

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

APPLICATION FOR GRANTS
UNDER THE

FY 2022 Javits Application Package

CFDA # 84.206A

PR/Award # S206A220040

Grants.gov Tracking#: GRANT13594563

OMB No. 1894-0006, Expiration Date: 02/29/2024

Closing Date: Apr 11, 2022

PR/Award # S206A220040

****Table of Contents****

Form	Page
1. Application for Federal Assistance SF-424	e3
2. ED GEPA427 Form	e6
<i>Attachment - 1 (1237-ProjectEAGLE_GEPA)</i>	e7
3. Grants.gov Lobbying Form	e10
4. Dept of Education Supplemental Information for SF-424	e11
<i>Attachment - 1 (1238-ProjectEAGLE_SF424Sup_NonExemptNarrative)</i>	e13
5. ED Abstract Narrative Form	e20
<i>Attachment - 1 (1236-ProjectEAGLE_Abstract)</i>	e21
6. Project Narrative Form	e22
<i>Attachment - 1 (1234-ProjectEAGLE_Narrative)</i>	e23
7. Other Narrative Form	e54
<i>Attachment - 1 (1239-ProjectEAGLE_OtherAttachments)</i>	e55
<i>Attachment - 2 (1240-ProjectEAGLE_EvidenceForm)</i>	e102
8. Budget Narrative Form	e107
<i>Attachment - 1 (1235-ProjectEAGLEBudgetNarrative)</i>	e108
9. Project Objectives and Performance Measures Information	e157
10. Form ED_524_Budget_1_4-V1.4.pdf	e164
11. Form ED_Evidence_2_0-V2.0.pdf	e167

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:

04/11/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

NA

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: University of Connecticut

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

* c. UEI:

d. Address:

* Street1: 438 Whitney Road Ext., Unit 1133

Street2:

* City:

Storrs

County/Parish:

Tolland

* State:

CT: Connecticut

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

06269-1133

e. Organizational Unit:

Department Name:

Division Name:

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

Prefix:

* First Name:

Tracy

Middle Name:

* Last Name:

Bourassa

Suffix:

Title: Director of Pre-Award Services

Organizational Affiliation:

University of Connecticut

* Telephone Number:

Fax Number:

* Email:

PR/Award # S206A220040

Page e3

Application for Federal Assistance SF-424

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

H: Public/State Controlled Institution of Higher Education

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:

84.206

CFDA Title:

Javits Gifted and Talented Students Education

* 12. Funding Opportunity Number:

ED-GRANTS-021622-001

* Title:

Office of Elementary and Secondary Education (OESE): Well-Rounded Education Programs: Jacob K. Javits Gifted and Talented Students Education (Javits) Program, Assistance Listing Number 84.206A

13. Competition Identification Number:

84-206A2022-2

Title:

FY 2022 Javits Competition

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

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Project EAGLE (Eliciting Advanced Gifted Learning Evidence)

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 * b. Program/Project

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

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):*** a. Federal * b. Applicant * c. State * d. Local * e. Other * f. Program Income * g. TOTAL *** 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 ☒ 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

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: Middle Name: * Last Name: Suffix: * Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:

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.

1237-ProjectEAGLE_GEPA.pdf

Add Attachment

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Project EAGLE

(Eliciting *Advanced Gifted Learning Evidence*)

Meeting the General Education Provisions Act (GEPA) Section 427 Requirements for Equitable Access

Project EAGLE consists of two phases. In the first phase, we will use the Cognitively Guided Instruction process and Improving Mathematical Problem Solving Practice Guide recommendations from the What Works Clearinghouse to refine a dynamic approach for identifying ELs with math talent. In the second phase of the project, we will implement a train-the-trainer model to extend the impact of our work to teachers across three states.

Project EAGLE Dynamic Measure and Gifted Nomination: Project EAGLE is a dynamic approach to equitably identify gifted English learners (ELs) by building teachers' capacity to spot gifted EL talent. Teachers conduct math lessons in their classroom throughout the year using a validated checklist of observable gifted math behaviors. All students in the classroom work in small groups on problem-based activities while the teacher interacts with them, observes their actions, and looks for behaviors that indicate math talent. Given our emphasis on English learners, we are designing the activities to require minimal language instruction from the teachers and be situated in topics that are relevant across cultures. We have an emphasis on manipulatives and visuals when working on the problem-based activities. This reduces the disadvantages students might have due to limited English or other language challenges. We are providing instructions in Spanish to assist Spanish speaking EL students. Because all the lessons will be embedded in classrooms with all students, all students have an opportunity to have their math talent recognized, thus ensuring equal exposure to the entire classroom population.

