years. **We are focused on science for a few reasons:**

- Science is a discipline that is conducted via interaction with real-world phenomena, but traditional tests have created a context in which many students receive science instruction made up of lecture and worksheets.
- Science and technology/engineering are recognized as critical ingredients to success in a rapidly changing world. Especially for many students of color and economically disadvantaged students, who are more likely to be in low-performing schools, improving science instruction is critical to support access to future careers in STEM.
- The current science MCAS is perceived as very broad in coverage, due to the range of science standards and the need for the Grade 5 and 8 tests to cover three years of standards. Such a wide range of standards is especially likely to promote instruction that

emphasizes breadth over depth, especially in schools focused on improving their accountability levels.

The proposed project consists of two components that fulfill our theory of action.

- 1. Development and administration of an innovative science assessment:** The state assessment system is one of the strongest tools that an SEA can use to influence the daily instruction students receive. We have secured a partnership with vendors Pearson, WestEd, and the Concord Consortium to implement our approved IADA plan to build a cutting-edge, world-class science assessment that not only measures student knowledge of standards, but more deeply measures students' mastery of the science and engineering practices in the state's NGSS-inspired science framework. Using Concord Consortium's large bank of highly interactive computer simulations, the assessment will engage students in authentic, relevant performance tasks to conduct investigations, create and explore models, and solve science or engineering problems. In initial years, students taking the innovative performance tasks will also take an abbreviated version of the existing MCAS, the data from which will aid in establishing validity, reliability and comparability as required under federal law. The first pilot of the performance tasks will occur in May 2021 with roughly 2,800 students, and each successive year we will expand the number of participating students to reach roughly 40,000 in spring of 2024.
- 2. Professional development with an intentional focus on equity:** As we gathered stakeholder input for the IADA application, we heard a clear, consistent message: the change to the assessment must be paired with professional development and support. This is especially important to reduce inequities, since accountability pressure to teach to the test has disproportionately impacted the marginalized students in schools labeled "low

11

performing” and teachers in these schools experience higher turnover and may have received less professional development in the past. The proposed plan for professional development draws on expertise within and beyond DESE: deeper learning expertise from the Kaleidoscope team, science expertise from the state’s STEM experts, the NGSS instructional experts at WestEd, the curriculum design expertise at OpenSciEd, and experts in culturally responsive teaching at Overcoming Racism. Funds from this grant will support the development of innovative, research-backed models for training and coaching, including remote training and coaching well-suited for life under COVID-19 safety measures.

Design and Rollout of the Innovative Assessment

The IADA proposal outlines a five-year plan to create the innovative assessment and bring it to statewide scale. This grant will significantly aid us in bringing the plan to fruition, allowing us to dedicate the needed level of resources to both the development of the assessment and support for schools and teachers.

Year 1 (SY2020-21) – Pilot new science assessment for Grades 5 and 8

Work is already underway to develop and administer the first pilot of the innovative assessment in May 2021 to students in grades 5 and 8. We are also working across DESE teams to coordinate plans for PD in science instruction and deeper learning. This grant will support the hiring of a project manager in late 2020 to coordinate the work described below, initially reporting to the innovative assessments project director.

The innovative assessment will include both an abbreviated summative section (containing a subset of the items on current MCAS) and the innovative technology-enhanced performance task

section. This combination will allow us to study and refine the performance tasks as we work toward reliability, validity, and comparability, while using the abbreviated summative to provide sufficient evidence of student achievement for individual score reports.

To create the innovative performance tasks, we have selected a vendor team led by Pearson, with WestEd and Concord Consortium as key sub-contractors, due to a number of strengths: reliability and flexibility of the Pearson assessment development process and platform (TestNav); the existing bank of simulations and expertise of the Concord Consortium; WestEd's thoughtful work with NGSS curriculum materials. The contract runs through October 2021 and covers the work for task development and the pilot test in Year 1. Together, we plan to conduct multiple tryouts of the prototype tasks with diverse pools of students, gathering evidence and feedback through cognitive labs, observations, and analysis of student responses. We have also developed a contingency plan if COVID-19 causes major disruption to schooling (and testing), in which case we would still create the performance tasks but postpone the pilot of the performance tasks by a year.

The initial pilot group of schools in Grades 5 and 8 was drawn from the pool of Kaleidoscope Collective participants and applicants, based on their demonstrated commitment to deeper learning and the contribution to balanced demographic representation in the pilot. In case COVID-related disruptions cause some participants to drop out, we fortunately have a long list of interested schools from which to draw replacements.

All schools participating in the pilot will receive PD, but the plan will vary slightly for schools in KCL and those not in KCL. As part of this grant, all schools will receive professional learning on high-quality science tasks and instructional practices, provided by a combination of DESE science staff and a vendor or vendors to be procured upon award of the grant. In addition

to the science PD, schools in KCL have already begun intensive training on deeper learning practices through their participation in the KCL cohort. For the schools in the pilot who are *not* in KCL, we will create opportunities for them to access the deeper learning training, but with less intensive support.

At the end of year 1, we will analyze the student results on the innovative assessment, conduct an evaluation of validity and reliability of the assessment, and gauge the degree of change in teachers' instructional practices and confidence level. We will incorporate lessons learned from this evaluation into the plans for the next year.

Year 2 (SY2021-22) – Field testing of tasks for Grades 5 and 8, pilot year for high school performance tasks

In the second year, we will conduct a first pilot for high school assessments (with 2,500 students), expand the number of students taking part in the grade 5 and 8 pilot (to 5,000 in each grade), and begin fully integrating PD across the three targeted areas (science, deeper learning and assessments) and DESE teams. Our existing contract with Pearson only covers the work for Year 1, so we plan to conduct a new procurement in mid-2021 for the innovative assessment work in Years 2-4.

Because the high school tests in biology and physics are used for individual students' graduation requirements, the state plans to address these tests only after DESE and US Department of Education have established confidence that the performance tasks at Grades 5 and 8 are generating usable data for student scores. If the pilot in grades 5 and 8 in year 1 is successful (and not delayed by COVID disruptions), DESE expects to begin developing and piloting performance tasks for the high school biology and physics tests in SY2021-22, with the

aim of launching a pilot group for high school tests in subsequent years, pending validation of the performance tasks at lower grades.

As we expand the pilot, we will consider a number of important factors in selecting schools: interest and capacity in deeper learning; community engagement and understanding of purpose behind the innovative assessment; and ensuring a representative mix of students that is similar to state demographics overall. We expect to add many or most KCL schools and districts to the assessment pilot, since they will meet many of these criteria. As described above, participants in KCL are focused on deeper learning and encouraged to conduct stakeholder engagement, and DESE will maintain balanced representation of student groups in KCL.

In the second year, the professional development will be expanded and refined to incorporate ideas related to science instruction, deeper learning, and the use of performance assessments. The project manager will be responsible for integrating ideas from multiple DESE teams (science team, Kaleidoscope team, assessments team) while also continuing to coordinate the work of PD vendors who will contribute to development of materials and delivery of PD. In the second year, we will establish a model to provide PD to all participants in the innovative assessment pilot that can scale effectively and cost-effectively for future years when we grow the pilot rapidly (targets for scaling up participation are set in our IADA application and can be found in section (f)(1) of this proposal).

As in year 1, we will continue to evaluate our work throughout year 2 and study the results of the evaluation at the end of the year to inform our work in the future.

Years 3 and 4 (SY 2022-23 and SY2023-24) – Scale up innovative science assessment and training; conduct third-party evaluation

In years 3 and 4, the primary focus will be on continuing to scale up and refine the innovative assessment and accompanying PD. To enable this, we will more fully integrate the innovative assessment into the core work of the DESE student assessments team and the professional development into the work of the DESE Center for Instructional Support's science team. The project manager will continue to play a key role, but will begin to shift reporting to reside within one of these offices rather than operating as part of a separate innovative assessments team. This will help ensure that these offices have the needed additional capacity to support the innovative assessments and PD as part of their core processes.

Additionally, we will procure a third-party group to conduct a thorough evaluation of the innovative assessment and implementation efforts. We plan to identify and contract with the evaluation partner in Year 3, so that the partner has time to establish an approach to evaluation and gather baseline information if needed, while the bulk of the evaluation activity will take place in Year 4. This evaluation not only will help us identify areas of strength and areas in need of support, it also will inform DESE's decision about whether or not to apply for a 2-year extension of the IADA period. More detail about the evaluation plan can be found in section (g) of this proposal. If the evaluation provides evidence that the work is a strong position, then we would proceed with the fifth year of IADA piloting in SY2024-25 (beyond the end of this grant) and then begin using the innovative assessment as our statewide science assessment in the following year.

(c)(3) Comprehensive effort to improve teaching and learning

The innovative assessment is part of an ongoing comprehensive effort in Massachusetts to improve teaching and learning practices, and especially to reduce outcome disparities by creating greater equity of access to high-quality learning experiences for all students. The Kaleidoscope Collective for Learning (KCL), begun in 2019, is a separate but closely related initiative through which DESE supports deeper learning practices in schools and districts via training and school leadership support.

At the core of this state effort is the belief that deepening students' learning requires improvement in the quality of classroom tasks students are given. The presence of in-depth performance tasks on the innovative science assessment will encourage teachers to include similar tasks in the classroom. Though the assessment tasks will be exclusively computer-based simulations of hands-on experiences, teachers will be encouraged to use a mix of simulation and hands-on science tasks in the classroom.

To achieve this improvement in classroom task design, the project will include professional development (PD) that comprises three areas: (1) science instruction; (2) deeper learning; (3) performance assessment. We will build the professional development over multiple years. In year one, we will build out a strong foundation in the approach to phenomena-based, inquiry-driven science instruction. Once that foundation is in place, in subsequent years we will dive deep into components of the deeper learning guidance, as applied to science instruction, as well as performance assessment. This grant will not only enable us to scale the PD more rapidly, it will also build further alignment across KCL, assessments, and DESE's Center for Instructional Support. As we integrate the PD over the four years of this grant, we will build the state's

capacity to deliver aligned, cohesive support on deeper learning, laying the foundation for similar work in other subject areas.

Here we describe the content of the PD; the approach to delivery and evaluation is described in section (d)(3).

Science Instruction: In the first year of the grant, the focus for PD will be primarily on science instruction. In our stakeholder engagement, teachers voiced that it will be critical to provide PD on the types of science instruction that will prepare students for the innovative assessment *before* the assessment is rolled out. The science team within DESE's Center for Instructional Support has long provided PD which has been well-received by science teachers and school leaders on recent instructional shifts and research-based best practices. In recent years, the science PD has focused on supporting districts in the adoption of the OpenSciEd curriculum, due to its high-quality science tasks, research-based teaching methods, and focus on equity. Much of this PD has been delivered in districts like Boston and Marlborough which have large populations of students of color as well as ELs. The evaluation data on this PD shows that teachers did substantially change from more traditional beliefs (teacher-led) to inquiry- and phenomena- based science instructional practices. For example, after the PD there was a significant change in teachers' beliefs, realizing that they should NOT tell students an idea or an outcome of an activity or experiment before carrying it out, a key shift in the role of sensemaking in phenomena-based science instruction. This suggests that the PD is leading to meaningful improvements in science instruction and student learning.

However, curriculum adoption is a slow process, and we recognize the need for PD on the research-based and equity-centered science instructional routines and tasks from OpenSciEd even for schools using other curricula. Schools and districts in the innovative assessment pilot

will be an especially receptive audience for this PD, since teachers will be open to learning new practices to prepare their students for the new assessment.

In the first year, the project manager and DESE's science staff will partner with a vendor (or potentially existing partners like OpenSciEd) with expertise in high-quality science curriculum and instruction to revise and expand DESE's existing science PD to ensure it is aligned to the tasks on the innovative assessment. A key goal is to support teachers in the use of science tasks (hands-on and simulated) and equity-centered instructional routines that support students to employ science and engineering practices in the investigation of science phenomena. The PD will develop teachers' use of specific well-designed tasks to build students' skills and knowledge through these activities. In subsequent years, this PD will be expanded to cohesively address deeper learning and use of performance assessments in science content.

Deeper Learning: The Kaleidoscope Collective for Learning (KCL) is currently working with an initial cohort of schools to develop and refine practices and PD related to the implementation of deeper learning in schools. In the first year of IADA, the project manager will collaborate with KCL staff to adapt the tools and training developed by KCL for use with the schools participating in the innovative assessment. In future years, we will work with KCL to integrate the core concepts and practices for deeper learning into the science instruction PD sequence.

A major focus for KCL is on the design and refinement of deeper learning tasks. Teachers are taught to evaluate a task or lesson that is already a part of their curriculum, looking at three criteria for depth of learning: building knowledge (including guidance for standards and practices, access for all, and authentic assessment), producing authentic work (including guidance for relevant framing, resources, and product), and developing 21st century skills

(including guidance for being problem-based, incorporating discourse/cooperative learning, and capacity-building). The PD provides teachers with a framework to strengthen their tasks by distinguishing among three phases of deeper learning tasks: igniting students' curiosity (beginning); providing opportunities for students to grapple with concepts taught and begin to apply skills that have been introduced (middle); and centering student learning around a challenging application of the concepts and skills students practiced throughout the lesson/unit arc (end). Currently most of this training is content-agnostic. In the first year, parts of this training will be shared with teachers in the innovative assessment pilot alongside their training on science tasks. In future years, the deeper learning PD will become more content-specific, and we will integrate the deeper learning tools for science into the science instructional PD. We have already determined that the OpenSciEd curriculum (already supported by the state's STEM team) meets our standards for deeper learning practices, so we are well-positioned to create coherent science-specific PD on deeper learning.

Performance Assessment: As we reshape the way teachers design instructional tasks and engage students, we must also support teachers to re-think their use of assessments. While DESE continues to believe in the importance of data-driven instruction, we have seen that this too often leads to over-testing via a proliferation of interim standardized assessments intended to predict performance on MCAS, while teachers are trained to analyze student performance by reviewing numbers on a spreadsheet. In some cases, this manifests in data meetings in which teachers focus only on “bubble kids” who are near the threshold between failing and passing MCAS, leaving far too many students to fall through the cracks. At the same time, we have seen effective teachers use “looking at student work” protocols or other similar approaches to collaboratively analyze

the full range of student performance on rigorous tasks to gain a deeper understanding of their students' skills and knowledge beyond what a test score can capture.

With the introduction of performance tasks on the state assessment, we must revisit the guidance and training the state offers to teachers and principals on effective use of data, helping more teachers do what the best are already doing – learning about students' performance through a combination of formative assessments and observations of students' work on high-quality classroom tasks. The project manager will work with vendors and the Kaleidoscope and assessment teams to create updated PD on assessment literacy, including protocols for assessing student performance on classroom-based, curriculum-embedded tasks.

(c)(1) Specific, Measurable Objectives and Outcomes

DESE has identified specific, measurable outcomes related to the ultimate impact of this project and specific interim objectives (i.e. implementation milestones) to ensure we are on track to achieve the desired impact.

Ultimate Impact

The ultimate goals of this project, as stated in the theory of action, are:

- All students will gain skills and knowledge that will prepare them for life beyond school in the 21st century, and
- Students who have not been fully served by our existing education systems will get more opportunities for deeper learning, leading to reduced achievement gaps.

These goals are very well aligned with broader state goals for student learning, including the measurable targets for improvement and reduction of achievement gaps in our ESSA plan from 2016 (see table below). In our ESSA plan, we set ambitious, long-term academic achievement

goals for all students and all student groups in English language arts, mathematics, and science. The overall goal is consistent for all groups and subjects: reduce the proficiency gap on MCAS by one-third. This project, along with the Kaleidoscope initiative, are both intended to accelerate our movement toward these ambitious targets.

However, the ESSA goals were set on the *legacy* MCAS scales, with targets for percent of students scoring advanced or proficient. In the years since, we began transitioning to the NextGen MCAS, with the plan to transition the last few tests in spring 2020. We had intended to update the ESSA targets this year to percent of students meeting or exceeding expectations on NextGen MCAS, but due to COVID-19 we did not administer MCAS this year and have not yet updated the targets. Regardless, the big picture goal remains the same: gains for all students and reducing outcome gaps by one third.

ESSA Plan Targets (Legacy MCAS – Science and Technology/Engineering)

Group	2016 % Proficient or above	2017 Target	2018 Target	2019 Target	2020 Target	2021 Target	2022 Target
All students	54.7	57.2	59.7	62.2	64.7	67.2	69.6
Amer. Ind. or Alaska Nat.	42.4	45.6	48.7	51.9	55.1	58.2	61.4
Asian	70.0	71.7	73.3	75.0	76.6	78.3	79.9
Afr. Amer/Black	30.9	34.7	38.5	42.3	46.1	49.9	53.7
Hispanic/Latino	30.6	34.4	38.2	42.1	45.9	49.7	53.5
Multi-race, Non-Hisp./Lat.	55.7	58.1	60.6	63.0	65.4	67.9	70.3
Nat. Haw. or Pacif. Isl.	51.4	54.1	56.7	59.4	62.1	64.8	67.4
White	62.6	64.7	66.7	68.8	70.8	72.9	74.9
Econ. Disadvantaged	33.8	37.4	41.1	44.7	48.4	52.0	55.6
ELL and Former ELL	19.8	24.2	28.6	33.0	37.4	41.9	46.3
High needs	33.2	36.9	40.5	44.2	47.9	51.6	55.2
Students w/disabilities	26.5	30.5	34.6	38.6	42.7	46.7	50.8

The first specific measurable outcome for this project relates to traditional measures of achievement: schools participating in the training and innovative assessment should make

greater progress toward these goals than similar schools not taking part. In tangible terms, this means that we will evaluate whether students in the innovative assessment pilot (overall and for each student group) achieve larger improvements in the percentage of students meeting or exceeding expectations than the comparable student groups in non-participating schools. Within this goal, **our second specific measurable outcome relates to equity:** we expect to see schools in the pilot reducing achievement gaps more rapidly than schools not taking part.

Measurement for these two goals is complicated by the fact that this project, by definition, introduces a different assessment in participating schools. To address this, we have designed the innovative assessment so that the abbreviated summative section will consist entirely of items that are on the statewide MCAS, so there will be a shared set of items, roughly half the number of points, for comparative analysis.

The third measurable outcome relates to deeper learning. The performance tasks on the innovative assessment are designed to measure deeper understanding and application of science content and practices. We expect to see that students in classrooms with more effective implementation of instruction based on deeper learning practices will score higher on the performance task portion of the assessment. Because we are administering the performance tasks only to schools in the pilot, there is no comparison group of students taking the performance tasks but *not* receiving training on deeper learning. Therefore, we will evaluate the correlation between the degree of shift in instructional practices and student scores on the performance task. In other words, in schools that have higher observed levels of deep instruction, do those students perform better on the performance tasks? We will evaluate this both across schools with different levels of practice shift, and within a school as their practices change over the years in the pilot.

Interim Objectives

The workplan described in section (f)(1) contains the annual objectives by which we will measure progress in this work. The annual objectives are grouped under two major workstreams:

- Workstream 1: Develop, administer, and score the innovative science assessment
- Workstream 2: Provide professional development with an intentional focus on equity

The implementation objectives are based on the workplan in our approved IADA proposal, with additional detail arising from the work we have done since submitting that proposal. Please refer to the bold objectives in section (f)(1), for example “**SY1.1: Complete development of 6 innovative performance tasks and abbreviated summative**” due in March 2021. We will continually monitor progress of implementation toward these initiatives, which will ultimately contribute to our long-term goals of reducing proficiency gaps.

(c)(2) Linkages with other appropriate agencies and organizations

(2) The extent to which the proposed project will establish linkages with other appropriate agencies and organizations providing services to the target population. (5 points)

This project will help establish and strengthen linkages with other offices within DESE to build a state system of support more fully aligned to deeper learning. Crucially, the project will establish greater integration among the offices of student assessment, the Center for Instructional Support, and the new Kaleidoscope Collective for deeper learning. As described in (c)(3) and (4), the cross-functional team will work together to build the assessment tasks and supporting PD. The new project manager, funded by this grant, will lead the cross-functional effort, engaging the appropriate offices and staff when their expertise is relevant. In year 1, the various offices will each contribute to this project, and the project manager will identify areas of overlap and relevant for collaboration. In later years, the project manager will lead the team to fully

integrate relevant work, so that each office's support for districts provides a unified message and aligned supports.

Beyond DESE, this project will help us establish and deepen linkages with important partners in the Massachusetts education landscape by including them in our innovative assessments working group. The team includes: a board member from the Massachusetts Consortium for Innovative Education Assessment (MCIEA), a group of 8 districts working together to re-think their use of assessments and school ratings; a former president of the Massachusetts chapter of the National Association for the Advancement of Colored People (NAACP) and current president of MassLeague; leaders from the Massachusetts Education Equity Partnership (MEEP, publisher of the report *#1 for Some* and *Moving Forward with a Focus on Equity*); and a charter school leader who provides perspectives from Massachusetts' strong and thriving community of charter schools. Each of these team members contributes domain expertise and ensures that our work is linked to the efforts of these other organizations committed to similar goals. These team members participate in monthly working sessions to provide input on the innovative assessment.

(d) Quality of project services (up to 25 points).

(d)(1) Strategies for equal access

(1) The quality and sufficiency of strategies for ensuring equal access and treatment for eligible project participants who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability. (10 points)

Addressing disparities in educational outcomes is one of the core goals of this project, with a focus on disparities that impact students who are Black or Latinx, students in poverty, students with disabilities, and English learners. In DESE's proposal for IADA, accessibility and cultural sensitivity are treated as foundational requirements. The requirements to ensure equal access were informed by extensive focus groups with parents and educators (described in the IADA application) and input from DESE staff with expertise serving the target populations.

Access for students with disabilities and ELs: The requirements for equitable access strongly guided our selection of vendors to create the performance tasks. Pearson proposed the strongest plan to create performance tasks for the May 2021 pilot that meet and go beyond the state's criteria for accessibility for students with disabilities and ELs. This includes the use of universal design principles in developing tasks and ability to apply MCAS accessibility features. Pearson has committed to design the performance tasks to accommodate the vast majority of participants in the first year, and provide a written plan that addresses how, by the time of the May 2023 administration, the performance tasks will be made accessible to virtually all students except those who are candidates for taking either an academic or linguistic (i.e., English proficiency) alternate assessment. We are also exploring the possibility of offering the assessment in languages other than English; while state law had prohibited this since 2002, it was recently replaced, allowing us to evaluate the feasibility and benefits.

Equity and access for students of color: The approach to reduce racial and cultural impediments for students of all backgrounds and cultures is grounded in the state’s broader efforts to reduce bias and increase cultural relevance of students’ education. DESE has multiple initiatives to expand the representation of educators of color at all levels: teachers, principals, and district leaders. Further, DESE is beginning to work with the organization Overcoming Racism for agency-wide training to strengthen our culturally responsive practices and policies. Our Innovative Assessment project team is intentionally diverse, including both racial diversity and people with experiences teaching in under-served schools. We are committed to listening to those affected by inequitable systems to inform the design and implementation of the innovative assessment.

Our plan for rapid prototyping includes multiple opportunities to get feedback from educators and students related to cultural relevance and bias. Already, the team has conducted empathy interviews with a diverse panel of educators, parents, and students about their experiences with assessment and the changes they might want to see. These interviews have deepened our own understanding of the different ways that many students of color experience the assessments, emphasizing the importance of stereotype threat and the need for multiple modes for students to show what they know. During the planned early trials and cognitive labs to test the performance tasks, we will assemble diverse student cohorts with representation from marginalized groups. By watching students “think aloud” as they explore the task, we will gather important information about how students of different cultures experience the tasks. We have also built in multiple checkpoints with educator committees, including with a Bias and Sensitivity Committee who will follow a structured protocol to review the performance tasks through an equity lens.