Given gender differences in interest in mathematics, we are cognizant that the problem-based math activities need to appeal to both young males and young females. Therefore, we will design the activities to be gender neutral with high interest for third and fourth grade students while also encouraging female participation. We will also work to make the scenarios race and national origin neutral. We will work with the participating schools to ensure we meet all accommodations that are in place for students in the classrooms where we implement Project EAGLE.

Project EAGLE Postdoc: We will be hiring a postdoctoral research associate to assist in refining measures, developing and providing professional learning sessions, recruiting participants, and conducting interviews and observations. This postdoc will have experience working with ELs. We will encourage applications from persons who are members of groups that have traditionally been underrepresented and who are also fluent in Spanish, the predominant language of ELs in the three states where we expect to work.

Project EAGLE Trainers, and Teachers: We are casting a wide net to recruit a diverse group of trainers and teachers to attend our workshops. We have commitments from two state department gifted specialists (Arizona and Colorado) and one state gifted association director (Texas) to assist with recruiting participants and promoting Project EAGLE in their states, which have high populations of EL students. Having state department gifted and talented specialists and state gifted association personnel assist in promoting the Project EAGLE state workshops will also result in broader appeal for any interested teacher (classroom, gifted, English learner) to attend the free workshops.

We will attend each state's gifted and talented state conference and promote the program. We will have an open call for teachers to serve as talent trainers, with extra effort to encourage

educators from underserved groups to apply. Additionally, we will recruit trainers and teachers through the Gifted & Talented Bilingual Education Special Interest Group (SIG) of the National Association for Bilingual Education (NABE). One of our advisory board members is co-chair of the SIG.

Participants will not be screened for age, and we will encourage more experienced teachers as well as beginning teachers to participate. We are providing generous financial support for our trainers so their economic situation will not limit their ability to attend our week-long training or to conduct workshops.

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

University of Connecticut

* 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
Application for Federal Assistance

OMB Number: 1894-0007
Expiration Date: 12/31/2023

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Dr.	Del		Siegle	Ph.D.

Project Director Level of Effort (percentage of time devoted to grant): 23

Address:

* Street1:	2131 Hillside Road, Unit 3007
Street2:	
* City:	Storrs
County:	Tolland
* State:	CT: Connecticut
* Zip Code:	06269-3007
Country:	USA: UNITED STATES

* Phone Number (give area code) Fax Number (give area code)

--	--

* Email Address:

--

Alternate Email Address:

--

2. New Potential Grantee or Novice Applicant:

a. Are you either a new potential grantee or novice applicant as defined in the program competition's notice inviting applications (NIA)?

☐ Yes ☒ No

3. Qualified Opportunity Zones:

If the NIA includes a Qualified Opportunity Zones (QOZ) Priority in which you propose to either provide services in QOZ(s) or are in a QOZ, provide the QOZ census tract number(s) below:

4. 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) #(s): ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8

☒ No Provide Assurance #(s), if available:

FWA00007125

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.

1238-ProjectEAGLE_SF424Sup_NonExemptNarrative.pdf

Add Attachment

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Project EAGLE

(Eliciting Advanced Gifted Learning Evidence)

Non-Exempt Research Narrative (SF424 Supplement)

(1) Human Subjects Involvement and Characteristics:

Project EAGLE occurs in two phases. In the first phase (Years 1, 2, and 3), we will refine and validate a dynamic identification approach that involves having teachers review a list of characteristics mathematically talented students in Grades 3 and 4 exhibit while the teachers interact with and observe students engaging in problem-based activities. In the first year, we will conduct problem-based math activities with 3rd and 4th grade students in their classrooms. We anticipate working in two classrooms of each grade with approximately 20 students in each classroom for a total of 80 students. In the second year we will train eight 3rd and 4th grade teachers to use the problem-based activities in their classrooms. This initial work will occur with teachers in Connecticut, Rhode Island, and Massachusetts. The majority of the teachers in the region are White with approximately 6-8% Latinx and 5-7% Black. In the third year, we will train 3rd and 4th grade teachers in 10 schools to use the problem-based activities in their classrooms. We expect 3 teachers in each school to participate for a total of 30 teachers.

In the second phase (Years 4 and 5), we build capacity by scaling-up the project and implementing a train-the-trainer model to expand implementation of the Project EAGLE dynamic approach to identification across three states as we further validate its effectiveness. We will work with five trainers in Texas, five trainers in Colorado, and five trainers in Arizona for a total of 15 trainers. The trainers will be certified teachers with experience in gifted education, experience working with EL students, and experience conducting professional learning. Each trainer will provide five workshops in their state. We anticipate twenty 3rd and 4th grade

teachers will attend each workshop for a total of 1,500 teacher participants. The teachers and trainers will range from 22 to 65 years of age. The students in the teachers' classrooms generally range from 8 to 10 years old (Grades 3 and 4).