As part of administering the innovative assessment in each project year, we will conduct surveys of students and staff to learn about their experiences and will analyze these surveys in the end-of-year evaluation reports. This will help us answer questions about the presence of disparities at multiple levels: Do students of color report that they felt the test was relevant and free of bias? Do overall satisfaction and engagement levels show disparities along racial lines? Are there correlations between a student's level of engagement, belief in self-efficacy and performance, and do these align with racial disparities?

As the assessment pilot expands, we will incorporate what we learn from stakeholder feedback and data analysis as we strive for continuous improvement of the new performance tasks. These strategies will help us ensure that by the end of the grant period, the performance tasks are fully accessible to students with disabilities and ELs and are culturally relevant for all students.

Supporting Implementation of Innovative Assessment

To ensure equitable access, DESE also plans to provide robust training and support to familiarize school staff, parents, and students with the innovative assessment system and the implementation thereof. This effort will include ensuring materials geared toward parents and families are available in multiple languages in order to increase equitable access to information. DESE will provide direct support to schools in the assessment pilot during the first year through a combination of webinars, conference calls, email updates, and conversations with an assigned DESE liaison. This approach will also help support staff in these schools to communicate effectively with parents and students they serve.

Additionally, DESE recognizes that release items are highly valued by teachers in Massachusetts and will be a critical aspect of familiarizing teachers and students with the new

test. In consultation meetings related to the IADA proposal, the desire to maintain DESE's approach to release items came up frequently from teachers. In the first year, it will not be possible to share a released item, but DESE does plan to share prototypes of the performance tasks with teachers ahead of the first formal pilot in spring 2021. In future years, DESE will be able to release previously used performance tasks to teachers. DESE is still determining the feasible level of item release, given that performance tasks will be more expensive to develop than traditional items, but is committed to releasing at least one item for each grade level after the spring 2021 administration.

DESE has already conducted webinars and in-person meetings with staff and parents from schools in the pilot group to begin communicating about the possible changes. DESE plans to provide targeted communication at key points throughout the development and planning for the innovative assessment, including communication about the following:

1. Confirmation that Massachusetts is awarded the IADA
2. Selection of a vendor to develop the performance tasks
3. Opportunities to pilot early prototypes and provide feedback
4. Preparation and training for test administration
5. Updates on accommodations and supports for students with disabilities or ELs
6. Scoring, evaluation, and reflection on first year pilot

In following years, DESE will incorporate the training, communication, and lessons learned from the first year into the extensive set of tools, documentation, and training opportunities for staff related to the statewide MCAS. These documents and communication materials will be refined over time as the innovative assessment is used at larger scales, so that information about the innovative assessment is integrated into statewide assessment communication.

(d)(2) Services appropriate to the intended recipients

(2) The extent to which the services to be provided by the proposed project are appropriate to the needs of the intended recipients or beneficiaries of those services. (10 points)

Our belief is that all students in Massachusetts will benefit from a focus on deeper learning.

The innovative assessment project is designed with **two ultimate outcomes in mind**:

- All students will gain skills and knowledge that will prepare them for life beyond school in the 21st century, and
- Students who have not been fully served by our existing education systems will get more opportunities for deeper learning leading to reduced achievement gaps.

To achieve these outcomes, the services proposed in this grant will serve all students in Massachusetts, with specific intentionality in ensuring that these supports are well-designed for those students not fully served by our existing education system. This means addressing the substantial inequities and achievement gaps still present for Black, Latinx, and Indigenous students, students with disabilities, English learners, and students in poverty, and ensuring that students who are successful in our public schools are prepared for success in life beyond school.

The recent report *#1 for Some* has laid bare the stark achievement gaps that continue to persist for students of color and other marginalized students. We know that deeper learning experiences are more common in affluent communities and honors-track classes—school settings to which our underprivileged students, English learners, and students with disabilities do not always have equitable access. When the students with greatest need are more likely to experience shallow instruction with low relevance to their lives, it is no surprise that we see such disparities in outcomes. Changing the state science assessment to focus on deep learning tasks, together with aligned professional development for teachers, will change the equation for students in

need. The state will send a clear message about the types of high-quality, relevant classroom tasks that all students deserve, and support teachers to ensure that they have the tools to provide these deep learning experiences to students.

We also expect that the innovative performance tasks will help us understand achievement gaps in new ways. There may be some skill areas where students currently perceived to be low performing may actually outperform students currently perceived to be high performing. For example, students who historically have not scored well on the state science assessment could potentially demonstrate stronger use of science practices in simulated real-world tasks. It may also be that the performance tasks could uncover new aspects of the achievement gap, showing that students with low performance on the existing MCAS also perform below average on the new tasks. The performance tasks that measure deeper learning and science practices may also reveal that achievement gaps are even greater on these valued skills. Whatever the results show, we expect that the new assessment will provide a better and more multifaceted understanding of students' strengths and the gaps between student subgroups. This deeper information will then inform the state's efforts to support schools and students.

To ensure the appropriateness of services for students requiring the most support, we have identified three critical strategies to help us refine and focus our efforts:

- **Engagement with teachers, students and other stakeholders:** For the new performance tasks and PD to be successful, they must be relevant and engaging for all students (particularly students who have been historically underserved), and teachers must see clear connections between the performance tasks and high-quality curriculum activities. We have already begun engaging a broad range of teachers and students, including those from communities most impacted by educational inequities, through a

human-centered design approach and empathy interviews. Throughout the project, we will engage stakeholders through small-scale trials of prototype tasks and PD, conduct formal committee review for bias and appropriateness, and gather feedback from students and teachers.

- **Alignment of resources and policies within DESE:** We must acknowledge that some state policies or initiatives pose real or perceived challenges to implementing deeper learning at scale, or may play a role in sustaining inequitable systems. A serious effort to broaden deeper learning for all students will require us to examine the incentives and constraints within our systems and existing use of resources. We are working to re-align these systems as needed to support deeper learning for all students. As we implement the IADA proposal, we will simultaneously work to build alignment across agency efforts to support a unified vision for deeper learning.
- **Evaluation and continuous improvement:** The innovative assessment will take Massachusetts into uncharted territory, and it will be crucial to have a rigorous approach to evaluate the work throughout implementation. Evaluation will occur at many scales: use of rigorous cognitive laboratories with deliberately diverse and representative student panels during rapid prototyping; annual evaluation of the pilot assessment, including surveys of participating staff and students and analysis of differential item functioning (DIF) by race and other groups; rigorous measurement of implementation and effectiveness of deeper learning; and a formal, third-party evaluation in Year 4 of the IADA period to help inform the state's decision whether to implement the innovative assessment as the statewide assessment in place of MCAS.

(d)(3) Professional development quality, intensity and duration

(3) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services. (5 points)

Massachusetts is proposing innovative approaches to ensure sufficient quality, intensity and duration of PD to lead to improvements in practice. Current research on effective PD is summarized in a meta-analysis (2017 Darling-Hammond, et. al.) that identifies seven core elements: (1) Content focus; (2) Active learning for adults; (3) Collaboration in job-embedded contexts; (4) Includes modeling; (5) Provides coaching support; (6) Includes feedback and reflection; (7) Has sustained duration.⁶

DESE's current Standards for Professional Development are aligned with these elements, and are designed into DESE's instructional support PD offerings. We further draw on the work of Kathleen Lynch and Heather Hill whose meta-analysis identifies factors specific to effective STEM professional development.⁷ In the current model, educators self-select to attend a sequence of 4-5 full- or half-day workshops around various topics related to curriculum and instruction. These workshops are run by a combination of DESE content experts and vendor staff. They are consistently well regarded, with 85% of participants either agreeing or strongly agreeing on a six-point scale that the meeting was a good use of their time, and very few participants disagreeing across the entire sequence of sessions. We have replicated this model,

⁶ Linda Darling-Hammond, et al. "Effective Teacher Professional Development," The Learning Policy Institute, 2017, <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-brief> (accessed on June 15, 2020).

⁷ Kathleen Lynch, Heather Hill, et al., "Strengthening the Research Base That Informs STEM Instructional Improvement Efforts: A Meta-Analysis," *Educational Evaluation and Policy Analysis* 43, no. 3 (2019).

with some variation, to create “Academies” providing professional learning to hundreds of educators on topics such as: literacy, math, MTSS, social-emotional supports, and positive behavior systems. Some of the Academies run for a single year, and some for multiple years. This sequenced-session format will continue to be part of the approach for PD under this grant.

However, we also see a need for innovation in our delivery of PD for multiple reasons. First, research shows that PD is most effective when coupled with job-embedded supports. Some of the Academies include job-embedded team coaching, but it is costly and logistically difficult. Second, we anticipate significant impact of COVID-19 during the grant period, as likely restrictions on mass gatherings will disallow large training workshops. Third, we will need PD models that can scale rapidly and cost-effectively in order to meet the innovative assessment participation targets in the IADA plan, which call for half the state to participate within 5 years.

To address these challenges, we propose to implement and evaluate a range of models for virtual job-embedded supports, taking the form of coaching cycles, inquiry cycles or school-based technical assistance. We will explore a range of support models as a complement to the webinars and virtual PD workshops that will still play a key role in presentation of PD content.

Virtual PD Workshops

In the near-term, we plan for PD to be delivered primarily via online virtual PD workshops hosted on Zoom or a similar platform. The Kaleidoscope convenings scheduled for May 2020 were adapted successfully into virtual workshops, as were the PD workshops on instruction that were scheduled in the spring. We continue to learn and build capacity to effectively engage teachers in virtual formats. Teacher feedback from the Kaleidoscope virtual convenings shows that teachers actually rated the experience more highly, on average, than in-person workshops. In line with the research that PD must have sustained duration, we will create a two-year learning

sequence, with 4-5 training sessions spanning throughout each year to promote a coherent arc of learning leading to significant change in teacher practice. As described in section (c)(3), the first year will focus heavily on science instructional practices, and the second year will incorporate additional ideas on deeper learning and use of performance tasks.

DESE content experts will partner with a vendor (paid via this grant) to develop the PD materials. Quality of PD will be monitored during development through review with expert science educators in the state's Science Leaders Network, as we continually assess the PD relative to the seven core elements of research-backed PD and additionally informed by the research base that informs STEM instructional improvement. After each workshop, we will conduct and analyze participant surveys, to include questions about shifts in their classroom practices.

Virtual Coaching Network

Recognizing the importance of job-embedded supports, DESE has sometimes provided coaching or technical assistance as part of PD in the past, but it is costly, logistically difficult and hard to scale as a state effort. As part of this grant, DESE plans to develop and explore a range of innovative approaches to enable virtual (web-based video chat) support to teachers taking part in the PD for the innovative assessment. A review of research on coaching (Kraft and Blazer) found that online coaching and in-person coaching had similar effect sizes on teacher practice, and recommends online coaching as a strategy to overcome typical challenges in scaling up coaching

programs.⁸ The timing is right to explore virtual coaching, not only because of anticipated COVID-19 restrictions, but also because teachers are much more familiar with video chat platforms after the remote learning in Spring 2020.

In the first year, we will explore a coaching model with support provided by DESE content experts or vendor staff. DESE will build up the needed infrastructure and tools, possibly partnering with a vendor with experience providing virtual coaching. Key tools to build include:

- Guidance on the coaching cycle and coaching session structure for virtual coaching
- Guidelines about frequency of coaching, duration of sessions, time spent on prep, number of teachers per coach, etc.
- Tools to enable video recording of lessons to share with coaches
- Platform to capture notes, progress and next steps identified during a coaching session

To allow for evaluation of the virtual coaching, we will provide the virtual coaching only to some of the PD participants, with quasi-random assignment. At the end of the first year, we will review participant survey results to assess whether the teachers who received coaching reported greater understanding, changes in teacher practice, and satisfaction with the experience. We will also be able to analyze whether the students of teachers receiving coaching have better performance on the innovative assessment, but would not draw causal conclusions due to the many confounding variables.

⁸ Matthew Kraft and David Blazar, “Taking Teacher Coaching To Scale: Can Personalized Training Become Standard Practice?” *Education Next*, Sept. 23, 2019, <https://www.educationnext.org/taking-teacher-coaching-to-scale-can-personalized-training-become-standard-practice/>, (accessed June 18, 2020).

If the coaching proves promising in year one, then in year two we will explore the possibility of inviting teachers who completed the PD and demonstrated changes in practice to serve as coaches. Enabling teachers to serve as coaches to teachers in other districts will require us to answer many design questions:

- How does the state determine if a teacher is qualified to serve as a coach?
- What sort of “micro-credential” can we give to qualified teachers?
- What additional training do expert teachers need on the coaching cycle?
- How will teachers be paid for their coaching?
- What agreements with unions may be needed?
- What is a reasonable coaching caseload for a full-time teacher?
- To what degree can full-time teachers who are coaching on the side help enable rapid scaling and spreading of effective practices?
- How will we evaluate the performance of coaches? Through feedback from teachers being coached, and/or through observations?

In the second year, we will plan to explore the use of teacher coaches and dedicated coaches (DESE or vendor staff). This will allow us to evaluate the relative success of teacher coaches vs. the full-time coaches, and also serves as a back-stop in case the teacher coaches are unable to follow through with providing coaching. We will also evaluate the cost-effectiveness, assessing the cost to provide coaching to one teacher in tandem with the impact on instruction.

In later grant years, as the innovative assessment pilot expands according to the aggressive targets for scaling up in our IADA application, we will refine the support model to determine the balance that is most effective and cost-effective. Key design decisions include: vendor coaches vs. teacher coaches; frequency of coaching; coaching cycle and protocol; one-on-one vs. group

coaching; level of professional development required for coaches. We will also evaluate whether DESE should operate the coaching model itself, or should hire a vendor with expertise to operate the coaching system.

To ensure that coaching helps contribute to reducing disparities in student outcomes, we may also use more intensive models of coaching (e.g. more frequent coaching, strongest coaches, etc.) for schools with more under-served students. Throughout the entire life of the grant, we will continue to evaluate and refine the overall approach to PD to ensure that the PD leads to meaningful, sustained changes in teacher practice that can drive deeper learning for students and reduce outcome disparities.

(e) Adequacy of resources (up to 10 points).

The Secretary considers the adequacy of resources for the proposed project. In determining the adequacy of resources for the proposed project, the Secretary considers the extent to which the costs are reasonable in relation to the number of persons to be served and to the anticipated results and benefits.

In partnership with vendors and districts, DESE will develop, administer, evaluate, and scale summative assessments and deliver professional development across the Commonwealth. The major cost categories are personnel, assessments, professional development, and program evaluation. Personnel includes the full-time Project Manager under this grant, 50% of Project Director, Innovative Assessments, and 2-5% of several agency members across key DESE teams:

- Centers for Instructional Support's STEM team
- Kaleidoscope Collective for Learning
- Student Assessments
- Strategic Initiatives (equity focus)

The agency has already committed to investing \$2.5-3 million to develop and administer the innovative assessment in May 2021 with similar expenditures expected for the assessment contract in each of the following years. Of that, roughly \$400,000 will be funded by this grant in each year. Professional development that aligns with the innovative assessments will cost roughly \$120,000 in the first year and less in the following three years. Finally, the program evaluation will cost \$50,000 in year three and \$150,000 in year four.

The number of persons being served by these resources is considerable. By 2024, approximately 72,800 students in grade 5 and 8 and high school – whose demographics are reflective of the state as a whole – will have taken a forward-thinking, innovative assessment featuring authentic, relevant, and purposeful tasks. Roughly 5,700 teachers will have participated in professional development experiences and ongoing support. Massachusetts teachers will

develop and refine their skills designing and executing on deeper learning tasks. The state will partner with districts to evaluate and analyze student learning results to continuously improve assessments and educator development and support. This continuous cycle of learning and improvement will hasten deeper learning for all students. In years 3 and 4 of the grant, the agency will employ a third-party evaluator to assess the impact of the program. The agency is also prepared to integrate this initiative into its existing instructional support and student assessments teams and structures. By the end of the IADA period, the assessment created under this grant will be ready for deployment at statewide scale.

Beyond this group of teachers and students, we anticipate this project will set the direction for the future of assessments and teacher support in Massachusetts and the nation. This initiative will raise the bar for how we assess student learning and spread deeper learning experiences that are accessible and relevant to all learners.

(f) Quality of the management plan (up to 20 points).

The Secretary considers the quality of the management plan for the proposed project. In determining the quality of the management plan for the proposed project, the Secretary considers

- (1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks. (10 points)*
- (2) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project. (10 points)*

We have designed a robust management plan to carry out this work. The timeline below illustrates DESE's plan to initially pilot the innovative assessment and professional development, and the plan to scale up to statewide implementation by the end of the IADA period. Our plan includes defined responsibilities, timelines, and key milestones for each component.

Workstream 1: Develop, administer, and score innovative science assessment

We have secured a partnership with Pearson, WestEd, and the Concord Consortium to build a cutting-edge, world-class science assessment that measures student mastery of science knowledge and practices. In partnership with our vendor team, we will collaborate with teachers and districts to create innovative performance tasks; administer and score assessments; and analyze and evaluate results for ongoing improvement.

The workplan below describes the process for scaling up the assessment over the 4 years of the grant. Participation targets for each year are set in our IADA plan, and included here (only years 1-4 will occur during this grant, year 5 is after the life of this grant).

Outcomes and Tasks	Owner	Timing
Year 1 (SY20-21)		
OUTCOME - SY1.1: Complete development of 6 innovative performance tasks and abbreviated summative	Sam Ribnick, Project Director, Innovative Assessments (IA), DESE	September 2020 – March 2021
TASK - Create test blueprints and item selection for abbreviated summative <ul style="list-style-type: none"><i>Establish working agreement with current MCAS vendor (Cognia) for them to support creation of abbreviated summative</i>	Sam Ribnick, Pearson and Cognia (current MCAS vendor)	Sept. 2020 – Nov. 2020
Prototype and develop technology-enhanced performance tasks via cognitive labs and tryouts	Sam Ribnick, Test Development staff, Pearson et. al.	Sept. 2020 – Feb. 2021

<p>Develop protocols and surveys to administer tasks and gather feedback</p> <ul style="list-style-type: none"> • <i>Assess for key factors such as accessibility, validity of inferences from task design, and student engagement</i> 	Project Manager, Pearson et. al.	Jan. 2020 – Mar. 2021
Conduct review of technology-enhanced performance tasks with bias committee	Sam Ribnick, Test Development staff, Pearson et. al.	Mar. 2021
Refine tasks findings based on results and input	Project Manager, Pearson et. al.	Mar. 2021 – Apr. 2021
SY1.2: Administer new assessment	Sam Ribnick, Project Director	March 2021 – June 2021
<p>Train and prepare administration and districts for assessment</p> <ul style="list-style-type: none"> • <i>Create computer-based tutorials and training for stakeholders including students and teachers. Include scripts and requirements for teachers.</i> • <i>Create communications for schools, LEAs, and families</i> 	Project Manager, Pearson et. al.	Mar. 2021 – Apr. 2021
Administer and score Grades 5 and 8 assessments	Pearson et. al.	May 2021 – Jun. 2021

<ul style="list-style-type: none"> • <i>Ensure sufficient staffing and capacity at vendor and DESE to support assessment administration</i> 		
SY1.3: Analyze and evaluate results from assessment pilot	Sam Ribnick, Pearson and Cognia	May 2021 – Jul. 2021
Integrate data between two halves of assessment through manual process in collaboration with MCAS vendor	Bob Lee (Chief of Test Analytics), Pearson and Cognia	May 2021 – Jun. 2021
Score technology-enhanced performance task results and generate score reports for distribution to students, LEAs, and accountability office within DESE	Michol Stapel (head of Student Assessment team), Pearson and Cognia	Jun. 2021 - Jul 2021
Produce end-of-year evaluation report assessing validity, reliability of innovative assessment and analyzing feedback from students and staff	Pearson	Sept-Oct. 2021
Year 2 (SY21-22)		
SY2.1: Develop high school performance tasks	Sam Ribnick, Project Director	June 2021 – May 2022
Prototype and develop computer-based HS tasks	Vendor TBD	Sept. 2021 – Dec. 2021
Conduct review of technology-enhanced performance tasks with bias committee	Vendor TBD	Feb. 2022

Create, review, and finalize assessments for HS assessments	Vendor TBD	Mar. 2022 - May 2022
SY2.2: Administer assessment for grades 5 and 8 and high school	Project Manager	Sept. 2022 – Jun. 2022
Expand pilot group of high schools for grades 5 and 8, and add high schools	Project Manager, Vendor TBD	Sept. 2022 – Oct. 2022
Evaluate, refine, and scale prior year’s assessment for Grades 5 and 8	Project Manager, Vendor TBD	Sept. 2022 – Apr. 2022
Administer and score assessments for grades 5, 8 and HS	Project Manager, Vendor TBD	May 2022 – Jun. 2022
SY2.3: Analyze and evaluate assessment results	Project Manager	May 2022 – Jul. 2022
Codify and make improvements to assessments based on results and feedback	Project Manager, Vendor TBD	May 2022 – Jul. 2022
Year 3 (SY22-23)		
SY3.1 Integrate development timeline for innovative assessments into statewide MCAS timeline	Michol Stapel (head of Student Assessment) and Vendor	June 2022 – May 2023

Coordinate with MCAS vendor to create and execute on plan for integration	Michol Stapel	June 2022 – Mar. 2023
SY3.2 Outline, identify, partner and plan for conducting third-party evaluation	Sam Ribnick, Project Director	Jun. 2022 – July 2023
Create third-party evaluation plan and conduct a procurement to select a third-party evaluator	Sam Ribnick, Bob Lee	Jun. 2023 – Jul. 2023
Oversee initial evaluation process to finalize plan and establish baseline data	Sam Ribnick	Aug. 2022 – Jun. 2023
SY3.3: Refine, administer, evaluate, and analyze results for grades 5 and 8 and high school	Sam Ribnick, Project Director	Sept. 2022 – Jun. 2023
Evaluate and refine prior year's assessments for grades 5 and 8 and HS; continuously improve based on results	Vendor	Sept. 2022 – Apr. 2023
Administer, score, generate and distribute results	Vendor	May 2023 – Jul. 2023
Year 4 (SY23-24)		
SY4.1: Conduct third-party evaluation on assessments	Sam Ribnick, Project Director	June 2023 – May 2024
Scope, hire, and begin process of evaluation with a third-party	Sam Ribnick	Jun. 2023 – Dec. 2023

SY4.2: Refine, administer, evaluate, and analyze results for grades 5 and 8 and high school	Michol Stapel (head Student Assessments)	Sept. 2023 – Sept. 2023
Evaluate and refine prior year's assessments for grades 5 and 8 and HS; continuously improve based on results	Vendor	Sept. 2023 – Apr. 2024
SY4.3: Prepare for full statewide implementation of science assessments	Michol Stapel (head Student Assessments)	June 2023 – May 2024

Workstream 2: Provide professional development with an intentional focus on equity

We have designed a robust, highly coordinated management plan for professional development and support aligned with our innovative assessment plans. We will be coordinating and collaborating with different teams within the agency to build the local capacity of schools and districts to design deeper learning tasks and increase assessment literacy.

Outcomes and Tasks	Owner	Timing
Year 1 (SY20-21)		
SY1.1: Design and deliver aligned professional development and support on science instruction	Erin Hashimoto-Martell, STEM Director	September 2020 – April 2021
In collaboration with the DESE' Center for Instructional Support (CIS), align innovative assessment tasks with OpenSciEd curriculum	Erin Hashimoto-Martell	Sept. 2020 – Feb. 2021

Design, develop, and deliver high quality professional development in collaboration with CIS	Erin Hashimoto-Martell and vendors	Sept. 2020 – Apr. 2021
SY1.2: Adapt deeper learning tools and trainings for participating schools and districts	Project Manager	September 2020 – April 2021
Adapt deeper learning tools and trainings developed by KCL to implement and share with schools and districts	Project Manager	Sept. 2020 – Dec. 2020
Refine and adapt based on innovative assessment tasks and input and being to modify for HS teachers and principals	Project Manager	Jan. 2021 – Apr. 2021
SY1.3: Coordinate the design and delivery of aligned professional development and support on assessment literacy	Project Manager	September 2020 – July 2021
Design and deliver tools and trainings on effective data use for teachers and principals	Project Manager	Sept. 2020 – Apr. 2021
Refine tools and trainings based on assessments and input for next year and begin to modify for HS teachers and principals	Project Manager	May 2021 – Jul. 2021
Years 2-4 (SY21-24)		
SY2-4.1: Improve and scale model for PD in science instruction for grades 5 and 8; design, deliver, and scale HS PD of science instruction	Project Manager, Erin Hashimoto-Martell	September 2021 – August 2024

Refine and scale PD of science instruction for grades 5 and 8 in partnership with Center for Instructional Support (CIS)	Project Manager	Each year, Sept. - Apr.
Employ improvement cycles to drive better results over time	Project Manager	Each year, May – Sept.
SY2-4.2: Integrate core concepts and practices for deeper learning into the science instruction PD sequence	Project Manager, Michelle Ryan (KCL)	September 2021 – August 2024
Coordinate and collaborate with CIS and KCL to integrate science-specific deeper learning tools to PD sequence, ensuring alignment with assessments	Project Manager	Each year, May – Sept.
SY2-4.3: Improve trainings and tools for using data effectively	Project Manager	September 2021 – August 2024
Refine trainings and tools over time based on results and input for grades 5 and 8; design, scale, and improve trainings and tools over time for HS	Project Manager	Each year, May – Sept.

(f)(2) Personnel commitments

(2) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project. (10 points)

DESE will dedicate adequate staff capacity within the agency to execute on our plans. DESE has deliberately assembled a team to manage the initial design and implementation that includes representation from many existing offices and new staff dedicated to innovative assessments who

are not tied to any existing office. This decision is based on organizational research showing that to innovate, organizations need to protect innovative initiatives from the pressures and constraints of the existing structures (*The Ambidextrous Organization*, Tushman and O'Reilly⁹). The innovative assessments team officially resides outside of any one office, but will draw on expertise from staff in the student assessment office, experts in deeper learning (the KCL team) and science instruction (STEM team).

As the innovative assessment pilot grows, it will be critical to put in place the structures and processes that will allow DESE to implement the innovative assessment on an ongoing basis with internal capacity. The student assessment team will help shape the approach for test development in early years to ensure compatibility with existing test development processes. During years 3 and 4, the assessments team will take on primary responsibility and DESE will further realign FTE from the existing science MCAS work to contribute to the innovative assessment. Eventually, when Massachusetts reaches the end of the IADA period and commits fully to the innovative assessment system, those tests would fully displace the existing MCAS STE tests. At that point, the full level of resources currently dedicated to administering MCAS STE would be available for the ongoing development and administration of the innovative assessment.

Similarly, the PD will initially be coordinated by the newly hired project manager, engaging staff and resources from other offices as needed. As the pilot grows and deeper learning becomes the norm in ever more schools, the PD initially developed for the innovative assessment pilot

⁹Michael Tushman and Charles O'Reilly "Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change," *Harvard Business Review* Apr;82(4):74-81, 140 (2004)

will become integrated into the core work of the state’s STEM team. The grant will help fund the development of the PD and the rapid scaling up of the PD, but eventually the core PD coordinated by the state will fully incorporate many of these ideas, allowing us to support the deeper learning science PD with the resources the state has currently dedicated to science PD.

The project director, Sam Ribnick, will dedicate 50% of his capacity to overseeing the innovative assessments project including collaborating with other teams to deliver professional development and support to educators. Matt Deninger, acting Chief Strategy and Research Officer, will serve as principal investigator for this initiative and will dedicate 5% of his time to this effort.

The Project Manager, Innovative Assessments will dedicate 100% of their capacity to this project (job description below):

Job Description

Project Manager, Innovative Assessments

After 25 years of building a successful, comprehensive system of standards and assessments, Massachusetts has delivered “first in the nation” results on many educational measures. At the same time, however, achievement gaps have grown for the Commonwealth’s Black and Latinx students, English learners, low-income students, and students with disabilities. To support all students to flourish, the Department of Elementary and Secondary Education (DESE) has prioritized equity and deeper learning as signature strategies. Assessments are one way that the state can support districts to improve instruction and student experiences. A critical component of DESE’s approach to deeper learning and equity involves changing the tasks asked of students on assessments to be more authentic, relevant, and purposeful.

The Project Manager, Innovative Assessments will manage the high-quality execution of Massachusetts' forward-looking, world-class science assessment pilot and scaling plans in conjunction with innovative professional development. The Project Manager will oversee an external vendor to successfully pursue an ambitious multi-year, multimillion-dollar project ultimately impacting over 72,000 students in the Commonwealth. The Project Manager will report to the Project Director, Innovative Assessments and collaborate and coordinate with DESE's STEM curriculum experts and student assessments team to deliver outstanding results. They will also partner with the [Kaleidoscope Collective for Learning](#), an initiative of DESE that spreads deeper learning throughout the Commonwealth.

This is a grant-funded position with expected duration of 4 years. The Project Manager will manage two strands of work:

- **Coordinate the development, administration, and scoring of innovative assessments**
 - Manage the work of innovative assessment vendors to ensure assessments pilot and scaling are effective
 - Prepare, facilitate, and follow up on frequent meetings with vendors to oversee high-quality work
 - Oversee the efficient use of resources for pilot and scale plans
 - Engage members of DESE's student assessment team at appropriate points in development and administration

- Oversee training and creation of guidance for participating schools and districts to administer assessments
 - Create high-quality training and guidance plans for participating districts to administer assessments
 - Provide technical requirements for administering assessments
 - Generate result report guidance to participating district
- Develop and implement cycles of annual test development, administration, and scoring
- Incorporate findings from evaluation and input from key leaders into strategic direction and project plans in partnership with Project Director, Innovative Assessments
- **Coordinate and manage professional development in alignment with assessments and with a focus on equity**
 - Coordinate and collaborate with Center for Instructional Support to align assessment tasks with science curriculum eventually integrating into the professional development sequence
 - Coordinate and collaborate with Kaleidoscope Collective to align assessment tasks to deeper learning trainings and resources
 - Create schedules of deeper learning engagement opportunities for participating districts
 - Communicate opportunities for professional development to districts and track participation

- Coordinate and collaborate with the Center for Strategic Initiatives and other teams within the agency to ensure professional development plans meet the state's goals for equity and excellence
- Write and provide resources and guidance to build the capacity of local districts to effectively analyze assessment results to drive improved instruction
 - Draft and deliver resources on assessment literacy
- Eventually, coordinate and collaborate with the Office of Student Assessment to integrate innovative assessments into existing assessment efforts

Preferred Qualifications:

The successful candidate will demonstrate most of the following qualifications.

Candidates not meeting all qualifications are still encouraged to apply.

- Effective management of the project plan and budget of a multi-year, multimillion-dollar vendor contract. Ability to hold parties accountable to excellent results using resources efficiently.
- Science instruction or assessment experience, including science teaching, work on science curriculum, or other science content development.
- Experience working with an explicit equity-based lens.
- Experience working with a range of diverse stakeholders and tailoring approaches and communication to successfully meet project goals and timelines.
- Excellent written and oral communication skills, especially public-facing communication.

- Strong interpersonal skills, including negotiating difficult decisions and providing clear rationales for those decisions.
- Commitment to efforts devoted to closing the opportunity gap and to addressing racial inequities in education.
- Experience in the education sector ideally including experience teaching.
- Knowledge of the current state and national landscape of education research especially related to STEM assessments and instruction.
- Advanced degree or relevant experience in psychometrics, assessment design and development, STEM curriculum, assessments or instruction.

Both prongs of our proposal – assessments and professional development – are central to DESE’s support to districts. Thus, this initiative is relevant to many across the agency and will involve the capacity of several teams:

Center for Instructional Support (5%): The Center for Instructional Support’s STEM team will be the primary owner of the design and delivery of professional development. STEM experts will also contribute to the design and review of assessment tasks, to ensure that they reflect best practices for science instruction. At varying points, their time commitments will range and will be higher when during peak times for development and delivery of PD.

The Kaleidoscope Collective for Learning (5%): KCL will provide strategic input and guidance at varying points each year to ensure deeper learning resources shape assessments and professional development. Some of KCL’s member schools will be part of the innovative assessment pilot and those that are not will still receive some of KCL’s deeper learning trainings

and have access to its resources. The Senior Associate Commissioner of KCL and her team will provide strategic input through regular meetings amounting to about 5% of their capacity.

Center for Student Assessments (5%): The Associate Commissioner for Student Assessments, the Test Development Director, and Chief Analyst will advise the development of innovative assessments in the first two years of the project, amounting to about 5% of their time. By years 3 and 4, however, much of the test development and administration process will be integrated into the Center for Student Assessments' existing processes and the level of time and staff involvement will increase.

Center for Strategic Initiatives (2%): Equity and excellence are top goals of the agency and are embedded into each team's priorities and work. The Center for Strategic Initiatives brings additional expertise and tools related to equity that will guide the design and delivery of the innovative assessment effort. Specifically, they will be involved in assessment development phases through bias reviews and informing culturally accessible and relevant professional development plans.

In addition, we have convened an Innovative Assessments working group with internal and external team members to provide strategic direction and guidance. The purpose of this group is to offer input, guidance, and advice from multiple perspectives early in the process to shape and inform the medium and long-term direction of DESE's Innovative Assessment initiative. Thus far, the working group has met for 2-3 hour working sessions once per month and will be more involved at critical junctures throughout the process such as prototyping performance tasks.

Internal Team:

- Sam Ribnick - Project Director (Special Advisor, Innovative Assessments))
- Matt Deninger – Principal Investigator (Acting Chief of Strategy and Research)

- Komal Bhasin (Senior Associate Commissioner, Kaleidoscope Collective)
- Jass Stewart (Deputy Chief of Staff)
- Bob Lee (Chief Analyst for Student Assessment)
- Erin Hashimoto-Martell (Director of Science, Technology, Engineering and Mathematics)
- Shay Edmond (Associate Commissioner, Center for Strategic Initiatives)
- Michelle Ryan (Deeper Learning Implementation Manager for Kaleidoscope)

External Advisors

- Dianne Kelly (Superintendent of Revere Public Schools. Board member of MCIEA. Has two schools participating in Kaleidoscope and the innovative assessment pilot.)
- Priti Johari (Chief Academic Officer for the Academy of the Pacific Rim Charter, participating in Kaleidoscope and the innovative assessment pilot.)
- Matthew Tibbits (Ludlow High School senior and student member of the state Board of Elementary and Secondary Education)
- Nathan Dadey and Scott Marion (Center For Assessment)

(g) Quality of the project evaluation (up to 5 points).

The Secretary considers the quality of the evaluation to be conducted of the proposed project. In determining the quality of the evaluation, the Secretary considers the extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

DESE recognizes the importance of high-quality evaluation of this major effort, and plans a multi-faceted approach in line with the evaluation approach in our approved IADA plan. DESE plans to conduct a thorough, third-party independent evaluation of the final form of the innovative assessment and related PD near the end of the IADA period (year 4 of this grant) to help inform the decision about whether the innovative assessment is fully ready for statewide use in place of MCAS STE, or whether it makes sense to apply for the 2-year extension of IADA. Additionally, after the 2021 MCAS administration, DESE plans to include the innovative assessment in the planned independent study of alignment of MCAS STE. This is a well-established process for a formal review of the alignment of MCAS test content to standards. DESE will use the same procedure to evaluate the alignment of the innovative assessment by including it in the study to be conducted of 2021 MCAS STE.

In addition to these formal, third-party evaluations, DESE will also work our vendor team to conduct annual evaluations of both implementation and the quality of assessment results and findings. These annual evaluations will be similar to existing MCAS Technical Reports, and include reliability evidence such as classical and item response theory (IRT) statistics and analysis of differential item functioning (DIF), and validity evidence related to test content and response processes arising from the evidence-centered design process for the performance tasks. The annual evaluation will also include the results of student and staff surveys, to allow us to gain a better understanding of engagement and relevance. We identified and proposed specific criteria for evaluation in the addendum to our IADA application, below.

For the mini-summative, DESE and its vendor will produce evidence of reliability and validity to mirror the evidence published annually in the MCAS technical reports. For an example, see the [2018 Next-Generation MCAS and MCAS-Alt technical reports](#). Note that the specifics of these approaches may change as the work evolves and additional insight is provided by key partners, including DESE's technical advisory committee. The current planned analysis includes the below analyses.

- Examination of **reliability** includes both classical and item response theory statistics dealing with measurement precision. The key classical test statistics are (a) Cronbach's alpha, which is calculated overall and for each subgroup with 10 or more students and (b) decision accuracy and consistency calculated following Livingston and Lewis (1995), which is calculated overall and conditional on each achievement level. The key item response theory statistic is the conditional standard error of measurement (CSEM) along the entire scale and in particular at each cut point.
- Examination of **validity** will include evidence of validity from the key sources outlined by the APA, NCME, and AERA Standards for Educational and Psychological Testing (2014), which are also drawn on by the general MCAS. These sources include test content, response processes, internal structure, and relationships to other variables. Since these sources of validity evidence will be collected for the MCAS, examinations of the abbreviated summative will leverage the same data and techniques to essentially reexamine the reduced item pool defining the mini-summative.
- Examinations of **comparability** will explore whether students taking the mini-summative would have received similar scores if they had taken the full summative. Since the mini-summative is simply a subset of the general MCAS, this question can be answered

largely by taking the item responses from the students who took the full MCAS and reducing it to just the items on the mini-summative, then re-estimating scaled scores and achievement levels. Once produced, these mini-summative scores can be compared against those from the general MCAS. While DESE plans to report only achievement levels (and commits to establishing comparability of achievement levels, per the requirements), DESE will also examine the comparability of the scaled scores internally and use this analysis to inform future work.

For the performance task section of the assessment, the focus of work on reliability, validity, and comparability will be aimed at supporting the possible replacement of the general MCAS over a number of years. Again, the performance tasks will *not* be used operationally in the first year, but instead used to support the gradual development of a rich set of performance tasks to meet the department's long-term vision.

- In terms of **reliability**, this work is aimed at exploring what is possible within the context of large-scale assessment, thus the specific measurement model is not known *a priori*. Assuming that the performance tasks result in item response data that is amenable to the classical and item response theory approaches generally taken in large scale assessment, then the vendor will be asked to produce information on measurement precision at the task level. Doing so will provide the department with an idea of how many tasks a student needs to take to produce sufficiently precise scores. Should such models not be appropriate, much of the work on precision will be to determine what statistics appropriately address precision, and then estimating them.

- In terms of **validity**, the work this year will dive deeply into test content and response processes through careful test development and rapid prototyping using a principled approach to assessment design. Drawing on Evidence Centered Design, doing so means deeply articulating the student, evidence and task models that define what is to be measured, what students need to do to provide evidence of that target, and what the features are of tasks that would elicit that evidence. These models will be articulated for each task, and revisited and revised after each round of the rapid prototyping. In addition, cognitive laboratories will be used to understand student response processes and then support task revision. Log files collected from the testing platform may also provide insight into student responses, assuming the vendor is able to create *a priori* structures within the testing platform. Evidence related to internal structure can be investigated within and across tasks using typical methods, e.g. the MCAS currently employs the nonparametric IRT-based methods DIMTEST (Stout, 1987; Stout, Froelich, & Gao, 2001) and DETECT (Zhang & Stout, 1999). Internal structure, however, may also be modeled based on hypotheses about student task interactions based on the student, evidence, and tasks models. Finally, since students in the pilot will be taking both the performance tasks and the mini-summative, a source of external validity evidence is the mini-summative itself, with associations between performance on the mini-summative and performance tasks acting as evidence.
- In terms of **comparability**, the approach for the performance tasks is essentially the same as what has been previously mentioned for validity evidence based on external variables – to compare associations performance on the mini-summative and performance tasks for students participating in the pilot.

For the evaluation of professional development, the project manager will work closely with the Center for Instructional Support and Kaleidoscope team to establish an approach to evaluating the effect on teacher practice. We plan to conduct surveys to gauge teacher response to each training event, with longer pre-/post- surveys at the start and end of each year of training and coaching. Self-reported changes in practice will be one key measure of impact. Further, Kaleidoscope is currently developing rubrics to assess the presence of deeper learning practices at the classroom and school levels, in addition to a rubric for assessing principal leadership. We will draw on these rubrics to gather data on each participating Kaleidoscope school during a baseline period and a later period to determine the degree of progress.

In the annual evaluations, we will be closely examining not just the overall data, but also looking for signs of differential impact in schools with greater numbers of marginalized students. With a thoughtfully designed assessment and targeted use of PD resources in high-need schools, our goal is to see signs that this project is contributing to more rapid improvement in those schools and reducing the gaps in outcomes. The evaluation will assess indicators that we are moving in the right direction, and will highlight specific “bright spot” schools that show the greatest progress with marginalized students. By evaluating the implementation and other factors at these schools, we will identify practices to spread to other schools, driving a cycle of continuous improvement.

Other Attachment File(s)

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Massachusetts Resumes for CGSA Application

SAM RIBNICK (PROJECT DIRECTOR)

Matthew J. Deninger (Principal Investigator)

JASS STEWART

ERIN A. HASHIMOTO-MARTELL

HEATHER G. PESKE, Ed.D.

Komal Bhasin

Michol Stapel

Daniel J. Wiener

Robert C. Curtin

Robert Lee

Sheika (Shay) Edmond

Ventura Rodríguez, Jr., Ed.L.D.

Nathan Dadey

Scott Marion

SAM RIBNICK (PROJECT DIRECTOR)

HIGHLIGHTS OF QUALIFICATIONS

- **Strategic thinking and leadership**, with experience facilitating strategic planning and monitoring processes for districts.
- **Commitment to equity and inclusion**, applying evidence-based practices in hiring, planning and resource allocation.
- **Excellent verbal and written communication**, capable of presenting to large audiences and facilitating training workshops.
- **Track record of relationship development with districts**, winning over \$2,000,000 in new district projects.
- **Superior problem-solving skills**, with expertise in talent development, recruiting, finance, data analysis and process design.

EXPERIENCE

Massachusetts Department of Elementary and Secondary Education (Malden, MA) Dec. 2019 — Present

Special Advisor, Innovative Assessments and Data

- Obtained approval for Massachusetts's IADA application.
- Led innovative assessments design process and vendor selection.

Senior Director, Consulting Team, District Management Group (Boston, MA) March 2017 – Present
Director, Consulting Team August 2013 – March 2017

- Led projects and managed teams of up to 5 consultants for 15+ school district clients at a time, facilitating strategic planning, training on strategic budgeting practices, progress monitoring and optimizing use of time in school schedules.
 - Advised superintendents and cabinet-level leaders, presented to school boards, and conducted focus groups with teachers, paraprofessionals, other staff, and parents on projects for over 50 districts.
 - Designed a more inclusive implementation approach for DMG partnership with districts, creating a guiding coalition of administrators and teachers to lead implementation. Process is now adopted in all implementation work.
 - Developed expertise in Academic Return on Investment, becoming established as a leading expert on A-ROI, launching an A-ROI training institute attended by leaders from 9 districts from across the country, and advising state agency leaders.
- Established and maintained collaborative relationships with many education organizations, including Panorama Education, Education Resource Strategies, BetterLesson, Achievement Network, Research for Better Teaching, Momenta, The New Teacher Project and Teach For America.
- Managed many key human capital systems internally, and mentored consultants via regular two-way feedback meetings, setting goals, and delivering performance reviews.
 - Oversaw creation and delivery of professional development for team of ~20 consultants, including a sequence of onboarding sessions used for all new hires since Fall 2015, contributing to reduced employee turnover and higher job satisfaction.
 - Designed and oversaw execution of new recruiting process for DMG to reduce subjectivity and bias, used for hiring over 15 consultants in last 3 years with high acceptance rate and increased diversity of hires.
- Example projects and outcomes:
 - Designed and led district professional development sessions on topics including human capital systems, MTSS and intervention, effective coaching practices and addressing racial disparities and inequities.

- Coordinated work of district partner organizations, supporting community engagement, and producing a unified approach to professional development and coaching with aligned roles for each partner.
- Led creation of district improvement plan for 3 years for New Bedford Public Schools, winning \$1.2M in school improvement funds, developing a structure for school improvement planning and monitoring of the district plan, ultimately leading the state to release the district from monitoring.

Freelance Tutor and Curriculum Developer (during sabbatical year of international travel)

Technion University (Haifa, Israel) February 2013 – July 2013

- Developed interactive flipped classroom science curriculum aligned to Next Generation Science Standards.

MyGuru Tutoring (online from Santiago, Chile) September 2012 – July 2013

- Partnered with CEO to research and select technology platforms to allow for seamless online remote tutoring.

The Boston Consulting Group (Boston, MA) July 2012 – August 2012

- Provided Excel training to newly hired MBA and college graduates. Received average feedback of 4.9/5.

Science Teacher, Teach for America and Boston Public Schools (Boston, MA) June 2010 – July 2012

- Taught 9th grade physics at the English High School in the Boston Public School district. Students achieved 93% passing rate on state physics MCAS exam compared to 71% with the prior teacher.
- Developed framework and led task force to create a new 3-year strategic plan for the school. Advised the principal on communication and strategy. Aligned leadership team on 4 measurable goals to guide school improvement.
- Analyzed assessment and in-class performance data to determine student needs. Developed customized physics curriculum to target critical gaps in students' academic backgrounds. Ran after-school study sessions to provide additional remediation.

Associate, The Boston Consulting Group (Boston, MA) 2008 – 2010

- Led internal trainings on skills for analysis and financial modeling. Received highest possible peer feedback of "Excellent."
- Performed analysis, conducted interviews, and synthesized findings in a team environment for a range of projects.
- Created financial model to enable a \$2.5B consumer goods company to craft strategy for shareholder return. Analyzed impact of acquisitions and financial policy decisions. Proposed strategy to CEO and CFO to deliver 12-15% shareholder return.
- Developed roadmap for \$1B in spending on IT and infrastructure strategy for a national bank and credit company.
- Conducted consumer insight research for tool manufacturer to evaluate viability of entering new product space. Performed over 100 contractor interviews, analyzed survey data. Delivered proposal to extend current brand strength onto new products.

Consultant, Stroud Consulting (Marblehead, MA) 2006 – 2008

- Partnered with a client team of 60 people to drive a 15% increase in department efficiency across 6 manufacturing lines. Performed an analysis to identify and prioritize improvement opportunities. Worked with senior client contact to build sense of urgency within department. Delivered final value of over \$2M annually.
- Coached client leadership to drive a 30% reduction in manufacturing waste. Functioned as the primary on-site consultant for 3 months. Advised management in weekly direction-setting meetings. Achieved over \$680,000 in annual cost savings.
- Conducted workshops on client sites to train employees in management techniques, prioritization, and problem solving.

Center for Talent Development, Northwestern University Campus (Evanston, IL)

Residential Coordinator 2005

- Hired, trained and managed 17 summer teaching assistants to supervise and tutor 150 students for 8 weeks. Conducted daily staff meetings to maintain communication between program leadership and staff.

Residential Teaching Assistant 2003, 2004

- Instructed 20 students in physics and research methods. Contributed to curriculum, creating assignments, labs and exams.

PUBLICATIONS

Focus and Persistence Change the Course: Turnaround at New Bedford Public Schools (case study)

The District Management Journal, Spring 2016

Realigning Reading: Mounds View Public Schools, MN (case study)

The District Management Journal, Winter 2015

What Does the Most Good...and For Whom? An Academic Return on Investment Guidebook

District Management Group training manual used for A-ROI Institute training

PRESENTATIONS

Chicago Leadership Development Meeting, *Strategies for Recruiting Teachers of Color* April 2019

Boston Leadership Development Meeting, *Entrepreneurship in Education* November 2018

East Longmeadow Public Schools, *Principals as Innovators* October 2017

Massachusetts Association of School Business Officials, *Using RADAR Reports* May 2017

Government Finance Officers Association, *Academic Return on Investment* June 2017 and ongoing

MA Department of Elementary and Secondary Education, *Strategic Budgeting Based on Data* September 2016

Superintendents' Strategy Summit, *Weighing Budget Tradeoffs via Simulation* January 2016

EDUCATION Cambridge, MA

Massachusetts Institute of Technology, Bachelor of Science in Physics

TEACHING CERTIFICATES *(formerly held, currently expired)*

Physics, 8-12, Initial License (Massachusetts)

English as a Second Language, 5-12, Preliminary License (Massachusetts)

INTERESTS

Education policy, cooking, cycling, travel, technology, start-ups and entrepreneurship

Matthew J. Deninger (Principal Investigator)



EDUCATION

HARVARD UNIVERSITY GRADUATE SCHOOL OF EDUCATION <i>Ed.M. – Educational Policy and Management</i> <ul style="list-style-type: none">Coursework focused on education policy, leadership, statistics, research methods, law, instructional improvement, financial management, and organizational change.	CAMBRIDGE, MA	2004 - 2005
DARTMOUTH COLLEGE <i>A.B./English; Dartmouth Teacher Preparation Program, Secondary Licensure</i>	HANOVER, NH	1997 - 2001

PROFESSIONAL EXPERIENCE

MASS. DEPT. OF ELEMENTARY AND SECONDARY EDUCATION <i>Serving as Acting Chief Strategy and Research Officer</i> <ul style="list-style-type: none">Oversees research, resource allocation, strategy, and planning functions within the agency. <i>Promoted to Director, Resource Allocation Strategy and Planning</i> <ul style="list-style-type: none">Led the successful consolidation of several groups within DESE to streamline our federal grant-making processes and to ultimately provide districts with the tools and evidence they need to make research-informed resource allocation decisions. <i>Promoted to Manager, Strategic Planning & Perf. Mgmt. Office of Planning and Research</i> <ul style="list-style-type: none">Initiated results-oriented strategic planning and performance management process to focus agency efforts and ensure Commissioner's priorities were implemented with fidelity.Served as lead manager for the agency's <i>Delivery Unit</i>, which supports, facilitates, and evaluates the work of the agency's highest priority initiatives (including accountability systems, communications, curriculum standards reform and implementation, educator evaluation systems, educator preparation and licensure systems, district funding formulas, strategic resource use, information technology systems, data governance, social-emotional learning, school and district turnaround, college/career readiness and pathways, etc.). <i>Promoted to Policy Coordinator Office of Planning and Research</i> <ul style="list-style-type: none">Managed the District Analysis and Review Tool (DART) project.Supported the rollout of the statewide student growth model; developed identification methodology for schools and district accountability system. <i>Promoted to Policy Analyst Office of Planning and Research</i> <ul style="list-style-type: none">Led development of annual special education disproportionality analysis formula and process, co-authored a study on the achievement gap, a research brief on out-of-district special education students; authored a research brief on disproportionality. <i>Education Specialist & District Liaison Program Quality Assurance Services</i> <ul style="list-style-type: none">Led special education program evaluations (document reviews, interviews, focus groups, and wrote final reports). Provided technical assistance and problem resolution to parents and administrators concerning special education laws and regulations.	MALDEN, MA	2005 - PRESENT 2019 - PRESENT 2017 - 2019 2011 - 2017 2009 - 2011 2007 - 2009 2005 - 2007
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MASSACHUSETTS SCHOOL BUILDING AUTHORITY	BOSTON, MA	2015 - PRESENT
<i>Board member / Commissioner's designee on MSBA Board of Directors</i>		
<ul style="list-style-type: none"> Oversees \$800 million in building projects, annually. Coordinates efforts among agencies. 		

NORTHEASTERN UNIVERSITY	BOSTON, MA	2016 - PRESENT
<i>Adjunct Lecturer Graduate School for Public Policy and Urban Affairs</i>		
<ul style="list-style-type: none"> Teaches graduate seminar: "Education Policy in the United States." 		

BOSTON PUBLIC SCHOOLS	BOSTON, MA	Summer 2005
<i>Research Consultant</i>		
<ul style="list-style-type: none"> Authored a study: <i>Professional Development Spending in the Boston Public Schools: FY 2005</i>. 		

ASHLAND HIGH SCHOOL	ASHLAND, MA	2001 - 2004
<i>English Teacher, Athletic Coach, Class Advisor; School Site Council Member</i>		
<ul style="list-style-type: none"> Taught composition and literature courses in grades 9-12. Coached girls' basketball, boys' tennis, and girls' soccer. 		

LEADERSHIP, RESEARCH, AND ORGANIZATIONAL EXPERIENCE

COMMONWEALTH MANAGEMENT CERTIFICATE PROGRAM	BOSTON, MA	2011 - 2012
<i>2011-2012 Fellow</i>		
<ul style="list-style-type: none"> Selected for leadership development program designed for managers in state government. 		

EDUCATION POLICY FELLOWSHIP PROGRAM	BOSTON, MA	2008 - 2009
<i>2008-2009 Fellow</i>		
<ul style="list-style-type: none"> Participated in national program for leaders in education policy. 		

HARVARD UNIVERSITY GRADUATE SCHOOL OF EDUCATION	CAMBRIDGE, MA	2004 - 2005
<i>Lead researcher for "Legal Literacy of Educators"</i>		
<ul style="list-style-type: none"> With Professor David Schimmel, developed and conducted a quantitative evaluation of hundreds of educators to determine their knowledge of legal issues in the school setting. 		
<i>Researcher for "The Effect of the EQA on School Districts"</i>		
<ul style="list-style-type: none"> Coordinated a qualitative study to determine the efficacy of the Massachusetts Department of Educational Quality and Accountability. 		

8 WEBSTER AVENUE FOUNDATION	HANOVER, NH	2006 - PRESENT
<i>Treasurer, Executive Board Member</i>		
<ul style="list-style-type: none"> Manages finances and oversees operation of a 501(c)(3) charitable foundation, which promotes academic excellence at Dartmouth College. 		

CERTIFICATIONS AND LICENSURE

- Teacher Certification – Secondary English – Massachusetts and New Hampshire

ADDITIONAL SKILLS AND INFORMATION

- Proficiency in SPSS, Word, PowerPoint, Excel, Outlook, SharePoint, Acrobat

AWARDS

-
- | | |
|---|------|
| ■ Department of Elementary and Secondary Education – Pride in Performance Award | 2011 |
| ■ Manuel Carballo Governor’s Award for Excellence in Public Service | 2015 |

JASS STEWART

SUMMARY OF QUALIFICATIONS

- More than 19 years' management experience in organizational leadership and relationship building with political, business, community, and education leaders.
- Extensive background in private-sector, government, and foundation fundraising, directly securing \$4.3 million and key contributor in the attainment of \$14.6 million.
- A strategic thinker, succinct communicator, and consensus builder with strong skills in public speaking, facilitating, research, negotiating, writing, client services, and product development.
- Skilled with project management, office, digital production/editing, and HR software, including Excel, Final Cut Pro, PowerPoint, Salesforce, SharePoint, Smartsheet, Word, Workday.

EDUCATION

M.B.A. in Human Resources Management, Fitchburg State University, Fitchburg, MA

SENIOR FELLOW, MIT, Department of Urban Studies and Planning, Cambridge, MA

M.Ed., Boston University, School of Education, Boston, MA

B.S., Boston University, College of Communication, Boston, MA

HIGH SCHOOL DIPLOMA, Business and Management Magnet High School, Dallas, TX

PROFESSIONAL WORK EXPERIENCE

2013-pres

Massachusetts Department of Elementary and Secondary Education, Malden, MA

DEPUTY CHIEF OF STAFF

[Senior Strategist, Public Understanding (2017-2018); Assistant to the Chief of Staff (2016); Special Assistant to the Sr. Associate Commissioner (2014-2015); Consulting Project Director (2013-2014)]

Work closely with the commissioner and the state's leadership team for K-12 education as a member of senior staff. Current responsibilities include strategy for the Commissioner's Office, communication and marketing, talent management, operations management, information management, and funder development.

- Develop and implement strategic plans across business units, impacting teaching, learning, and testing for 365 school districts and nearly 1 million students.
- Drafted and head agency's first-ever statewide communication strategy.
 - Funded \$1.6 million initiative through staff- and cost-sharing model across the agency.
 - Manage statewide [public awareness campaigns](#); revamped agency's website for the first time since the 1990s; refreshed all social media sites; implemented cloud-based communication platforms.
- Launched and serve as chief advancement officer for agency's new fundraising operation, including the creation of the Commissioner's Trust Fund and outreach to foundations and high-wealth individuals.

- Created agency's "best place to work" climate and culture initiative, with 81% of staff "strongly agreeing" that the agency's diversity definition, vision statement, goals, and career advancement commitments are "equitable" and "inclusionary."

2010-2015

City of Brockton, MA

CITY COUNCILOR AT LARGE

Actively represented the diverse interests of nearly 100,000 residents and oversaw a \$350-million budget to ensure the efficient and cost effective delivery of services through the filing of legislation; the enactment of orders, ordinances, and resolutions; and by analyzing appropriations and loan orders.

- Pushed through first-ever anti-nepotism policy to ensure every resident has a fair shot at a city job, despite entrenched opposition.
- Lobbied for the divestment of local taxpayer dollars from big banks because of the foreclosure crisis, reinvesting more than \$170 million a year in community banks.
- Spearheaded first-ever American trade mission to Cape Verde, West Africa, securing more than \$26 million in contracts for local businesses.
- Led effort to make city government more transparent and accessible by placing online all city meetings with agendas, ordinances, and recreational calendars.

Jass Stewart, page 2

2010-2014

Jass Stewart Consulting, Brockton, MA

PRINCIPAL

Develop integrated business and communication solutions for mission-driven organizations, including the strategic analysis, integration, and execution of high-impact business and marketing plans. Clients included:

- Massachusetts Department of Elementary and Secondary Education: Project managed key parts of the \$250-million, Race to the Top portfolio of educational initiatives across multiple business units.
- Year Up (Boston): Created information architecture and interactive metrics application to track, measure, and report "leading indicators" for key organizational and Human Resources goals.
- City Year (Boston): Developed and built startup infrastructure for organization's first-ever talent acquisition strategic plan, which included talent data analyses, strategic sourcing, onboarding and talent retention, and technology investments.
- United Way of Greater Plymouth County (Brockton): Developed, branded, and executed citywide public awareness campaign to improve attendance for at-risk students.

2008-2010

Jobs for the Future (JFF), Boston, MA

VICE PRESIDENT

Planned, developed, managed, and increased the impact of JFF's messages, products, and events with media, policymakers, and other opinion leaders. JFF is a national research and advocacy organization focused on educational and economic opportunity for American families and businesses.

- Initiated aggressive departmental “turnaround” effort to meet the demands of the organization’s more robust communication goals:
 - Conducted gap and SWOT analyses and developed 5-year communication strategy and annual operational plans, emphasizing new “go deep vs. wide” outreach approach.
 - Increased department budget and strategic spending from \$1 million to \$4 million through organization-wide communication cost analysis and consolidation.
 - Aligned work functions to new communication strategy, creating new PR, Creative, and Performance units, increasing staffing by 50%, and moving IT operation out of department.
 - Improved internal view of department with 61% of staff observing “significant improvement” in performance and enhanced JFF’s public visibility through a 42% increase in media mentions.
- Stewarded, refined, and expanded existing communication activities as restructuring took place, and helped to set overall organizational goals and policies as executive team member.

ADDITIONAL WORK EXPERIENCE

- 2007-2008 **EDUCATION CONSULTANT, Diploma Plus (Boston)**: Started four small high schools in Indianapolis area; revamped school startup process for organization.
- 2005-2007 **NATIONAL DIRECTOR, Big Picture Learning (Providence, RI)**: Served as chief national facilitator in 15 cities to support the growth of Gates Foundation-funded Big Picture high schools.
- 2000-2005 **FOUNDER AND CHIEF CLIENT OFFICER, Invent Media (Brockton)**: Developed and led solid business strategy for social marketing and technology firm serving mission-driven organizations.
- 1994-2000 **SENIOR DIRECTOR, ASSOCIATE DIRECTOR, MANAGER, ASSISTANT MANAGER, PROMOTIONS COORDINATOR, Blackside Film and Television Productions (Boston)**: Led the growth of company’s Marketing, Outreach, and New Media department.
- 1998, 1994, 1993 **ADJUNCT PROFESSOR, Boston University**: Designed and taught graduate-level course on educational media and technology and two summer courses on television and film production.

COMMUNITY INVOLVEMENT

Artists for Humanity, Big Brothers, Black Men’s Health Alliance, Brockton Boys and Girls Club, Brockton Community Schools, Brockton Neighbors United, Brockton Cable Board, BU Alumni Association, Center for Science Exploration, Crime Watch, Citizen’s Police/Trial Court Academies, Mass-Care, Mayor’s Cultural Affairs Committee, Mayor’s After-School Taskforce, Signature Healthcare Business Council.

TRAVEL EXPERIENCE

Africa: Cape Verde, Ghana, Kenya, Tanzania, Uganda. **Asia**: Hong Kong, Japan, Malaysia, Singapore, Thailand. **Caribbean**: Bahamas, Haiti, Puerto Rico. **Europe**: France, Spain, Switzerland, United Kingdom. **Latin America**: Mexico. **North America**: Canada, United States (33 states).

ERIN A. HASHIMOTO-MARTELL

EDUCATION

Ph.D., Curriculum and Instruction, Boston College, 2014

Dissertation title: *Using Rasch Models to Develop and Validate An Environmental Thinking Learning Progression*

Committee Members: Katherine McNeill (chair), Larry Ludlow, Lauri Johnson

M.Ed., Curriculum and Instruction, Boston College, 2004

B.S. Ecology, Behavior and Evolution; University of California, San Diego, 1999

WORK EXPERIENCE

Massachusetts Department of Elementary and Secondary Education, Malden, MA

Director of Science, Technology/Engineering, and Mathematics 2017-present

- Manage the STEM Team within the Center for Instructional Support (CIS)
- Coordinate initiatives and projects to support implementation of the MA Curriculum Frameworks for Mathematics, Science and Technology/Engineering, and Digital Literacy and Computer Science in schools and districts
- Coordinate efforts with other Department offices to support implementation and alignment of the MA STEM Curriculum Frameworks across the Agency
- Serve as a senior leader on the CIS team to advance Department and CIS priorities, provide management and input into cross-team projects to ensure their success, contribute ideas to and ownership of CIS strategic planning to ensure cross-team coherence and accelerate the impact of CIS on students and educators

Boston Public Schools, Boston, MA

Director of Science & Engineering; Dearborn STEM Academy 2015-2017

- Lead Science, Engineering, and Health Department
- Provide coaching, feedback, and evaluation of science, engineering, & health teachers
- Plan department and school-wide professional development
- Facilitate STEM working group & new school vision/transition for STEM program
- Identify, vet, and develop strategic STEM partnerships for the school
- School Testing Coordinator (2015-2016)
- BPS District support: Support and develop plan for curricular transition related to new MA STE Curriculum Framework

K-8 Science Content Specialist, Science Department 2013-2014

- Provided instructional coaching support to teachers and principals across the district
- Planned and developed district-based professional development for teachers, principals
- Supported district initiatives and work (create instructional support documents, science fair organization, budget narratives, ATI assessment review)

Science Teacher & BPS Science Department Teacher Leader 2005-2015

- BPS Science Department: Lead elementary and middle school curriculum trainings for district, participated in curriculum pilots and development
- John D. O'Bryant School of Mathematics and Science (2013-2014): Taught 7th-8th grade
- Nathan Hale Elementary (2008 – 2013): Taught PreK – 5th grade science classes; lead science-related professional development; organized school-wide science fair and events; founding advisor for environmental club
- Rafael Hernandez Two-Way Bilingual School (2005 - 2008): Taught PreK – 8th grade science classes; facilitated teacher inquiry group; manage middle school science fair

Boston Museum of Science, Boston, MA

Overnight Program Instructor 2003-2014

- Instructed 2nd – 7th grade participants in scientific inquiry based on museum exhibits

Current Science & Technology Program Presenter 2003

- Developed and delivered presentations on current science topics to museum visitors

Boston Teacher Residency, Boston, MA

2010-2013

Elementary Science Methods Instructor

- Taught elementary science methods course for BTR resident student teachers/University of Massachusetts, Boston, graduate students

University of Massachusetts at Boston, Boston, MA

Instructor 2008-2012

- Co-taught EEOS 510: Earth Science I, Weather and Water, graduate level course for in-service science teachers

Boston University, Boston, MA

2011

Secondary Science Methods Instructor

- Taught SC571: Science Materials: Principles, Design, & Construction

Boston College, Chestnut Hill, MA

Graduate Research Assistant, International Study Center 2010-2011

- Trends in International Mathematics and Science Study (TIMSS)

Teaching Fellow 2009-2011

- Taught ED 546: Teaching About the Natural World, for Masters level students
- Taught ED 109: Teaching About the Natural World, for undergraduate students

Supervisor of Student Teachers 2009-2010

- ED 152 & ED 153: Supervise pre-practicum student teachers

Graduate Research Assistant, Urban Ecology Institute 2008-2009

- Curriculum developer and instructional support for middle school urban ecology program

Wellesley College, Wellesley, MA

Instructor 2007-2008

- Taught EDUC 304: Curriculum and Instruction in Elementary Education, science section

Excel Academy Charter School, Boston, MA

Science Teacher 2004-2005

- Taught and developed curriculum for 6th grade; student research with Mass Audubon

San Mateo Outdoor Education Program, La Honda, CA

- Assistant Principal* 2001-2003
- Supervised and trained naturalist teachers, directed high school volunteer program
- Naturalist Teacher* 1999-2001
- Provided instruction and developed curriculum for 5th/6th grade students at residential outdoor school
- Castro Valley High School**, Castro Valley, CA
- General Science Summer School Teacher* 2003
- Taught 9th – 12th grade general science course; including biology, chemistry, physics and earth science

REFEREED JOURNAL ARTICLES

- Hashimoto-Martell, E. A. (under review). Inside the science classroom: Exploring science identities of elementary students of color.
- Hashimoto-Martell, E. A., Clinchot, M., Daniels, H. & Bennie, F. (2012). Across the city and across grades: Investigating energy flow in the Boston Harbor Ecosystem. *Science Scope*, 36(3), 39-42.
- Hashimoto-Martell, E. A., McNeill, K. L., & Hoffman, E. M. (2012). Connecting urban youth with their environment: The impact of an urban ecology course on student content knowledge, environmental awareness and responsible behaviors. *Research in Science Education*, 42(5), 1007-1026.

SELECTED CONFERENCE PAPERS & PRESENTATIONS

- Hashimoto-Martell, E.A., Daniels, H., Bennie, F. & Clinchot, M. (2013, April). *Reconfiguring the urban science experience: The power of diversity, social context, and the local environment*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico.
- Hashimoto-Martell, E. A., Daniels, H., Bennie, F. & Clinchot, M. (2012, April). *Vertical collaborative inquiry: Assessing elementary and middle school students' models of energy transfer in ecosystems*. Paper presented at the Annual Meeting of the American Educational Research Association, Vancouver, British Columbia.
- Hashimoto-Martell, E. A. (2012, March). *Building bridges across the borders: Elementary student conceptions of science*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Indianapolis, IN.
- Hashimoto-Martell, E. A. (2011, April). *Exploring science identities of elementary students of color*. Presented as part of the Invited Presidential Session, *Practitioner research: Counternarratives on practice* at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

- Hashimoto-Martell, E. A., McNeill, K. L., & Hoffman, E. M. (2010, May). *The Impact of an urban ecology course on students' scientific learning, environmental awareness and stewardship*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.
- Bennie, F., Clinchot, M., Hashimoto-Martell, E. A., Ripley, H. (2010, April). *Investigating how students use models to visually represent knowledge of energy transfer in an ecosystem*. Poster presented at the Boston Science Partnership Showcase, University of Massachusetts, Boston, MA.
- Douglas, E., Hashimoto-Martell, E. A., Balicki, S., Oglavie, D. & Fairbank, C. (2009, December). *Teaching science to science teachers: Lessons taught and lessons learned*. Presentation at the fall meeting of the American Geophysical Union, San Francisco, CA.

SELECTED WORKSHOPS/PROFESSIONAL DEVELOPMENT

- Hashimoto-Martell, E. A., Clinchot, M., & Mendillo, J. (2016, April). *Making the science curriculum culturally relevant*. Workshop accepted to be presented at the national conference of the National Science Teachers Association, Nashville, TN.
- Hashimoto-Martell, E.A., Clinchot, M., Daniels, H., & Bennie, F. (2014, April). *Reconfiguring the urban science experience: The power of diversity, social context, and the local Environment*. NARST Sponsored workshop presented the national conference of the National Science Teachers Association, Boston, MA.
- Hashimoto-Martell, E. A. (2013). *The young scientist in the elementary classroom*. Professional development series designed and presented for ACCEPT Education Collaborative in Needham, MA.
- Hashimoto-Martell, E. A. (2013, August) *Elementary science teaching in an urban context*. Guest speaker at the National Institute of Education, Singapore.
- Hashimoto-Martell, E. A. (2013). *Elementary science teaching: Engaging and connecting*. Guest speaker at the Academy of Singapore Teachers, Singapore.
- Hashimoto-Martell, E. A. & Ziminski, K. L. (2012, March). *Notebooking for meaning*. Workshop presented at the national conference of the National Science Teachers Association, Indianapolis, IN.
- Hashimoto-Martell, E. A. (2012, February) *Teacher research studies*. Guest speaker in Advanced Classroom Research class, Boston College, Chestnut Hill, MA.
- Ripley Daniels, H., Hashimoto-Martell, E. A., Clinchot, M., Bennie, F. (2011, March). *Vertical collaboration through using elementary and middle school student models to assess understanding of energy systems*. Workshop presented at the national conference of the National Science Teachers Association, San Francisco, CA.
- Hashimoto-Martell, E. A., Wells, D., & Ziminski, K. (2009, April). *Collaborative coaching and learning models in Boston Public Schools science*. Workshop presented at the national conference of the National Science Teachers Association, New Orleans, LA.

PROFESSIONAL SERVICES

Organizations and Conferences

Core member of the Science of Nature-based Learning Collaborative Research Network, NSF funded project housed at University of Minnesota (2015 to 2018)

Appointed Member, Committee on Research on Science Teaching, National Science Teachers Association (2016-2018)

Executive Board for Teacher as Researcher Special Interest Group of the American Educational Research Association (Chair, 2016 to present; Treasurer/Secretary 2014 to 2016)

Member of committee to draft Massachusetts State Environmental Literacy Plan, 2013 to 2014

Proposal Reviewer for the Annual Meeting for the American Educational Research Association: Science Teaching and Learning Special Interest Group, 2012 to present
Teacher as Researcher Special Interest Group, 2011 to present

Proposal Reviewer for the Annual Meeting for National Association for Research in Science Teaching, 2012 to present

CONSULTING

BPE, Boston, MA 2015

- Created performance-based tasks and curriculum maps for middle and high school science courses

Pearson Education, Boston, MA 2012

- Created and consulted on teacher designed video project connected to science textbooks for elementary, middle, and high school grades

Rose Fitzgerald Kennedy Greenway Conservancy, Boston, MA 2011

- Created and piloted field lessons for the Greenway to connect to Boston Public Schools science curriculum

Education Development Center, Newton, MA 2010

- Conducted literature search and ran Rasch analysis on count data from science teacher lesson observations. Worked with Dr. Larry Ludlow, Ph.D. to review analytic output and assist with writing of technical report.

TERC, Cambridge, MA 2009

- Acted as the advising teacher during design-stage of the research project, Accessing Science Ideas, to test the extent to which science specific enhancements support the scientific thinking

and understandings of students with verbal learning disabilities associated with executive function disorders.

Boston Schoolyard Initiative

2007-2008

- Pilot teacher and provided feedback on the development of *Science in the Schoolyard*, outdoor curriculum guides supported by the Lawrence Hall of Science, University of California, Berkeley, FOSS developers.

HEATHER G. PESKE, Ed.D.

EXPERIENCE

MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION, Malden, MA www.doe.mass.edu

Senior Associate Commissioner for Instructional Support (April 2016 - present)

- Manage a team of 40 people to reach outcome goals and increase student learning in Massachusetts;
- Manage work in the areas of educator effectiveness, preparation and development, licensure policy, curriculum and instruction, and supporting English Learners;
- Serve as a member of the Department's Executive Senior Leadership team;
- Examples of impact:
- Managed the consolidation of three teams into one coherent and effective Center for Instructional Support;
- Led a major revision of the History-Social Science Curriculum Framework; Board of Elementary and Secondary Education ("Board") unanimously approved the revisions;
- Managed ~\$35 million in federal grants and foundation grants distributed to districts to improve teacher effectiveness and promote better curriculum decisions;
- Managed licensure functions to reduce application-to-license timeline from 34 weeks to three and eliminated the backlog of licensure applications.

Associate Commissioner for Educator Effectiveness (February 2013 – March 2016)

- Led the implementation of the Commonwealth's Educator Evaluation Framework, including completion of the Model System. Supported 400 districts to use the Evaluation Framework to drive improvement in instructional practice.
- Managed the redesign of educator preparation program review for 80 educator preparation programs in the state to drive towards outcomes and evidence-based decisions. Secured \$3.8 million in foundation funding to support.
- Managed the development and implementation of the state's Equity Plan to ensure equitable access to effective teachers.
- Collaborated with other states to drive national policy change on educator effectiveness policies, such as the Chief State School Officers "Network for Transforming Educator Preparation."

TEACH PLUS, Boston, MA www.teachplus.org

Vice President for Programs (2009-present)

- Managed, designed and executed programs for over 200 teacher leaders to impact policy in six sites across the country.
- Managed mobilization of a network of nearly 7,500 teachers across six cities to inform and influence state and district policy to better retain effective teachers in urban schools.
- Led expansion of the teaching policy program from two to six sites in two years, from serving 30 teachers in the first year to 155 teachers in 2012.
- Managed a team of eight people in regional sites across the country.
- Served as part of a four-person Senior Leadership team building from start-up to nationally-recognized organization.
- Co-taught monthly sessions with teachers in four of six regional sites.

Independent Consultant (2008-2009)

Conducted projects such as: research study on program evaluation; measuring teacher impact in a teacher preparation program; strategic planning. Authored report on educator evaluation in charter schools [*featured in The New York Times*](#).

THE EDUCATION TRUST, Washington, DC www.edtrust.org

Director of Teacher Quality (2004-2008)

- Led project teams in three states and three districts over two years to analyze data on student access to teacher quality, completed public reports, and proposed policy solutions for national, state, and local governments.
- Results of report on teacher distribution featured in *The New York Times*.
- Served on the management team to develop and oversee the organization's strategic goals, align inter-organizational teams, troubleshoot management problems and chart the policy and political course.
- Managed the teacher quality team (2 staff).

HARVARD GRADUATE SCHOOL OF EDUCATION, Cambridge, MA

Research Associate, Project on the Next Generation of Teachers (1999-2004),

www.gse.harvard.edu/~ngt

- Co-author of the award-winning book, *Finders and Keepers: Helping New Teachers Survive and Thrive in Their Schools*, Jossey-Bass (2004).
- Initiated, with Professor Susan Moore Johnson, the [*Project on the Next Generation of Teachers*](#).
- Presented findings at the American Educational Research Association Annual Meetings, 2002, 2004, 2005.
- *Instructor*, "Practicum on Teacher Leadership" in partnership with the Boston Public Schools (2003-2004)
- *School Reform Coach*, Leadership Development Initiative (1998-2000)
- *Teaching Fellow* (1999-2004): Graduate-level courses in school reform, instructional change, and teachers unions.

TEACH FOR AMERICA, Houston, TX

School Director, Teach For America Summer Institute (1998, 1999)

- Managed staff of 15 faculty members in a summer school program to prepare 200 new teachers.

MINNESOTA CHILDREN'S MUSEUM, St. Paul, MN

School Services & Federal Grant Coordinator (1995-1997)

EAST BATON ROUGE PARISH SCHOOLS, LA

3, 4, 5th grade teacher, Audubon Elementary (1994-1995) Taught in one of the first full-time inclusion classrooms in the district (nine students with disabilities were included in the classroom full-time).

Ensured that all students attained proficiency on the state assessment.

4th grade teacher and Teach For America Corps Member, Dufrocq Elementary (1992-1994)

EDUCATION

Harvard University Graduate School of Education, Cambridge, MA

Ed.D. in Administration, Planning, and Social Policy, 2005.
M.Ed. in Administration, Planning, and Social Policy, 1998.

Kenyon College, Gambier, OH

B.A. with distinction, magna cum laude, Religion, 1992.

HONORS & AWARDS

Governor Paul Cellucci Award for Leadership & Mentoring in State Government, presented by Governor Charlie Baker for outstanding mentoring in the workplace, 2017.

Class Marshall, Harvard Graduate School of Education, 2005. Selected by peers.

Outstanding Writing Award, American Association of Colleges for Teacher Education, awarded for the book, *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools*, 2005.

Ed Meade Fellowship, Institute for Educational Leadership, 2004.

Herold Hunt Fellowship, Harvard University Graduate School of Education, 2004.

Model Dissertation Proposal, Harvard University Graduate School of Education, 2003.

Spencer Research Apprenticeship Grant, Harvard University Graduate School of Education, 2000, 2001.

Teacher of the Year, Dufrocq Elementary, Baton Rouge, LA, 1993.

Phi Beta Kappa, 1992.

Simpson Prize for distinguished work in Religion, selected by Kenyon College faculty, 1992.

Distinction, Senior Comprehensive Exercise, Kenyon College, 1992.

SELECTED PUBLICATIONS

Celine Coggins, Heather G. Peske, Kate McGovern, Eds. *Learning from the Experts: Teacher Leaders on Solving America's Education Challenges*. 2013. Harvard Education Press.

Celine Coggins and Heather Peske, "New Teachers are the New Majority." 2010. *Education Week*.

Available: <http://www.edweek.org/ew/articles/2011/01/19/17coggins.h30.html>

Morgan Donaldson with Heather G. Peske, "Supporting Effective Teaching through Teacher Evaluation: A Study of Teacher Evaluation in Five Charter Schools." 2010. The Center for American Progress.

Available: http://www.americanprogress.org/issues/2010/03/pdf/teacher_evaluation.pdf

Heather G. Peske and Kati Haycock, "Teaching Inequality: How Poor and Minority Students are Short-changed on Teacher Quality." 2006. The Education Trust.

Available: <http://www2.edtrust.org/NR/rdonlyres/010DBD9F-CED8-4D2B-9E0D-91B446746ED3/0/TQReportJune2006.pdf>.

Lead Author, with analysis by Richard Ingersoll, University of Pennsylvania. "Core Problems: Out of Field Teaching Persists in Key Academic Courses and High-Poverty Schools." 2008. The Education

Trust.

Available: <http://www2.edtrust.org/NR/rdonlyres/0D6EB5F1-2A49-4A4D-A01B-881CD2134357/0/SASSreportCoreProblems.pdf>.

Co-Author. "Their Fair Share: How Teacher Salary Gaps Shortchange Poor Children in Texas," 2007. The Education Trust. Available: www.hiddengap.org.

Lead Author. "Missing the Mark: An Education Trust Analysis of Teacher Equity Plans," 2006. Available: <http://www2.edtrust.org/NR/rdonlyres/5E2815C9-F765-4821-828F-66F4D156713A/0/TeacherEquityPlans.pdf>.

Susan Moore Johnson, Sarah E. Birkeland, Heather G. Peske, 2005. "Life in the Fast Track: How States Seek to Balance Incentives and Quality in Alternative Teacher Preparation Programs," *Educational Policy*, 19(1), pp.63-89.

Co-author, *Finders and Keepers: Helping New Teachers Survive and Thrive in Their Schools*, Jossey-Bass, 2004.

Ed Liu, Susan Moore Johnson, Heather G. Peske, 2004. "New Teachers and the Massachusetts Signing Bonus: The Limits of Inducements," *Educational Evaluation and Policy Analysis*, 26(3), pp. 217-236.

Heather G. Peske, et al., 2001. "The Next Generation of Teachers: Changing Conceptions of a Career in Teaching," *Phi Delta Kappan*, 83(4), pp.304-311.

SELECTED PRESENTATIONS

U.S. House of Representatives Committee on Education and the Workforce, testimony, hearing on "Exploring Efforts to Strengthen the Teaching Profession," February 27, 2014.

U.S. Department of Education, Teaching Ambassador Program, Keynote Panelist, 2008.

Appalachia Regional Comprehensive Center Webcast Panelist, "Highly Effective Teachers: More than Highly Qualified," June 26, 2008.

Battelle for Kids Annual Conference, Keynote Panelist, "Teacher Quality and Value Added Analysis," 2007.

The Education Trust National Conference, "Teaching Inequality: How Poor and Minority Students are Shortchanged on Teacher Quality," 2007.

National Center for Education Statistics Summer Data Conference, "Teaching Inequality: How Poor and Minority Students are Shortchanged on Teacher Quality," 2006.

National Council on Teaching and America's Future Annual Meeting. "Emerging Issues Exchange," 2006.

The American Educational Research Association Annual Meeting, "'Faculty are the Backbone': Quality Control in Connecticut's Alternative Route to Certification," 2003.

SELECTED PAST AND CURRENT PROFESSIONAL AFFILIATIONS

The Alliance for Excellence Education, Teacher Quality Advisory Board, 2006-2008.

The Hechinger Institute on Education and the Media, Teachers College, Columbia University, Consultant to the Joyce Fellows Program, 2007-2008.

Teach For America, "One Day" Alumni Magazine, Advisory Board, 2007-2008.

Ed Action Steering Committee, volunteer organization running campaigns for excellent candidates for Washington, DC School Board, 2005-2007.

Center for Research, Evaluation, and Advancement of Teacher Education Advisory Board for the Texas A&M University System, the Texas State University System and the University of Texas System, 2005-2008.

U.S. Department of Education, Teacher Quality Advisory Board, 2007.

Harvard Educational Review, Editorial Board, Solicitations Manager, 2000-2002.

Komal Bhasin

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komal.bhasin@post.harvard.edu

86 Lancaster Road
Arlington, MA 02476

WORK EXPERIENCE

Massachusetts Department of Elementary and Secondary Education, Malden, MA

Senior Associate Commissioner, Kaleidoscope Collective

November 2019

to present

- Design and launch the Kaleidoscope Collective, a statewide initiative focused on the implementation of Deeper Learning as a vehicle to close achievement gaps across the Commonwealth and prepare students for post-secondary success.
- Develop tools, frameworks and trainings to support schools in implementing Deeper Learning and enlisting community voice and buy-in to school redesign efforts
- Provide professional development and onsite coaching to a diverse coalition of schools to pilot the work and measure the effectiveness.
- Develop and execute a strategy for statewide scaling of lessons learned from the pilot
- Serve as a member of the Commissioner's Executive Senior Staff

Lawrence Public Schools, Lawrence, MA

Principal, UP Academy Leonard Middle School

August 2013 to

November 2019

- Lead a full school turnaround of one of the lowest performing schools in the state, in a fully unionized, district, public school (96% free lunch, 95% Hispanic/Latinx, grades 6-8)
- Lead students to achieve the highest math SGP of any standalone middle school in the state (spring 2019).
- Lead school to Level One status, based on improvements to behavioral climate and academic gains, including scoring #4 in the state for growth in ELA and #2 in the state for growth in Math, based on MCAS SGP in spring 2015
- Develop an engaged, positive school climate; reducing suspension rate by 92% through implementation of restorative justice protocols within the school
- Retain over 85% of staff annually for 5 consecutive years

Principal in Residence, UP Education Network

August 2012 to

July 2013

- Build community & family relationships, author school-design plan for full school turnaround, hire staff of 50
- Plan and execute the network's first Educators of Color Leadership Conference (200 attendees from all over MA)
- Design and lead trainings for network staff on recruiting and hiring a diverse staff, support the launch of network-wide goals regarding Diversity, Inclusivity and Equity.

Excel Academy Charter Schools, Boston, MA

Principal, Excel: East Boston

August 2008-July

2012

- Lead the highest performing middle school in Massachusetts (78% free lunch, 75% Hispanic/Latinx, Grades 5-8)
- In 2011, lead the school to 100% passing rate (ELA & Sci), 99.5% passing rate (Math), and overall 90.3% Advanced/Proficient rate on MCAS Exam
- Manage, coach and lead professional development for all instructional staff, creating and implementing systems for effective support and evaluation, retaining 100% of core academic teachers in 09-10 school year

Dean of Curriculum and Instruction, Excel: East Boston

August 2007-July

2008

- Develop systems for instructional support of teachers, including school-wide professional development, data analysis, and observation/feedback systems.
- Create school-wide academic support and remediation programs
- Develop school-wide systems for managing Special Education and ELL compliance

KIPP: New Orleans, New Orleans, LA

Founding Middle School Leader, KIPP: McDonogh15

February 2006-

June 2007

- Co-wrote and defended charter for turnaround preK-8th grade school (98% free-reduced lunch, 97% African American)
- Led school to be the highest-performing open-admission public school in New Orleans, based on state LEAP test results. Students grew from 21st to 80th national percentile ranking in math.
- Recruited and trained 35 teachers, created and implemented school-based system of rules and consequences, and created curriculum for students in grades 5-8. Served as disciplinary, operational and instructional leader for staff in grades 5-8.

Founding Middle School Leader, New Orleans West College Prep

August 2005-

June 2006

- Co-Founded a K-8 School for homeless students (100% free lunch, 100% African American,) in the aftermath of Hurricane Katrina
- Led a team of first and second year teachers to achieve significant academic gains in ELA & Math; 6th grade students grew from 3rd grade level to 9th grade level in math, based on the Stanford 10 test of achievement.
- Served as disciplinary, operational and instructional leader for staff in grades 5-8.

Founding Science Teacher, KIPP: Phillips Academy

June 2005-

August 2005

- Worked on a team to execute a full school turnaround for low performing public middle school, until school (and surrounding neighborhood) was destroyed by Hurricane Katrina

John Ory Middle School, LaPlace, LA

6th, 7th and 8th grade Science Teacher

June

2003-June 2005

- Lead 100% of students (general, students with disabilities and ELLs) to pass the high-stakes Science LEAP test
- Participated in Teach for America, a national service corps of recent college graduates who commit 2 years to teach in public schools.

PRESENTATIONS AND PUBLICATIONS

Full-day Training, “Liderando Cultura de Estudiantes,” [Leading Student Culture] One World/Relay Graduate School of Education/ISFODOSU, Dominican Republic, Summer 2019

Full-day Training, “Leading Student Culture,” Relay Graduate School of Education, multiple sessions in Washington, DC and Atlanta during 2019.

Workshop, “Schools to Learn from: Staff Culture, Training Novice Teachers, and Retaining Staff,” Teach for America/The Management Center Principal Training Program, Winter 2019

Co-Author, Chapter 11: School Systems and Trauma, published in Beyond PTSD : Helping And Healing Teens Exposed To Trauma, Gerson and Heppell, editors. Washington, DC : American Psychiatric Association Publishing, [2019]. 1st ed.. 1 v. (3305532)

Ed Talk, “Staff Satisfaction: Getting at the Root of Problems” The Collective School Leader of Color Conference, Winter 2017

Workshop, “How to Lead Effective School Climate” UP Education Network, Dean Preparatory Academy, Fall 2015.

Workshop, “Leading with Influence” UP Education Network, Summit, Summer 2015.

Workshop, “Leading an Effective School Climate Turnaround,” Leading Educators, Spring 2015
Workshop, “Making your Voice Heard as an Educator of Color in a Predominately White Setting,” various settings, including The Collective School Leader of Color Conference, 2015 and 2017
Workshop, “Cultural Competence in Recruitment” UP Education Network, Dean Preparatory Academy, Fall 2015.
Workshop, “Building a Strong School Culture” KIPP School Leadership Program, Summer 2010, 2011, 2012
Workshop, “Key Components of a Strong Instructional Program” Building Excellent Schools Weekend Warrior, Winter 2011

MASSACHUSETTS LICENSURE

Principal/Assistant Principal (5-8), Professional Status
English as a Second Language (5-12), Initial Status
SEI Endorsement

AWARDS & RECOGNITION

Cohort V: Leverage Leadership Fellowship / Relay Graduate School of Education. Awarded “Platinum Distinction” (2018-19 SY)
Selected for Massachusetts Principal Advisory Cabinet (2018, 2019)
National Finalist – Sue Lehmann Award for Excellence in Teaching (2005)
Japan Fulbright Memorial Fund Scholar (2005)
John L Ory Teacher of the Year (2004)
The New Orleans Saints Teacher of the Year (2004)
Derek Bok Prize for Distinction in Chemistry Teaching at Harvard (2003)

LANGUAGES

Spanish Proficiency: Conduct disciplinary and academic meetings in Spanish, lead trainings and family meetings in Spanish, translate written documents into Spanish.

EDUCATION

Harvard University, Cambridge, MA

AB, Magna Cum Laude, in Neurobiology, with certificate in Mind, Brain and Behavior, conferred in June 2003
Honors Thesis: *A Biochemical Characterization of the Protein Torsin A*

Michol Stapel

PROFESSIONAL EXPERIENCE

Associate Commissioner for Student Assessment, November 2015 to present

Administrator for Publications and Test Administration, July 2012 to November 2015

Publications Coordinator, August 2010 to July 2012

Publications Specialist, January 2005 to August 2010

Office of Student Assessment, Massachusetts Department of Elementary and Secondary Education
Malden, Massachusetts

Current responsibilities

- Direct the overall management of the state's assessment systems as required under state and federal laws, including the Massachusetts Comprehensive Assessment System (MCAS), the MCAS Alternate Assessment, ACCESS for ELLs, NAEP, and PISA. Manage all aspects of these programs from item development through production, delivery, administration, scoring, and reporting.
- Oversee the budget and spending plan for Student Assessment, including multiple contractors, with an annual budget of approximately \$40M.
- Ensure the integrity of test administration to over 500,000 students across the Commonwealth and manage the provision of training and technical assistance to local school officials, test coordinators, and teachers.
- Ensure the technical integrity of the program, including acting as chair of the MCAS Technical Advisory Committee, overseeing standard setting events, developing and implementing a research agenda, and preparing submissions for federal peer review.
- Manage a team of more than 35 staff members; work collaboratively with the agency leadership and with staff members throughout the Department.
- Oversee the development and implementation of major policy and programmatic decisions and changes, including the ongoing transition to full computer-based testing throughout the Commonwealth.
- Develop and manage the RFP process and negotiate contract awards.
- Enforce the requirements of the contracts and oversee the work of the testing contractors to ensure the quality and timeliness of all deliverables.
- Engage in strategic planning, hiring decisions, resource allocation, and related activities; develop and make presentations to the Board of Elementary and Secondary Education, as well as advocacy and stakeholder groups.
- Establish editorial standards for the Office of Student Assessment.
- Communicate the department's policies and initiatives through letters, memos, presentations, and other documents.

Senior Assistant to the Associate Commissioner for Academic and Student Affairs

Rhode Island Office of Higher Education

Providence, Rhode Island

September 2000 to December 2004

- Provided professional staff support to the associate commissioner and the Board of Governors for Higher Education (prepared meeting materials; conducted research and produced reports; staffed standing committees, ad hoc committees, and special groups convened by the board and/or the governor).
- Produced office publications (newsletters, reports, conference programs, promotional materials, etc.).
- Assisted in planning and coordinating conferences, speakers, and other events sponsored by the board on topics such as student assessment, academic technology, and student leadership.
- Gathered, interpreted, and disseminated academic, student, and other data. Served as statewide coordinator for IPEDS (Integrated Postsecondary Education Data System) federal data collection. Maintained databases and prepared annual reports on admissions, enrollment, and retention.
- Managed a Title II grant program that provided professional development to educators through partnerships with higher education (developed RFPs, reviewed and awarded grants, conducted site visits, interpreted and applied federal regulations).
- Reviewed and evaluated certificate and degree programs at the public institutions of higher education and at independent institutions of higher education seeking to operate in Rhode Island.
- Attended professional conferences and meetings related to Title II and IPEDS. Represented the associate commissioner at meetings and events.

Research Assistant

South Carolina State Department of Education

Columbia, South Carolina

March 2000–August 2000

- Working in the Office of Professional Development, assisted in administering and monitoring the EIA Teacher Grant Program and the Robert C. Byrd Scholarship Program.
- Reviewed and determined eligibility of grants; wrote and edited letters for distribution to awardees. Updated and revised extensive databases for both programs; designed and printed reports.
- Revised, edited, and proofread reports on teacher and school visits, as well as other documents for dissemination at conferences and other departmental events.

Administrative and Research Assistant

Argonaut Partners, L.L.C.

San Francisco, California

August 1997–March 1998

- Researched business and industry personnel and company information through various sources including onsite reference materials, the Internet, and the client databases. Generated, updated, edited, and proofread candidate profiles, correspondence, and other office documents.

Legal Assistant

Suggs & Kelly Lawyers, P.A.

Columbia, South Carolina

May 1996–August 1997

- Composed, revised, edited, and oversaw the distribution of newsletters and case updates. Entered, updated, and organized information in files and in the client database. Prepared legal documents, reviewed cases for litigation potential, and filed claims.

EDUCATION

M.F.A. in Creative Writing, 2000

Antioch University Los Angeles, Marina del Rey, California

B.A. in English, 1996

Tulane University, New Orleans, Louisiana

Honors: full-tuition scholarship; graduated cum laude, Phi Beta Kappa

Daniel J. Wiener

EXPERIENCE

Massachusetts Department of Elementary and Secondary Education

Administrator of Inclusive Assessment (2007-present)

Manage all statewide assessment programs and policies for students with disabilities and English learners, including staff, contracts, professional development, accommodations policies, accessible test formats (Braille and electronic text reader), and alternate assessments for students with disabilities; and English language proficiency testing (reading, writing, listening, and speaking) for students with limited English proficiency. Chair, PARCC Technical Working Group on Accessibility, Accommodations and Fairness; and Chair, WIDA Accessibility, Accommodations, and Equity Subcommittee (2011-present).

Received Governor's "Pride in Performance" Recognition Award (2001, 2004, and 2014).

State Assessment Coordinator for Special Populations (1998-2007)

Developed and disseminated state testing policies for students with disabilities on the Massachusetts Comprehensive Assessment System (MCAS). Coordinated development and implementation of statewide *accommodations* policies and an *alternate assessment* program for students with significant disabilities; conducted annual training of more than 4000 educators; convened statewide advisory committee and teacher training network; oversaw \$8.7 million alternate assessment contract and \$16.2 million English proficiency assessment contract.

Instruction and Curriculum Specialist (1993-1998); Special Education Program Specialist (1991-1993)

Extensive familiarity with and experience in:

- *Special Education*: Specialized in inclusive programming, grant administration, regulation, problem resolution, program monitoring, and technical assistance to school districts, educators, and parents.
- *School Restructuring*: Coordinated school-based planning and restructuring grant program (160 schools); collaborated with *Harvard University Project Zero* to promote use of student portfolios and project-based learning in urban public schools.
- *State Curriculum Frameworks*: primary role in creating statewide curriculum guidelines and learning standards for arts education; developed strategies to promote involvement by students with disabilities in standards-based education

Education and Training Coordinator - Arts and Special Education (1982-1993)

Managed and implemented statewide program to use the arts to develop skills and promote inclusion of students with disabilities. Responsible for planning and conducting statewide training for educators and parents, and large annual arts education festivals. Supervision of

staff, program management, disability awareness training, managing budgets and contracts, recruitment and hiring.

Piedmont Center for the Arts, Inc., Worcester, MA

Arts Program Coordinator/Community Craft Studio Manager (1975-1982)

Supervised delivery of affordable arts and enrichment programs to city residents, with emphasis on urban, disadvantaged, disabled, and court-referred youths.

- Developed inner-city neighborhood-based arts education center with funds generated from local businesses and charitable foundations.
- Planned and conducted more than 300 large outdoor neighborhood celebrations for *Summer's World*, a city-wide summer multi-cultural arts program; hired, supervised seasonal program staff.

RELATED EXPERIENCE

Chairperson, PARCC Technical Working Group on Accessibility, Accommodations, and Fairness

Coordinated the work of a group of national experts to develop accessibility and accommodations policies for emerging student assessment consortium, the Partnership for Assessment of Readiness for College and Careers. One of four lead writers of *PARCC Accessibility and Accommodations Manual* (2013).

Chairperson, WIDA Accessibility, Accommodations, and Equity Committee

Coordinated state members of the Worldwide Instructional Design and Assessment (WIDA) consortium to develop accessibility and accommodations policies for emerging computer-based assessments for English learners. Co-lead writer of *ACCESS for ELLs 2.0 Accessibility and Accommodations Manual* (2014).

Studio Artist (1971 - present)

Design, produce, market, and exhibit handmade functional and sculptural art pottery. Skilled at wheel-throwing, hand-building, glaze chemistry, gas and electric kiln-firing, and studio management. Numerous one-person and group exhibits and annual sales events since 1975; represented by galleries in the Boston area. Web Page: www.wienerwarepottery.com

Chairperson, Board of Directors (1986-1992)

Mudflat Pottery Studio, Somerville, MA

Recruited and hired executive director, revised bylaws, rewrote policies and procedures, managed corporate agenda at monthly Board meetings; maintained private production studio within pottery cooperative and school.

Ceramics Studio Director and Instructor (1983-1985)

Project Arts Center, Cambridge, MA

Managed ceramics instructional programs at neighborhood arts facility; provided weekly instruction to adults and children; supervised professional staff; designed course offerings.

Founding Member (1980-1982)

Grove Street Gallery Worcester, MA

Member of Board of Directors; filed incorporation and tax exemption papers. Participated in renovation of industrial space to accommodate studios and gallery.

EDUCATION

B. A., Clark University – Geography. Additional study in: education, visual arts, psychology, anthropology

PUBLICATIONS

Creating Accessible PARCC Reading Assessments: Separating the Constructs and Providing Text-to-Speech Accommodations for Students with Disabilities, Daniel Wiener and Martha Thurlow, Achieve, Inc. Washington, DC, 2013

Alternate Assessment for Students with Significant Cognitive Disabilities: An Educator's Guide (Foreword)

Harold L Kleinert, H. L. and Kearns, J. F. Brookes Publishing Co., Baltimore, MD, 2010

Alternate assessments based on alternate achievement standards: policy, practice, and potential (Chapter: *Alternate assessment in Massachusetts: approaches and validity*), Daniel J. Wiener and Charles A. DePascale. Brookes Publishing Co., Baltimore, MD: 2009

How states use assessment results to improve learning for students with disabilities (Chapter: *Large-scale assessment and accommodations: what works*), Educational Testing Service, Princeton, New Jersey, 2007.

Alternate assessments measured against grade-level achievement standards: The Massachusetts "Competency Portfolio" (Synthesis Report 59). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes, 2006.

One state's story: Access and alignment to the grade-level content for students with significant cognitive disabilities (Synthesis Report 57). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes, 2005.

Massachusetts: One state's approach to setting performance levels on the alternate assessment (Synthesis Report 48. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes, 2002.

Educator's Manual for the MCAS Alternate Assessment, Massachusetts Department of Elementary and Secondary Education, updated annually 2001-2014.

Resource Guide to the Massachusetts Curriculum Frameworks for Students with Significant Disabilities, co-author, Massachusetts Department of Education, 2001; revised 2006, 2012, 2013.

Requirements for the Participation of Students with Disabilities in MCAS: A Guide for Educators and Parents, co-author, Massachusetts Department of Elementary and Secondary Education, updated annually 1998-2014.

Guidelines for Scoring Student Portfolios, co-author, Massachusetts Department of Elementary and Secondary Education, updated annually 2001-2014.

MCAS Alternate Assessment (MCAS-Alt): State Summary of Participation and Performance, co-author, Massachusetts Department of Education, updated annually 2001-2012

Considerations in the use of non-approved test accommodations, Martha Thurlow and Daniel J. Wiener, Assessment for Effective Intervention, Council for Educational Diagnostic Services, 2001.

Robert C. Curtin



EDUCATION

Massachusetts Education Policy Fellowship Program (EPFP), May 2008

Institute for Educational Leadership – Washington, DC and Northeastern University – Boston, MA

Master of Arts, Political Science, May 2001

Northeastern University – Boston, MA

Bachelor of Arts, Government, May 1999

Clark University – Worcester, MA

PROFESSIONAL EXPERIENCE

Massachusetts Department of Elementary and Secondary Education

Malden, MA

Associate Commissioner, Data and Accountability

August 2016-present

Director, Center for School and District Accountability
2016

October 2014-August

Director, Education Data Services
2016

June 2011-August

Manager, Data Analysis and Reporting
2011

February 2008–June

Supervisor, Data Analysis and Reporting
February 2008

February 2004–

- Serve as the Associate Commissioner for Data and Accountability that has responsibility for oversight of four teams leading the district/school accountability and data collection/analysis functions of the agency.
 - The Data Collection office supports the data collection efforts of the Department from 400 public school districts and nearly one million students and 80,000 educators that are collected multiple times per year.
 - The Data Analysis and Reporting group which is responsible for the majority of federal and state reporting for the Department and developing analyses needed to policy development at the Department.
 - The District and School Accountability office which is responsible for implementation of the Department's district and school accountability system

- The District Reviews and Monitoring office which is responsible for conducting up to 20 comprehensive district reviews per year focused on district structures and systems
- Manage 25 state employees that are members of the unit and oversee the work of over 40 contractors employed by the unit to assist in completion of district accountability reviews
- Serve as the Massachusetts Coordinator for Federal data reporting – through EdFacts and the Consolidated State Performance Report – resulting in consistent recognition from the U.S. Department of Education for Massachusetts as a leader in timely and accurate reporting
- Represented the Department on a number of key national stakeholder groups, including:
 - *Chairperson*, Education Information Management Advisory Consortium (EIMAC) General Statistics Standing Task Force for the U.S. Department of Education, January 2009–014
 - Advisory Board Member, Schools Interoperability Framework Association (SIFA), January 2012 - 2016
 - *Appointed Member*, EIMAC General Statistics Standing Task Force for the U.S. Department of Education, October 2005–January 2009
 - *Advisory Board Member*, Just for the Kids – Massachusetts, October 2004–October 2009
 - *Chairperson*, EIMAC General Statistics Subcommittee for the Council of Chief State School Officers (CCSSO), May 2006–May 2008
 - *Member*, National Center for Education Statistics Task Force on Dropouts and Completers, February 2004–July 2005
- Co-authored the successful application for a \$7.0 million 2015 Federal Longitudinal Data System (LDS) grant, a \$13.1 million 2009 American Recovery and Reinvestment Act LDS grant and a \$6.0 million 2008 LDS Grant. All three grants were designed to improve the collection and analytical capabilities at the Department and to provide resources for data-driven instruction in Massachusetts school districts.

Massachusetts Department of Elementary and Secondary Education

Malden, MA

Title I Data Analyst
2004

January 2002–February

- Conducted data analysis and wrote annual dropout data reports and grade retention data reports
- Provided technical assistance to Department staff and school districts on Federal Title I data, dropout data, and grade retention data
- Responded to numerous data requests from internal and external constituents

The Center for Comparative Democracy, Northeastern University

Boston, MA

Research Analyst
June 2001

September 1999–

- Served as a research analyst in the development of many projects including four manuscripts published by Dr. William Crotty

- The Politics of Presidential Selection (2000)
- Ireland on the World Stage (2001)
- America's Choice 2000: Entering a New Millennium (2001)
- The State of Democracy in America (2001)

TECHNICAL SKILLS

- Proficient with Microsoft Office Programs – Word, Excel, PowerPoint, and Access
- Proficient with the Statistical Package for the Social Sciences (SPSS)
- Proficient with the Cognos Data Warehousing Tools

Robert Lee

PROFESSIONAL EXPERIENCE

- 2005 to Present Dept. of Elementary and Secondary Ed. Malden MA
Chief Analyst; PARCC Coordinator (2013-2015)
Manager of the team of analysts responsible for producing all MCAS, NAEP, TIMSS and English Language Learner proficiency testing reports
Oversaw Standard Setting, scaling and vertical articulation of results for Next Generation MCAS testing in grades 3-8
Chair of the PARCC Ad hoc committee on score reporting; member PARCC Field Test Technical Team; Ad Hoc Committee on Growth, Research and Development and Standard Setting Advisory Committee
Developer of the state's growth model: Student Growth Percentiles
Lead technical advisor on the MCAS and WIDA-ACCESS for ELLs contracts responsible for reviewing IRT and test equating work
Lead efforts to reform the test equating process to allow for greater accuracy in MCAS reporting
Developed numerous innovative ways to manage transitions as the state moved from 4, 8 and 10th grade testing to 3-8 and 10th grade testing
- 2001-2005 Department of Education Malden MA
Analyst/Database Manager
Designed the Massachusetts Adequate Yearly Progress system, which pioneered the use of an index system instead of percent proficient
Integrated MCAS data with SIMS data to establish the databases used for the state accountability and Competency Determination systems
Designed Annual Measurable Achievement Objectives for programs serving English language learners
Lead the team of analysts providing regular updates to the commissioner and board of education on the effects of the new Competency Determination policy
- 1988-1999 Patriot Ledger/Baltimore SunQuincy MA/Baltimore MD
Reporter
Daily beat reporter covering crime, politics and local government
Author of 2,500 daily news stories
AP award winner for spot new coverage

Covered McDuffy vs. Robertson case and the subsequent passage of the Education Reform Act of 1994

EDUCATION

- 2008 Completed coursework in IRT and test equating taught by Ron Hambleton at UMASS and designed for government employees.
- 1999-2000 Harvard Graduate School of Education Cambridge MA
EdM. Research Methods and Statistics
Studied Hierarchical Linear Modeling, Regression, questionnaire design
Studied the history of education reform under Prof. Paul Reville
Interned at the Department of Education
- 1998-1999 UMASS -Boston Boston MA
30 credits study in Teacher Education program
Coursework focused on constructivism in secondary science education
Worked as a full-time substitute and Alternative Education teacher for Canton Public Schools
- 1985-1989 Johns Hopkins University Baltimore MD
B.A. The Writing Seminars
Journalism and public policy focus, graduated with departmental honors
30 credits of Biology coursework
Captain of the 1989 Division III national champion fencing team
Completed four internships at the Baltimore Sun and Baltimore Magazine

ADDITIONAL PROFESSIONAL ACTIVITIES

Advisor to the Georgia Department of Education's Race to the Top Growth Model Committee

Staff liaison to the Massachusetts Educator Evaluation Task Force

Member since 2010 of the Missouri Growth Technical Advisory Committee

Member since 2006 of the National Blue Ribbon Advisory Committee responsible for choosing Blue Ribbon Schools for the Department of Education

Member since 2011 of the Mississippi Assessment Technical Advisory Committee

Sheika (Shay) Edmond

sedmond@doe.mass.edu

81 Russ Street
Randolph MA, 02368
(617) 892-0033

EDUCATION

Boston University

Master of Education: Policy, Planning and Administration
Specialization: Higher Education Administration

**Boston, MA
December 2008**

Curry College

Bachelor of Arts: Politics and History
Minor: Criminal Justice
Graduated with Honors: Cum Laude

**Milton, MA
May 2005**

PROFESSIONAL EXPERIENCE

Massachusetts Department of Elementary and Secondary Education

Associate Commissioner, Center for Strategic Initiatives

**Malden, MA
November 2019 – Present**

- Lead high priority, cross agency, strategic initiatives to improve outcomes for historically underserved students.
- Lead, design, develop, and implement programs and initiatives to support the Department of Elementary and Secondary Education's priority to diversify the Commonwealth's educator workforce.
- Provide administrative, programmatic, and fiscal oversight to the \$26 million-dollar state-funded Metco program.
- Oversee the implementation of the inaugural, \$6 million-dollar teacher diversification pilot program grant.
- Provide leadership and oversight to the Board of Elementary and Secondary Education's Racial Imbalance Advisory Council.

Massachusetts Department of Elementary and Secondary Education

Director of Student Equity Initiatives

**Malden, MA
November 2018 – November 2019**

- Lead Department administration, programmatic support, and fiscal oversight of the \$26 million-dollar state-funded Mecto program for thirty-five participating school districts.
- Successfully lead the Department of Elementary and Secondary Education's efforts to develop the first Boston Metco Admissions Policy Guidelines to support increased transparency and equitable access for eligible Boston students.
- Successfully lead the Department of Elementary and Secondary Education's efforts to revise the Boston Mecto application to support increased transparency and equitable access for eligible Boston students.
- Oversaw the service contract with Metco, Inc. to ensure sufficient administration of services related to transportation, student support services, and provision of culturally responsive professional development for participating Metco districts.

- Lead, developed, and supported other Center for Educational Options initiatives to support diversity, equity, racial equity, and inclusion goals.
- Provided support and oversight to the Board of Elementary and Secondary Education's Racial Imbalance Advisory Council.
- Lead, developed, and supported Commissioner Office projects related to diversity, equity, and inclusion.

Massachusetts Department of Elementary and Secondary Education

Malden, MA

Coordinator of School Redesign and Innovation Schools

November 2017 – November 2018

Education Specialist, Innovation Schools, Charters Schools, and School Redesign

August 2012 – November 2017

School Redesign

- Facilitated internal student learning time regulations, time on learning waiver request system, and alternative structured learning day programs policy discussions.
- Effectively coordinated the Massachusetts time on learning waiver application review process, including the implementation of onsite visits.
- Provided technical assistance related to Massachusetts student learning time regulations, time on learning waiver request system, and alternative structured learning day programs.
- Developed student learning time summary documents for senior leadership, including Commissioner of Elementary and Secondary Education.
- Developed policy guidance documents related to alternative structured learning day programs.
- Maintained the student learning time waiver and alternative structured learning day programs webpages.
- Coordinated the FY19 Metropolitan Council for Educational Opportunity (METCO) grant cycle, including development of the comprehensive request for proposals.
- Supported the identification of state level policy considerations related to the implementation of the Metco program.
- Developed Metco summary documents for senior leadership and external stakeholders.
- Lead planning efforts for the fall 2018 Metco retreat.

Massachusetts Innovation Schools

- Coordinate all aspects of the Massachusetts innovation schools initiative.
- Propose policy to inform Massachusetts innovation schools discussions and decision making.
- Develop annual legislative report and coordinate submission to Massachusetts state legislature.
- Provide comprehensive technical assistance related to authorization and renewal of Massachusetts innovation schools.
- Develop and update Massachusetts innovation schools guidance and memoranda documents.
- Develop high impact request for proposals to provide state level fiscal support.
- Coordinate and implement competitive grant review processes.

Sheika (Shay) Edmond (page 2)

- Develop summary documents for senior leadership, including Commissioner of Elementary and Secondary Education.
- Coordinate submission of annual evaluations from participating districts and schools.

Charter Schools

- Serve as liaison to cohort of 18 charter schools.
- Lead onsite charter school accountability visits.
- Monitor and assess charter school performance in accordance to the Massachusetts Charter School Performance Criteria.
- Review and analyze charter school data to inform decision making.

- Develop high quality charter school accountability reports.
- Annually monitor charter school performance in relation to objectives and measures identified in individual accountability plans.

Massachusetts Department of Elementary and Secondary Education

Malden, MA

Education Specialist, Public Two-Year Colleges and School Districts

January 2008 – August 2012

- Oversaw public two-year colleges and school district compliance to Federal Perkins Act and applicable Massachusetts general laws.
- Conducted Federal civil rights and coordinated program reviews and prepared formal reports.
- Negotiated annual performance levels for public two-year colleges and school districts in accordance with Federal policies.

Massachusetts College of Pharmacy and Health Sciences University

Boston, MA

Student Affairs and Black Student Union Advisor

July 2005 – January 2008

- Served as a judicial hearing officer, as part of the leadership team, for violations to the student code of conduct and imposed sanctions in accordance with student discipline policies.
- Participated in weekly judicial affairs leadership meetings to discuss student discipline hearings and student progress towards sanction completion.
- Lead revisions to the student code of conduct.
- Developed and maintained internal database to track judicial related affairs.
- Responded to emergency situations and implemented effective crisis management protocols.
- Conducted presentations to families, students, and applicable stakeholders on the Federal Educational Rights and Privacy Act.
- Served as the staff advisor to the Black Student Union.
- Developed and implemented programming to support the holistic development of students of color and first-generation college students.
- Supervised a staff of eight residence life team members.
- Coordinated and executed annual student affairs trainings for university staff.
- Oversaw planning, implementation, and evaluation of living and learning community educational programming.

Ventura Rodríguez, Jr., Ed.L.D.

EDUCATION

Harvard Graduate School of Education, Cambridge, MA

Doctor of Education Leadership (Ed.L.D.)

May 2015

California State University, College of Education, Hayward, CA

Principal Leadership Credential (New Leaders for New Schools)

May 2008

San Francisco State University, School of Education, San Francisco, CA

Master of Arts in Education

June 2002

University of San Francisco, College of Arts and Sciences, San Francisco, CA

Bachelor of Arts in History

December 1997

PROFESSIONAL EXPERIENCE

- **Massachusetts Department of Elementary and Secondary Education (ESE), Malden, Massachusetts**

- *Associate Commissioner, Statewide System of Support*
2017 – present

November

-

- Direct and set policy for Massachusetts' assistance strategy to strengthen the state's lowest performing schools and districts.
- Lead the strategic redesign of the state's assistance delivery systems, which includes reviewing and improving the structures, resources, strategies, and implementation of the systems to address the needs of low performing schools and districts.
- Lead the development, management, prioritization and oversight of the federal and state budgets and other financial matters for the Statewide System of Support.
- Lead the integration and alignment of the assistance provided through the five offices within the Statewide System of Support, ensuring high quality and coordinated implementation, and equitable distribution of resources and supports for the state's lowest performing districts and schools.

-

- ***Previous Roles***

- *Director, Office of Strategic Transformation*
October 2017

July 2016 –

- *Special Assistant to the Commissioner, District and School Turnaround*
June 2016

July 2014 –

-
- **St. HOPE Leadership Academy Charter School, Harlem, New York**
- *Executive Director and Founding Principal* *January 2008 – August 2012*
-
- Served as the founding principal and Executive Director of a charter middle school with 350 students and a staff of 35 employees.
- Raised the school's overall performance ranking from the 12th to the 73rd percentile of comparable middle schools in New York City, as measured by the Department of Education's Annual Progress Report.
- SHLA was named a New York State School of Character by the Academy for Character Education at The Sage Colleges, for prioritizing the social, emotional, and character development of its students.
- Managed a yearly budget in excess of six million dollars and raised over \$1.5 million dollars to support the school's launch and ongoing operation.
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-
-
-
- **Sacramento High School (St. HOPE Public Schools), Sacramento, California**
- *Resident Principal (New Leaders for New Schools Fellow)/Staff Developer* *June 2006 – January 2008*
-
- Served as resident principal in a high school serving 1300 students.
- Coached, supervised, and developed 25 high school teachers across multiple subject areas.
- Led professional development sessions for new teachers in the St. HOPE Public Schools network.

International School of Kenya, Nairobi, Kenya

High School Spanish Teacher
June 2006

August 2002 –

- Taught and designed curriculum for 7 different levels of Spanish classes, from beginning to advanced literature courses (International Baccalaureate).
- Chaired the Modern Languages Department.
- Served on the Strategic Planning, Education, and Policy Committees for the school's Board of Trustees.
- Served as Finance Chair for the Teachers' Association and lead contract negotiations with the Board.

Gateway Charter High School, San Francisco, California

Founding High School Spanish and Humanities Teacher
June 2002
Board of Trustees Member

June 1998 –

- Served on the founding faculty of San Francisco's second charter high school, which was selected as a California Distinguished School by the state board of education and named a Blue Ribbon School.

- Designed and taught curriculum for 9th through 12th grade Spanish and humanities courses.
- Served on the school's Board of Trustees and various Board committees.

Aim High Summer School, San Francisco, CA

*Co-Director
(summers)*

June 1999 – July 2002

- Directed a six-week academic summer school program for 150 racially and economically diverse students.
- Hired, supervised, and supported 25 fulltime teachers and staff members.
- Planned and led monthly academic enrichment activities throughout the school year for Aim High Students

RELATED EXPERIENCE

Soldiers Field Park Children's Center (SFPPC), Boston, Massachusetts

*President, Board of Directors
December 2016*

June 2013 –

- Led the Board in hiring, evaluating, and supporting the Director, setting the annual budget, and meeting all legal and fiduciary responsibilities for a Harvard-affiliated early childhood education center.

Harvard Graduate School of Education (HGSE), Alumni of Color Conference, Cambridge, Massachusetts

*Co-Chair
June 2014*

July 2013 –

- Co-chaired HGSE's largest annual alumni convening, focused on exploring issues of equity and social justice in education. The event drew over 500 attendees and 100 presenters.

LANGUAGES

Spanish Fluent in written and spoken language (native speaker)

Nathan Dadey

Education

2015 Ph.D., *Research and Evaluation Methodology*, University of Colorado Boulder, School of Education.

Dissertation: Getting More out of the National Assessment of Educational Progress: Investigating Dimensionality at the State-Level

Committee: Derek C. Briggs (Chair), Greg Camilli, Andrew Maul, Michael Stallings, and Lorrie Shepard

2008 B.S., *Psychology (Quantitative Skills Specialization)*, The Pennsylvania State University.

Research Experience

2015- Present Associate ('17-Present) & Postdoctoral Fellow ('16-'17), *The National Center for the Improvement of Educational Progress, Inc.* Notable projects include:

- Conceptualization, Development and Implementation of Louisiana's Every Student Succeeds Act Compliant Innovative Assessment Demonstration Authority Pilot Assessments ('18-Present, with Scott Marion and Michelle Boyer)
- Supporting Alabama Regional Science Specialist in Developing Three Dimensional Science Assessment Expertise (Project lead, '18-Present, with Leslie Keng, Mary Norris and Scott Marion)
- Jointly Scaling a General Assessment with On Demand Assessments of Individual Standards (Project lead, '17-'18, with Leslie Keng and Scott Marion)
- Comparability study of the SAT and ACT to End-of-Course Assessments (Project lead, '17-'18, with Chris Domaleski and Joseph Martineau)
- Design and Scaling of Multiple of Systems of Interim Assessments (Project lead, '15-'17, with Brian Gong)
- Examination of Dimensionality for the National Center and State Collaborative Assessments ('16-'17)
- Design of a Next Generation Science Standards aligned Assessment System ('16-'17, with, Brian Gong and Scott Marion)
- Score Comparability Across Computerized Assessment Delivery Devices ('15-'17, with, Charles DePascale and Susan Lyons)
- Quantification of the Impact of Online Interruptions during the Spring 2015 Smarter Balanced Assessment Administration ('15-'16, with Joseph Martineau)

2011 Summer Intern, *The National Center for the Improvement of Educational Progress, Inc.*

- Development of initial interpretive arguments, based on the argument based approach to validity, for the use of scores produced by various growth models in a pay-for-performance context (with Brian Gong)

2008-2015 Research Assistant, *School of Education, University of Colorado at Boulder*. Long term projects include:

- The Connected Learning Research Network Survey ('12-'15, with William Penuel).
- Multilevel Evaluation Procedure for Examining State and School Educational Contexts with the National Assessment of Educational Progress ('12-'13, with Gregory Camilli)
- Multidimensional Vertical Scaling and Growth Modeling ('10-'12, with Derek C. Briggs)
- Multilevel Modeling of Mathematics Achievement in Early Childhood Longitudinal Study ('09-'11, with Finbarr C. Sloane)
- Meta-analysis of Vertical Scaling Practices ('08-'09, with Derek C. Briggs)

Publications

Peer Reviewed

- 2018 Dadey, N., Lyons, S., & DePascale, C. (2018). The comparability of scores from different digital devices: A literature review and synthesis with recommendations for practice. *Applied Measurement in Education*, 31(1), 30-50. <https://doi.org/10.1080/08957347.2017.1391262>
- 2017 Briggs, D. C., & Dadey, N. (2017). Principal holistic judgments and high-stakes evaluations of teachers. *Educational Assessment, Evaluation and Accountability*, 29(2), 155-178. <https://doi.org/10.1007/s11092-016-9256-7>
- Maul, A., Penuel, W. R., Dadey, N., Gallagher, L. P., Podkul, T., & Price, E. (2017). Measuring experiences of interest-related pursuits in connected learning. *Educational Technology Research and Development*, 61(1), 1-29. <https://doi.org/10.1007/s11423-016-9453-6>
- 2015 Briggs, D. C., & Dadey, N. (2015). Making sense of common test items that do not get easier over time: Implications for vertical scale designs. *Educational Assessment*, 20(1), 1-22. <https://doi.org/10.1080/10627197.2014.995165>
- 2012 Dadey, N. & Briggs, D. C. (2012). A meta-analysis of growth trends from vertically scaled assessments. *Practical Assessment, Research & Evaluation*, 17(14). Available online: <http://pareonline.net/getvn.asp?v=17&n=14>

Selected Working Papers

- Xu, J. & Dadey, N. (Under Review). Using Bayesian Networks to Characterize Student Performance across Multiple Assessments of Individual Standards.
- Dadey, N. & Gong, B. (In Preparation). Exploring the use of Bayesian Networks for Prediction in a System of Assessments.

Reports

- 2018 Marion, S., Thompson, J., Evans, C., Martineau, J., & Dadey, N. (2018, September) *A Tricky Balance: The Challenges and Opportunities of Balanced Systems of Assessment*. Dover, NH: National Center for the Improvement of Educational Assessment. Available online: https://www.nciea.org/sites/default/files/inline-files/A%20Tricky%20Balance_092418.pdf

- Martineau, J., Dadey, N., & Marion, S. (2018). *Literature Review on Developing and/or Revising Assessment Frameworks to Support a Transition from Paper-Based to Digitally-Based Assessment*. Washington, DC: National Assessment Governing Board, U. S. Department of Education.
- Dadey, N., & Martineau, J. A. (2018). *Investigating Comparability in Response to Georgia Senate Bill 211*. Dover, NH: Center for Assessment.
- 2017 Dadey, N. & Gong, B. (2017, April). *Using interim assessments in place of summative assessments? Consideration of an ESSA option*. Washington, DC: Council of Chief State School Officers (CCSSO). Available online: <https://ccsso.org/resource-library/using-interim-assessments-place-summative-assessments-consideration-essa-option>
- Lyons, S. & Dadey, N. (2017, March). *Considering English Language Proficiency within Systems of Educational Accountability under the Every Student Succeeds Act*. Dover, NH: The National Center for the Improvement of Educational Assessment, Inc., & The Latino Policy Forum. Available online: https://www.latinopolicyforum.org/publications/reports/document/Considerations-for-ELP-indicator-in-ESSA_030817.pdf
- 2016 Dadey, N. (2016, December). *Exploring dimensionality within the 2015 NCSC operational administration data*. Dover, NH: The National Center for the Improvement of Educational Assessment, Inc. Available online: <http://www.ncscpartners.org/Media/Default/PDFs/Resources/DimensionalityStudy.pdf>
- Martineau, J., & Dadey, N. (2016, September). *Final report on online interruptions of the spring 2015 Smarter Balanced assessment administration in Montana, Nevada, and North Dakota*. Available online: <https://portal.smarterbalanced.org/library/en/online-interruptions-of-the-spring-2015-smarter-balanced-assessment-administration-in-montana-nevada-and-north-dakota.pdf>
- Media Coverage: [Education Week Market Brief](#) (9/2/16), [Billings Gazette](#) (9/6/16)
- DePascale, D., Dadey, N. & Lyons, S. (2016, June). *Score comparability across computerized assessment delivery devices*. Washington, DC: Council of Chief State School Officers (CCSSO). Available online: <https://www.nciea.org/sites/default/files/pubs-tmp/CCSSO%20TILSA%20Score%20Comparability%20Across%20Devices.pdf>
- Media Coverage: [Education Week](#) (6/10/16), [Ed Tech Magazine](#) (8/8/16)
- 2015 Martineau, J., Domaleski, C., Egan, K., Patelis, T., & Dadey, N. (2015, November). *Recommendations for addressing the impact of test administration interruptions and irregularities*. Washington, DC:

Council of Chief State School Officers (CCSSO). Available online:
https://www.nciea.org/sites/default/files/publications/Computer-Based-Interruptions_110415.pdf

Penuel, W. R., Dadey, N., Van Horne, K., & Michalchik, V. S. (2015, July). *Surveys of connected learning, technical report, v1.0*. Available online: http://researchtools.dmlhub.net/wp-content/uploads/2015/07/SurveysofConnectedLearning_TechnicalReport.pdf

2014 Briggs, D. C., Kizil, R. C. & Dadey, N. (2014, November). *Adjusting mean growth percentiles for classroom composition*. Boulder, CO: University of Colorado, Center for Assessment, Design, Research and Evaluation (CADRE). Available online: <http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Pages/GSGM-Technical-Evaluation.aspx>

Briggs, D. C., Dadey, N., & Kizil, R. C. (2014, October). *Comparing student growth and teacher observation to principal judgments in the evaluation of teacher effectiveness*. Boulder, CO: University of Colorado, Center for Assessment, Design, Research and Evaluation (CADRE). Available online: <http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Pages/GSGM-Technical-Evaluation.aspx>

2013 Fuller, E. J., & Dadey, N. (2013, April). *Review of “Evaluation of Teach for America in Texas Schools.”* Boulder, CO: National Education Policy Center. Available online: <http://nepc.colorado.edu/thinktank/review-evaluation-tfa-texas>

2012 Briggs, D. C., Dadey, N., & Weeks, J. P. (2012, January). *Evaluating growth interpretations from the DCAS vertical scales in math and reading: A validation study*. A report commissioned by the Delaware Department of Education.

Conference Presentations

2020 Diggs, C., & Dadey, N. (2020, April). *A rapid review of interim assessment use*. Paper to be presented at the annual meeting of the American Educational Research Association: San Francisco, CA.

2019 Dadey, N., & Ousley, M. (2019, September). *Supporting Alabama regional science specialist in developing three dimensional science assessment expertise*. Paper presented at the Third Annual NCME Special Conference on Classroom Assessment: Boulder, CO.

Dadey, N. (2019, June). *Modeling and reporting results – developing easy to use, online summaries of district-level growth*. Paper presented at the National Conference on Student Assessment hosted by the Council of Chief State School Officers: Orlando, FL.

- Dadey, N. (2019, June). *Considering Scaling and Reporting for Louisiana's Innovative Assessment Pilot*. Paper presented at the National Conference on Student Assessment hosted by the Council of Chief State School Officers: Orlando, FL.
- Dadey, N. (2019, April). *Some emerging design criteria for interim assessments in a balanced assessment system*. Paper presented at the annual meeting of the National Council on Measurement in Education: Toronto, ON.
- 2018 Dadey, N., & Cooper, S. (2018, October). *Considering the design and role of interim assessments in an NGSS system of assessments*. Paper presented at the National Council on Measurement in Education Special Conference on Classroom Assessment: Lawrence, KS.
- Dadey, N. (2018, June). *Fleshing out systems of assessment in the context of the Next Generation Science Standards*. Paper presented at the National Conference on Student Assessment hosted by the Council of Chief State School Officers: San Diego, CA.
- Dadey, N., Tao, S., & Keng, L. (2018, April). *Developing scale scores and cut scores for on demand assessments of individual standards*. Paper presented at the annual meeting of the National Council on Measurement in Education: New York, NY.
- 2017 Dadey, N. (2017, June). *Reasoning with information from multiple sources within a comprehensive assessment system*. Paper presented at the National Conference on Student Assessment hosted by the Council of Chief State School Officers: Austin, TX.
- Dadey, N. (2017, April). *Opportunities afforded by multiple assessments: Considering systems of interim assessments*. Paper presented at the annual meeting of the National Council on Measurement in Education: San Antonio, TX.
- Dadey, N. (2017, April). *Exploring dimensionality of data produced by the NCSC assessments*. Paper to be presented at the annual meeting of the National Council on Measurement in Education: San Antonio, TX.
- 2016 Dadey, N. (2016, June). *Making sure we don't miss something: defining and capturing interruptions to online testing*. Paper presented at the National Conference on Student Assessment hosted by the Council of Chief State School Officers: Philadelphia, PA.

- Dadey, N., & Gong, B. (2016, April). *Using Bayesian networks for prediction in a comprehensive assessment system*. Paper presented at the annual meeting of the National Council on Measurement in Education: Washington, D.C.
- Kizil, R. C., & Dadey, N. (2016, April). *Diagnostic classification modeling in student learning progression assessment*. Paper presented at the annual meeting of the National Council on Measurement in Education: Washington, D.C.
- 2015 Van Horne, K., Dadey, N., & Penuel, W. R. (2015, June). *Modeling equity of participation in Connected Learning*. Paper presented at the annual Digital Media and Learning Conference: Los Angeles, California.
- Dadey, N. (2015, April). *Examining NAEP Fourth Grade Mathematics using a Multilevel Item Factor Analysis Model*. Paper presented at the annual meeting of the National Council on Measurement in Education: Chicago, Illinois.
- Dadey, N. (2015, April). *Looking at Differences and Changes in the Outcomes of Connected Learning*. Poster presented at the annual meeting of the American Educational Research Association: Chicago, Illinois.
- 2014 Dadey, N. & Camilli, G. (2014, May). *Dimensionality at multiple levels: State-level diagnosis using NAEP mathematics*. Paper presented at the annual meeting of the National Council on Measurement in Education: Philadelphia, Pennsylvania.
- Dadey, N. & Camilli, G. (2014, April). *Examining NAEP Mathematics with an exploratory, multilevel item factor analysis model*. Paper presented at the annual meeting of the Modern Modeling Methods (M³) Conference: Storrs, Connecticut.
- 2013 Arya, D. J., Evans, L., Dadey, N., & Maul, A. (2013, August). *A cross-national intervention on and study of climate change attitudes and behaviors*. Paper presented at the annual meeting of the American Psychological Association: Honolulu, Hawai'i.
- Dadey, N., & Briggs, D. C. (2013, April). *The curious case of linking items with p-value reversals*. Paper presented at the annual meeting of the National Council on Measurement in Education: San Francisco, California.

- Dadey, N. (2013, April). *Applying evidence-centered design to survey development*. Paper presented at the annual meeting of the American Educational Research Association: San Francisco, California.
- 2012 Dadey, N., & Gong, B. (2012, April). *Initial interpretative and evaluative arguments for the use of growth scores for teacher performance pay*. Paper presented at the annual meeting of the American Educational Research Association: Vancouver, Canada.
- 2011 Dadey, N., Briggs, D. B., & Weeks, J. P. (2011, April). *Making sense of growth trends in academic achievement among states with vertically scaled assessments*. Paper presented at the 2011 annual meeting of the National Council on Measurement in Education: New Orleans, LA.
- 2010 Dadey, N., & Chia, Y. M. (2010, April). *Creating a formative assessment of spelling ability for English language learners*. Presentation given at the International Objective Measurement Workshop: Boulder, CO.

Consulting

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- 2014 **Consultant**, *Georgia Department of Education (with Derek C. Briggs)*.
- 2012-2013 **Consultant**, *Denver Public Schools*.
- 2012-2013 **Survey Consultant**, *The Wellness Initiative*.
- 2011-2012 **Consultant**, *Delaware Department of Education (with Derek C. Briggs)*
- 2010-2011 **Survey Consultant**, *The Center for Alternative and Responsible Education (CARE)*.

Service

-
- Reviewer
- Educational Measurement: Issues and Practice (2012-Present)
 - Education Policy Analysis Archives (2015-Present)
 - Annual Meeting of the American Educational Research Association (2015-2017)
 - Annual Meeting of the National Council on Measurement in Education (2017, 2019)
- 2017 Conference Co-Organizer, *Reidy Interactive Lecture Series, Assessing Student Learning of the Next Generation Science Standards*.

- 2016 Peer Reviewer, *U.S. Department of Education Peer Review of State Assessment Systems, June Review*.
- 2014 Faculty Search Committee, Graduate Student Representative, *University of Colorado Boulder, School of Education*.
- 2011-2012 Student Reviewer, *American Educational Research Journal – Social and Institutional Analysis (AERJ-SIA) Student Editorial Committee (with Kenneth R. Howe)*.
- 2009-2010 Coordinator, *International Objective Measurement Workshop Conference (with Derek C. Briggs)*.
- 2009 Coordinator, *University of Colorado Boulder, School of Education Ph.D. Orientation*.

Professional Memberships

American Educational Research Association

American Evaluation Association

American Psychological Association

National Council on Measurement in Education

Software

Proficient in: BILOG-MG, flexMIRT, HLM, IRTPRO, Mathematica, SPSS, R/S-PLUS

Familiar with: BIMRT, ConQuest, GENOVA, Minitab, Microsoft Access, SAS, SQL, Winsteps



Scott Marion

Scott F. Marion is the President of the non-profit The National Center for the Improvement of Educational Assessment, Inc. Previously, he served as the Vice President of the Center since 2005 and as a senior associate from 2003-2005. The mission of the Center is to help states and districts foster higher student achievement through improved practices in educational assessment and accountability. The Center does this by:

- Providing customized support to states and districts in designing, implementing, and improving fair, effective, and legally defensible assessment and accountability programs. The Center's staff provides the full range of support, including technical analyses, policy support, documentation and communication, and training from designing an accountability system to meet a legislative mandate through designing effective programs in support of low-performing schools.
- Coordinating Technical Advisory Committees that help ensure a state's evolving assessment and accountability programs receive the best on-going technical advice possible, focused on the specific issues and decision-making needs of the individual state or district.
- Developing and disseminating practical standards for assessment and accountability programs that include specific information about what states and districts should do *today* to have technically sound programs.

As President, Dr. Marion consults with numerous states on such issues as optimal design of assessment and accountability systems, creating or documenting legally defensible approaches to accountability and educator evaluation, gathering validation evidence for accountability programs, and designing comprehensive assessment systems to serve both instructional and accountability purposes. In addition to his management role at the Center for Assessment, Dr. Marion assists in active leadership in the Center's efforts to develop practical professional standards through the Center's annual lecture series and as a regular contributor to professional publications and the annual conferences of AERA, NCME, and CCSSO.

As Wyoming's assessment director (1999-2003), Dr. Marion managed the K-12 testing program, the Wyoming Comprehensive Assessment System, overseeing the state's Uniform Reporting System, and generally overseeing all assessment-related activities at the Wyoming Department of Education. Wyoming's innovative high school competency assessment system—The Body of Evidence System—was the most ambitious project of his administration. Scott Marion worked through the entire cycle of development of the assessment system from initial design through incorporation into legislation, administrative rule, and into actual implementation. From 1997 Dr. Marion worked with department of education staff and educators in the field, the state board of education, advisory panels, and the governor's and legislative offices to design Wyoming's first statewide, standards-based assessment system.

Dr. Marion earned his Ph.D. at the University of Colorado at Boulder under mentorship of Professors Lorrie Shepard and Robert Linn. Dr. Marion started his career as a field biologist prior to earning his Master's of Science in Science and Environmental Education from the University of Maine.

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Education

Ph.D. May 2004. University of Colorado, Boulder, CO. Research and evaluation methodology. Specialization—educational Assessment. Dissertation Advisor: Lorrie Shepard. Dissertation title: Psychometric Concerns When Measuring Advanced Knowledge.

Master of Science. May 1992. University of Maine, Orono, Maine. Science and Environmental Education G.P.A. 4.0 Thesis Advisor: Theodore Coladarci. Thesis title: *Gender differences in science course-taking patterns among college undergraduates: Indicators of a hidden curriculum in science education?*

Bachelor of Science. May 1979. State University of New York, College of Environmental Science and Forestry, Syracuse, NY. September 1975-May 1979. Majored in zoology and forest biology, graduated cum laude (G.P.A. 3.1).

Professional History

Wyoming Department of Education. Cheyenne, WY.

Director of Assessment and Accountability. November 1999-January 2003. Responsible for managing the state's K-12 testing program, Wyoming Comprehensive Assessment System, overseeing the state's Uniform Reporting System, and, generally, overseeing all assessment-related activities at the Wyoming Department of Education, including assessment issues related to district accreditation and student graduation requirements. Managed two budgets in excess of three million dollars per year, supervised three staff members, several external consultants, and a testing contractor.

Wyoming Department of Education. Cheyenne, WY.

Assessment Specialist. August 1997-October, 1999. Served as a consultant to the Department to help with the development and implementation of the Wyoming Comprehensive Assessment System. Duties included writing background research reports, planning design team meetings, drafting the assessment system technical reports, and writing and reviewing requests for proposals.

School of Education, University of Colorado at Boulder. Campus Box 249, Boulder, CO.

Research Assistant, August 1993-September 1994; August 1995-May, 1997. I worked as a research associate of a variety of assessment related research projects funded by the Center for Research on Student Standards and Testing (CRESST). Supervisor: Dr. Lorrie Shepard

Evaluation Internship, September 1994 —August 1995. As part of a two-person internship team, I served as a co-principal investigator for an evaluation of the National Science Foundation-funded Mathematicians and Education Reform (MER) Forum. This internship was supported by the American Educational Research Association's Grants Program and NSF. Supervisor: Dr. Ernest House.

College of Education, University of Maine, Orono, ME.

Part-time Faculty Member. 1991-1993. Responsibilities include teaching the following graduate and undergraduate courses: EDS 520—educational Measurement; ESC 525—Planning the Environmental Curriculum; and EDB 221—Introduction to Educational Psychology.

Center for Research and Evaluation, College of Education. University of Maine, Orono, ME.

Research Associate, September 1988-July 1993. Responsibilities included conducting curriculum and program evaluations for school systems and other agencies, managing the Center's data bases and archives, writing grants and funding proposals, writing research and technical reports, and providing research design and statistical consulting services for University faculty and graduate students.

Selected Publications

- Keng, L. & Marion, S. F. (in press). Comparability of Aggregated Group Scores on the "Same Test." In Haertel, Pellegrino, & Berman (eds.). *Comparability Issues in Large-Scale Assessment*. Washington, DC: National Academy of Education.
- Marion, S.F. & Domaleski, C. (in press). An argument in search of evidence: A critique of "A validity argument related to the use of college admissions test scores in federal accountability." *Educational Measurement: Issues and Practice*, 38, 4, 27–28. <https://doi.org/10.1111/emip.12307>
- Marion, S.F. (2018). The opportunities and challenges of a systems approach to assessment. *Educational Measurement: Issues and Practice*, 37, 1, 45-48. <https://doi.org/10.1111/emip.12193>
- Marion, S.F., Vander Els, J. & Leather, P. (2017). Reciprocal accountability for transformative change: New Hampshire's performance assessment of competency education (PACE). *VUE: Voices in Urban Education*, 46, 20-25. <http://vue.annenberginstitute.org/issues/46/reciprocal-accountability-transformative-change-new-hampshire%E2%80%99s-performance-assessment>
- Marion, S.F., Lyons, S., & Pace, L. (2017). Evaluating and Continuously Improving an Innovative Assessment and Accountability System. www.innovativeassessments.org.
- Gagnon, D.J., Hall, E. & Marion, S.F. (2017). Teacher evaluation and local control in the United States: An investigation into the degree of local control afforded to districts in defining evaluation procedures for teachers in non-tested subjects and grades. *Assessment in Education: Principles, Policy & Practice*, 24, 4, 489-505.
- Marion, S.F., Pace, L., Williams, M., & Lyons, S. (2016). Project Narrative: Creating a State Vision to Support the Design and Implementation of An Innovative Assessment and Accountability System. www.innovativeassessments.org
- Marion, S.F., Lyons, S., Pace, L., & Williams, M. (2016). A Theory of Action to Guide the Design and Evaluation of States Innovative Assessment and Accountability System Pilots. www.innovativeassessments.org.
- Thompson, J., Lyons, S., Marion, S.F., Pace, L., & Williams, M. (2016). Ensuring and Evaluating Assessment Quality for Innovative Assessment and Accountability Systems. www.innovativeassessments.org.

- Lyons, S., Marion, S.F., Pace, L., & Williams, M. (2016). Addressing Accountability Issues including Comparability in the Design and Implementation of an Innovative Assessment and Accountability System. www.innovativeassessments.org.
- Jenkins, S., Pace, L., Lyons, S., Marion, S.F. (2016). Establishing a Timeline and Budget for Design and Implementation of an Innovative Assessment System. www.innovativeassessments.org.
- Thompson, J, Lyons, S., Marion, S.F., Pace, L. (2016). Supporting Educators and Students Through Implementation of an Innovative Assessment and Accountability System. www.innovativeassessments.org.
- Graue, E., Marion, S.F., & Nelson, M. (2016, Spring). Eye on her research: Assessment in a learning culture. *Education Views*, pp 6-8. School of Education, University of Colorado, Boulder.
- Rothman, R. & Marion, S.F. (2016). The next generation of state assessment and accountability. *Kappan*, 97, 8, 34-37. <https://journals.sagepub.com/doi/abs/10.1177/0031721716647016>
- Marion, S.F. & Buckley, K. (2016). Design and implementation considerations of performance-based and authentic assessments for use in accountability systems. In Braun, H. (ed). *Meeting the Challenges to Measurement in an Era of Accountability*. New York, NY: Routledge, Taylor & Francis Group.
- Chattergoon, R. & Marion, S.F. (2016). Not as easy as it sounds: Designing a balanced assessment system. *The State Education Standard*, 16, 1, 6-9. <http://www.nasbe.org/wp-content/uploads/Chattergoon-Marion.pdf>
- Marion, S.F. (2015). The search for the Holy Grail: Content-referenced score interpretations from large-scale tests. *Measurement: Interdisciplinary Research & Perspectives*, 2, 106-110. <https://doi.org/10.1080/15366367.2015.1055127>
- Domaleski, C., Gong, B., Hess, K., Marion, S., Curl, C., Peltzman, A. (2015). Assessment to support competency-based pathways. Washington, DC: Achieve. www.Achieve.org and www.nciea.org
- Marion, S. (2015, Feb). Two sides of the same coin: Competency based education and Student Learning Objectives. Published by Competency Works. <http://www.competencyworks.org/resources/two-sides-of-the-same-coin-competency-based-education-and-student-learning-objectives/>
- Marion, S., & Leather, P. (2015). Assessment and accountability to support meaningful learning. *Education Policy Analysis Archives*, 23(9). <http://dx.doi.org/10.14507/epaa.v23.1984>
- Diaz-Bilello, E.B., Patelis, T., Marion, S.F., Hall, E., Betebenner, D. & Gong, B. (2014). Are the *Standards for Educational and Psychological Testing* Relevant to State and Local Assessment Programs? *Educational Measurement: Issues and Practice*, 33, 4, 16–18
- Marion, S.F., DePascale, C., Domaleski, C., Gong, B., & Diaz-Bilello, E. (2012, May). Considerations for analyzing educators' contributions to student learning in non-tested subjects and grades with a focus on Student Learning Objectives. www.nciea.org.
- Marion, S.F. & Buckley, K. (2011). Approaches and considerations for incorporating student performance results from “Non-Tested” grades and subjects into educator effectiveness determinations. www.nciea.org.
- Buckley, K. & Marion, S.F. (2011). A Survey of Approaches Used to Evaluate Educators in Non-Tested Grades and Subjects. www.nciea.org.
- Marion, S.F. (2010). Constructing a validity argument for alternate assessments based on modified achievement standards. In Perie, M. *Alternate Assessments Based on Modified Achievement Standards*. Baltimore, MD: Brooks Publishing.

- Li, Y., Marion, S.F., Perie, M. & Gong, B. (2010) An approach for evaluating the technical quality of interim assessments. *Peabody Journal of Education*, 85, 2, 163-185
- Perie, M., Marion, S.F., & Gong, B. (2009). Moving towards a comprehensive assessment system: A framework for considering interim assessments. *Educational Measurement: Issues and Practice*, 28, 3, 5-13. <https://doi.org/10.1111/j.1745-3992.2009.00149.x>
- Marion, S.F. (2009). Some key considerations for test evaluators and developers. In Schafer, W. and Lissitz, R. (eds.) *Alternate assessments based on alternate achievement standards: Policy, practice, and potential* (pp. 357-360).
- Marion, S. F. & Perie, M. (2009). Validity arguments for alternate assessments. In Schafer, W. and Lissitz, R. (eds.) *Alternate assessments based on alternate achievement standards: Policy, practice, and potential* (pp. 115-127). Baltimore, MD: Brooks Publishing.
- Perie, M., Marion, S.F., Gong, B., & Wurtzel, J. (2007). The Role of Interim Assessments in a Comprehensive Assessment System: A Policy Brief. www.aspeninst.org and www.nciea.org.
- Marion, S.F. & Gong, B. (2007). Assessing college readiness: A continuation of Kirst. *NCME Newsletter*, 15, 2, 5-7.
- Hill, R.K., Gong, B., Marion, S., DePascale, C., Dunn, J., and Simpson, M. (2006). Using Value Tables to Explicitly Value Growth, Paper presented at the MARCES conference.
- Dunn, J. & Marion, S. F. (2006). NCLB Growth: What are we learning as reauthorization approaches? *NCME Newsletter*, 14, 4, 3-4.
- Marion, S. F. & Pellegrino, J. W. (2006). A validity framework for evaluating the technical quality of alternate assessments. *Educational Measurement: Issues and Practice*, 25, 4, 47-57.
- Dunn, J., Gong, B. & Marion, S. F. (2006). NCLB science assessments: A unique opportunity. *Measurement: Interdisciplinary Research and Perspectives*, 4, 4, 242-246.
- Gong, B. & Marion, S. F. (2006). Dealing with flexibility in assessments for students with significant cognitive disabilities. Minneapolis, MN: University of Minnesota, National Center for Educational Outcomes Synthesis Report No. 60. <http://education.umn.edu/nceo/OnlinePubs/Synthesis60.html>.
- Glenn, W. J., Picus, L.O., Marion, S., & Calvo, N. (2006). School facility quality and student achievement in Wyoming. *School Business Affairs*, 72, 5, 12-16.
- Picus, L. O., Marion, S.F. Calvo, N., Glenn, W. J. (2005). Understanding the relationship between student achievement and the quality of educational facilities: Evidence from Wyoming. *Peabody Journal of Education*, 80, 3, 2005
- Marion, S. F., White, C, Carlson, D., Erpenbach, W. J., Rabinowitz, S., Sheinker, J. (2002) Making valid and reliable decisions in the determination of adequate yearly progress: A Paper in the Series: *Implementing The State Accountability System Requirements Under The No Child Left Behind Act Of 2001*. Washington, D.C.: Council of Chief State Schools Officers.
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National Research Council/National Academy of Science Publications

(Participated as an active committee member and report contributor to the following NRC reports.)

- National Research Council. (2014). *Developing Assessments for the Next Generation Science Standards*. Committee on Developing Assessments of Science Proficiency in K-12. Board on Testing and Assessment and Board on Science Education, James W. Pellegrino, Mark R. Wilson, Judith A. Koenig, and Alexandra S. Beatty, *Editors*. Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.
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Technical Reports, Studies, Conference Papers and Presentations

Numerous technical reports of evaluation studies produced for such organizations as the National Science Foundation and various state agencies. I have given hundreds of presentations at various national conferences including almost yearly presentations at the American Educational Research Association (AERA)/National Council of Measurement in Education (NCME) annual meetings since 1990 and CCSSO's Large Scale Assessment Conference since 1998.

Honors, Awards, Scholarships and Fellowships

The Spencer Foundation. Spencer Dissertation Fellowship for Research Related to Education. 1998-1999.

The Spencer Foundation & American Educational Research Association. Travel Fellowship Award. 1996-1997.

American Educational Research Association & National Science Foundation. Evaluation Internship Award. 1994-1995.

American Educational Research Association, National Science Foundation, & National Center for Educational Statistics. Selected to participate in the AERA Statistics Institute. April 8-10, 1994.

University of Colorado. University Fellowship awarded by the Graduate School to fund the first year of Ph.D. studies. 1993-1994.

New York State Regents Scholarship. 1975-1979.

National Honor Society. 1974-1975.

Service

Rye School Board, Rye, NH. 2013-present; Board Chair, 2015-2017.

AERA, Division D, Robert L. Linn Distinguished Lecture Award. Committee Member: 2009-2012; 2016-present

Committee Member: AERA Book Award. 2006-2009

United States Department of Education. National Technical Advisory Committee Member. 2008-2010

National Research Council Committee Member for the following:

- Developing Assessments of Science Proficiency in K-12. Board on Testing and Assessment and Board on Science Education (2013-2014)
- Best Practices for State Assessment Systems (2013-2014)
- Value-Added Model in Education (2009-2010)

Southeast New Hampshire Land Trust—Board member, 2012-present.

The Keystone Center Board of Trustees 2006-2009

Nathan Dadey is interested in the design, scaling, and use of educational assessments, particularly assessments used for accountability purposes. He aims to produce methodological and applied work that contributes to improved understanding and use of assessment results in policy contexts.

In terms of methodological work, Nathan focuses on tackling issues in which typical educational measurement approaches fall short. One such area is the measurement of the Next Generation Science Standards (NGSS). For example, Nathan has supported multiple state departments of education (Delaware, Wisconsin, and Nebraska) in developing conceptualizations of their NGSS statewide systems of assessments, leading content specialists in the creation of three dimensional tasks, assisting multiple SCASS groups within the Council of Chief State School Officers and reviewing NGSS performance task quality and evaluation tools (with Achieve). A second area deals with the numerous challenges inherent in designing and implementing comprehensive systems of assessment. While working to tackling these kinds of challenges, Nathan has explored ways in which a set of “mini-interim” assessments can be [scaled](#) (with Curriculum Associates), written a policy [brief](#) addressing ESSA’s interim assessment provision and explored ways in which Bayesian networks can be used to summarize interim and summative assessment results.

In terms of applied work, Nathan focuses on issues that threaten the validity of assessment and accountability operational programs. These issues include the [dimensionality](#) of alternate assessment based on alternate achievement standards (on behalf of NCSC), the [impact of interruptions](#) on online assessment results (on behalf of the Smarter Balanced Assessment Consortia) as well as [recommendations](#) to address such impacts (on behalf of CCSSO), the [representation](#) of English Language Proficiency within state accountability systems (on behalf of the Latino Policy Forum), and the [comparability](#) of assessment scores across multiple digital devices (on behalf of the TILSA SCASS).

Nathan received a Ph.D. from the University of Colorado Boulder with a concentration in research and evaluation methodology.

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**Pearson**

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www.pearson.com

Sam Ribnick
Massachusetts Department of Elementary and Secondary Education
75 Pleasant Street
Malden, Massachusetts 02148-4906

RE: Massachusetts Innovative Science Assessment

June 25, 2020

Dear Mr. Ribnick,

Today, we are facing an unprecedented state of crisis with COVID-19 impacting our personal and professional lives—but even more—the impact on our students and learners is profound and unwavering. At this time, more than ever, we need to emphasize the importance of focusing educational resources on measuring student performance and supporting improved student outcomes. Through these unusual circumstances, and as we hopefully anticipate a return to more normal times, Pearson remains deeply and personally committed to Massachusetts and the success of all Massachusetts students.

Pearson, and our partners, are excited to partner with Massachusetts Department of Elementary and Secondary Education (DESE) to develop and deliver innovative components of the of Innovative Science Assessment (Phase I and II) to create truly innovative and interactive science delivery that leverages current successes while rapidly integrating authentic and innovative performance tasks. To adequately address tenets of the Innovative Assessment Demonstration Authority (IADA) plan and establish fidelity in the delivery of Phase I and II for Kaleidoscope Collective for Learning (KCL) schools, we will provide an open and collaborative approach to supporting DESE's vision for science and pursuit of deeper learning.

Nationwide, Pearson has extensively invested in innovative approaches to assessment including student centered approaches to measuring students for both science and 21st century skills. We have implemented next-generation science standards (NGSS) to develop the analytic skills required in our world of information overload and embodied in the three dimensions of science education: how to determine what is genuine, how to conduct research, and how to formulate valid conclusions based on structured evaluations.

Our solution partners have teamed to bring DESE's creative vision to reality:

- Pearson: Implementation, Delivery, Scoring, and Reporting.
- WestEd: Design and Implementation Support
- The Concord Consortium: Rapid Prototyping and Design
- EurekaFacts, LLC, Disadvantaged Business Enterprise (DBE) through the Massachusetts Unified Certification Program (MassUCP): Cog Labs Support and Focus Groups during the required Rapid Prototyping of the tasks
- Brilljent, LLC Certified Woman Business Enterprise (WBE) recognized by the Operational Services Division Supplier Diversity Office (OSD) of Massachusetts: Interpret Reports

Our teams have the research experience, as well as measurement and content expertise and proven technologies to build performance tasks that can be used to evaluate student learning in authentic real-world environments designed specifically to support engagement in the Massachusetts STE.

We are deeply grateful for the opportunity to support Massachusetts in this very important work and we look forward to a successful implementation over the months to come.

Yours Sincerely,



Trent Workman

Vice President, School Assessment
NCS Pearson, Inc. (Pearson)
319.321.4618
trent.workman@pearson.com

Budget Narrative File(s)

* Mandatory Budget Narrative Filename:

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Part 5: Budget Narrative

1. Personnel

Funds for personnel are requested in the amount of \$407,979.

Description	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
Project manager	\$83,333	\$104,000	\$108,160	\$112,486	\$407,979
FTE	1	1	1	1	
Total Personnel	\$83,333	\$104,000	\$108,160	\$112,486	\$407,979

The Project Manager for Innovative Assessments would be hired a few months into the grant, around December 2020 and continue through the life of the grant. Key responsibilities include:

- Managing the implementation work of the vendors developing the innovative assessment.
- Ensuring fidelity of implementation and timely completion of the work outlined in this grant application and the IADA application.
- Coordinating and supporting the work of DESE teams responsible for providing PD, including KCL and CIS.
- Evaluating the PD and innovative assessment to drive continuous improvement.

A complete job description is provided in section (f)(2) of the project narrative. The Project Manager will spend 100% of time on duties related to the implementation of the innovative assessment and PD. The salary will be \$100,000 in the first year of the grant in order to attract candidates with suitable experience, with 4% annual increases built in. Note that only 10 months of salary (\$83,333) is budgeted in Year 1 since hiring is anticipated in December. The Project Manager will play a crucial role in building DESE's capacity for implementing innovative assessments, and will also build important connections between teams whose work must be

coordinated. This person will initially report to the Project Director for Innovative Assessments, Sam Ribnick, but will shift reporting to align with existing teams for curriculum and assessment in later years of the grant, so that the capacity for innovative assessments becomes integrated into existing structures.

2. Fringe Benefits

DESE's total request to ED for fringe benefits amounts to \$158,623.

Fringe on Full-Time positions is calculated as at the proposed FY21 fringe benefit rate of 38.88%.

Description	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
Fringe Benefits	\$32,400	\$40,435	\$42,053	\$43,735	\$158,623

3. Travel

DESE's total request to ED for travel amounts to \$4,000. This will cover mileage for in-state travel, as needed to participate in workshops or meetings and observe implementation of the innovative assessment (including both tryouts and full administration).

Description	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
Travel	\$1,000	\$1,000	\$1,000	\$1,000	\$4,000

4. Equipment

A one-time cost of \$1,500 is included to cover the cost of a laptop for the project manager.

5. Supplies

No supplies are requested in the grant budget.

6. Contractual

We are requesting funding for professional services contracts in three distinct areas: development of the innovative assessment, professional development, and program evaluation. The proposed amounts are listed in Table 1, and the basis for each estimate is detailed below.

Table 1 Proposed Use of Grant Funds for Contracts

	Year 1	Year 2	Year 3	Year 4	Total
Innovative Assessment	\$400,000	\$400,000	\$400,000	\$400,000	\$1,600,000
PD	\$120,800	\$78,000	\$54,000	\$70,000	\$322,800
Evaluation	\$0	\$0	\$50,000	\$150,000	\$200,000

Development of the Innovative Assessment

	Year 1	Year 2	Year 3	Year 4	Total
Innovative Assessment	\$400,000	\$400,000	\$400,000	\$400,000	\$1,600,000

DESE has already secured a major contract to develop the innovative performance tasks for Grades 5 and 8 with Pearson as a prime contractor and WestEd, Concord Consortium, Brilljent, and EurekaFacts as sub-contractors, running from June 2020-October 2021. The services provided are central to the project, including rapid prototyping of tasks, cognitive labs, testing platform, test administration, scoring and psychometric analysis. The vendor team's proposal was selected as the strongest of six after a rigorous in-depth formal review, on the basis of strong relevant experience, innovative sample tasks, and high capacity to deliver the work. The complete scorecard is provided in part 6 under other attachments.

DESE plans to spend roughly \$2.5-3 million in total on this contract, and will charge \$400,000 to the grant in FY21 and \$150,000 in FY22. A detailed breakdown of the budget for development of the May 2021 pilot is provided in the table below. Most spending will be in FY21 with some in FY22.

Table 2 Innovative Assessment Budget Estimate for May 2021 Pilot

Deliverables	Cost
1.0 Project Design and Management	\$326,143
2.0 Development of Prototype Tasks	\$1,233,996
3.0 Process for Scoring and Reporting	\$103,836
4.0 Online Testing Platform and Management System	\$155,719
5.0 Test Development	\$219,043
6.0 Pilot Administration	\$221,923
7.0 Scoring and Reporting	\$313,555
8.0 Psychometrics and evaluation	\$35,348
Total Cost for Required Deliverables	\$2,609,563
FY21 Expense	\$2,348,607
FY22 Expense	\$260,956

Estimated time commitments of key personnel on the project are listed in Table 3:

Table 3 Estimated Personnel Time Commitments

Title	FTE dedicated
Project Director, Pearson	30%
Project Director, WestEd	10%
Project Director, EurekaFacts	15%
Project Manager, Pearson	30%
Project Coordinator, Manuals and Training Lead, Pearson	20%
Project Manager, Brilljent	30%
Senior Project Manager, Brilljent	7%
Research Project Manager, EurekaFacts	20%
Test Development Director, Pearson	20%
Senior Assessment Manager, WestEd	100%
Technology Director, Pearson	20%
Technology Director, Concord Consortium	10%
Principal Science Assessment Specialist, Pearson	100%
Science Assessment Development Manager, WestEd	10%
Content Development Manager, Science, Pearson	20%
Publishing Manager, Pearson	20%
Technology Project Manager, Accessibility, Pearson	10%
Field Service Engineer, Pearson	10%
Senior Software Architect, Concord Consortium	5%
Psychometrician, Pearson	25%
Business Analyst, Pearson	20%
Director of Research, WestEd	5%
Senior Research Associate, WestEd	5%
Senior Analyst, EurekaFacts	25%
Scoring Portfolio Manager, Pearson	5%
Scoring Project Manager, Pearson	5%
Technology Project Manager, Pearson	20%
Customer Services and Support, Pearson	10%

DESE will undertake a second procurement process during 2021 to secure a vendor for implementation of the innovative assessment in 2022, '23 and '24, or possibly may establish two

separate contracts: one for continuing the work with Grades 5 and 8, and a separate one for high school assessments. In any case, DESE plans to charge to the grant \$250,000 for these new contracts in FY22 and \$400,000 in each of FY23 and FY24.

Professional Development

	Year 1	Year 2	Year 3	Year 4	Total
PD	\$120,800	\$78,000	\$54,000	\$70,000	\$322,800

Professional development (PD) to support changes in teacher practice is a core contributor to the success of the project. To see improvements in student learning, the change to the assessment must be supported by PD for teachers, especially those serving students who historically receive low scores on MCAS.

DESE will undertake a procurement process in late 2021 to select a vendor or combination of vendors to help develop PD materials in partnership with DESE staff. Services will include: completing a diagnostic review of existing materials to identify needed changes; providing training directly to teachers and leaders; and creating systems and infrastructure to support and scale PD delivery. The budget is higher in the first year due to the greater need to develop new training materials and systems. In later years, the budget will support continued refinement of materials and direct delivery of training.

Our cost estimate includes monthly project management, initial upfront cost to develop materials and ongoing cost to provide PD workshops. The budget is based on a 2-year training plan, as described in the project narrative. Based on experience with similar PD efforts, we allocate \$52,000 for initial diagnostic, tool and materials creation in year 1 and an additional \$32,000 for material creation in year 2. In later years, we allocate \$8000 per year for continued

refinement of materials. The number of workshops to be provided is based on an estimate of 4 workshops per year for each teacher, with two cohorts of teachers in each year (due to the 2-year training plan) and an estimated maximum of 150 people per workshop. As the number of teachers increases, we will provide more workshops to match the scale. We may explore the viability of much larger virtual workshops (with hundreds of participants) if we see successful models for training at that scale elsewhere within DESE or externally.

The first year also includes coaching for an estimated 90 teachers. As described in the project narrative, we will use the first year to explore and codify a scalable coaching model. We initially estimate 8 hours of coaching for participating teachers over 4 cycles, with 1 hour of direct coaching and 1 hour of coach prep time for each cycle. At \$65/hr we estimate the total cost to coach one teacher is \$520. Coaching will continue in future years, but we acknowledge that the scale and cost of coaching will exceed what can be covered under this grant. Therefore, we propose to fund only the first year of coaching with this grant, and will identify other sources of funding (e.g. foundation grants, reallocated PD resources) to support and scale in later years.

Table 4 Professional Development Cost Estimate

		2020-21		2021-22		2022-23		2023-24		Grand Total
A. Project Management and Staff Services	Rate	#	Total	#	Total	#	Total	#	Total	
Project management (per month)	\$500	12	\$6,000	12	\$6,000	12	\$6,000	12	\$6,000	\$24,000
B. PD diagnostic review and creation	Rate	#	Total	#	Total	#	Total	#	Total	Total
Diagnostic review of existing PD	\$12,000	1	\$12,000	0	\$0	0	\$0	0	\$0	\$12,000
Design of coaching model and tools	\$8,000	1	\$8,000	0	\$0	0	\$0	0	\$0	\$8,000
Content and tool development for PD workshops	\$8,000	4	\$32,000	4	\$32,000	0	\$0	0	\$0	\$64,000
C. PD annual delivery	Rate	#	Total	#	Total	#	Total	#	Total	Total
Refinement of PD workshops and materials	\$2,000	0	\$0	4	\$8,000	4	\$8,000	4	\$8,000	\$24,000
Providing coaching to teachers (per teacher)	\$520	90	\$46,800							\$46,800
Delivery of PD workshops (virtual)	\$2,000	4	\$8,000	12	\$24,000	16	\$32,000	24	\$48,000	\$112,000
Evaluation: surveys, data gathering and analysis	\$8,000	1	\$8,000	1	\$8,000	1	\$8,000	1	\$8,000	\$32,000
	TOTAL:		\$120,800		\$78,000		\$54,000		\$70,000	\$322,800
Later year coaching costs (outside of grant budget)	Rate	#	Total	#	Total	#	Total	#	Total	Total
Providing coaching to teachers (per teacher)	\$520		\$0	325	\$169,000	650	\$338,000	1,300	\$676,000	\$1,183,000

Program Evaluation

	Year 1	Year 2	Year 3	Year 4	Total
Evaluation	\$0	\$0	\$50,000	\$150,000	\$200,000

Evaluation is a critical part of this project, and we are requesting \$200,000 for a third-party evaluation. As described in the project narrative, the evaluation will mostly take place in Year 4, but we plan to procure the partner and initiate the contract in Year 3 to allow time for designing the evaluation and gathering baseline data. DESE has worked with many established academic groups, non-profits, and companies on evaluations of other projects, and we anticipate receiving proposals from many of them for this evaluation contract.

Our estimate of \$200,000 is based on the scope of evaluation described in section (g) of the project narrative, and is informed by guidance from our strategic advisors at the Center For Assessment. They have worked with dozens of states on evaluation of assessment systems, including partnerships with other states implementing IADA programs, and have advised us that \$200,000 is a typical cost for such an evaluation.

For all existing procurement, DESE has followed procedures for procurement under 2 CFR 200.317-200.326, and will follow them for future procurements under this grant.

7. Construction

Not applicable to this program.

8. Other

No other costs proposed for this grant.

9. Total Direct Costs

The sum of direct costs in sections 1-8 is \$2,694,902.

	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
9. Total Direct Costs (lines 1-8)	\$639,033	\$623,435	\$655,213	\$777,221	\$2,694,902

10. Indirect Costs

	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
10. Indirect	\$37,180	\$43,191	\$49,993	\$66,238	\$196,602

The 2021 proposed DESE indirect rate of 22.1% is currently under review by the USDOE. The FY21 22.1%, rate is used to calculate the indirect costs for the grant budget. (The FY20 DESE approved rate is 24.4%.)

Per Massachusetts budget practices, the indirect rate of 22.1% was calculated on the first \$25,000 of each consulting contract for each year.

Year 4 of the budget crosses two Massachusetts state fiscal years (July 1 – June 30). Thus, the year 4 indirect reflects the indirect charges for two years (e.g., twice the amount of indirect for Years 1-3) for all consulting contracts.

11. Training Stipends

Not applicable.

12. Total Costs

The total of all costs (direct and indirect) is \$2,891,504.

	Project Year 1	Project Year 2	Project Year 3	Project Year 4	Total
12. Total Costs (lines 9-11)	\$676,213	\$666,626	\$705,206	\$843,459	\$2,891,504