(2) Sources of Materials:

After completing their professional learning, the teachers will complete a post survey that measures their knowledge of the Project EAGLE dynamic identification process and their knowledge of characteristics associated with gifted English learners. After completing their professional learning, the trainers will complete a post survey that measures their knowledge of the Project EAGLE dynamic identification process, their knowledge of characteristics associated with gifted English learners, and their knowledge of effective professional learning practices. Teachers who use the Project EAGLE dynamic identification process will share lists of characteristics they observed during different math problem-based activities. Schools will share the percentage of students nominated for gifted services (with a breakdown by underserved populations) before and after teachers receive training. We will also observe a sample of teachers who are using the Project EAGLE dynamic identification process in their classroom with students. All data will be collected for the purpose of the study. We will not collect any data from the students served by the teachers in the study.

(3) Recruitment and Informed Consent:

In Year 1, we will contact the principals of schools near the University of Connecticut and ask them if they are interested in using our math problem-based activities in their third and fourth grade classrooms. We expect to work in one or two schools. We will provide the third and fourth grade teachers in the one or two schools with information about the project. We will have those teachers who are interested in having the math problem-based activities used in their classrooms

and are willing to be observed and interviewed about their experiences sign an informed consent to participate. In Year 2 we will recruit 8 teachers from Connecticut, Rhode Island, and Massachusetts schools to attend professional training and implement the Project EAGLE dynamic identification process. We will recruit graduates of the University of Connecticut IB/M program who are third and fourth grade teachers. We will work with their school principals to allow them to participate, and we will obtain the teachers' signed informed consent. In Year 3, we will recruit 10 schools by promoting the study with former Master's students from the University of Connecticut's Three Summers Program who are working as gifted specialists. Gifted specialists, in collaboration with their principal, will share information with their third and fourth grade teachers. We will obtain signed informed consent forms from those teachers who are interested in attending a professional learning opportunity and using the Project EAGLE process. We will provide professional learning for those teachers in their district or in a neighboring district.

In Years 3 and 4, the state gifted association and/or state education department gifted specialists in Arizona, Colorado, and Texas will share information about the opportunity for five members in their state to serve as Project EAGLE trainers in a train-the-trainer model. Those who are interested will apply. We will screen the applicants based on their experience working with EL students, their experience in gifted education, and their experience conducting professional learning workshops. Those we select will sign an informed consent form and will agree to provide post-workshop survey data after they attend a week-long professional learning opportunity at the University of Connecticut. They will also agree to be observed conducting professional learning workshops and participate in a year-long online communication network moderated by Project EAGLE personnel regarding workshop implementation,

questions/solutions in conducting the workshops, and moderating online communication networks for their workshop participants. The gifted association and/or state department gifted specialists in Arizona, Colorado, and Texas will also assist us in recruiting teachers to attend the trainers' workshops. The trainers will obtain signed informed consent from the workshop participants at the workshops. These participants will complete post-workshop surveys and have the option to participate in a trainer-moderated online communication network throughout the year in which they may elect to post about implementing Project EAGLE (e.g., questions, challenges, strategies, successes).

(4) Potential Risks:

The Project EAGLE dynamic identification process involves normal educational practices and poses no special risks to any of the teachers or students involved. The teachers who participate will complete post surveys about their knowledge of the Project EAGLE process and some of them will be interviewed and observed, which poses no risk. Their only inconvenience is the time taken to participate in the post surveys and to participate in professional learning activities. The advantage to the teachers is an increase in their ability to recognize math talent in diverse students, particularly English learners. The students' participation is simply engaging in classroom math activities as part of their regular educational experience.

(5) Protection Against Risk:

All information collected during this project will be used for research purposes and/or for instructional purposes in collaboration with school personnel. All necessary steps will be taken to ensure the confidentiality of the data. All data collected will be stored on a secure server in folders accessible only by our researchers. We will ensure that all participant information is used in ways that are reviewed by the University of Connecticut IRB, and consistent with any local

school requirements. We will assign each school and teacher a code. Only the code will be used on all stored data, which will be stored on a secure, password protected University of Connecticut server. There will be a master list of teachers and their participant ID numbers and a master list of schools and their school ID numbers that will be stored separately from the data in a different password protected folder on a UConn secure server. Therefore, the data is de-identified, but we can link it back to the teacher and school to add additional data during the study if necessary. The data will be transferred to UConn through a secure server connection. Interviews will be recorded with the permission of participants. The research team member who conducts the interview will monitor the transcript to ensure that there is no identifying information on the recordings and will delete the recording once the transcript is confirmed.

(6) Importance of the Knowledge to be Gained:

There is clear and mounting evidence that gifted education must address the serious challenges associated with the underidentification and underservicing of diverse populations of gifted students (Peters, 2022; Siegle et al., 2016; Worrell & Dixon, 2022). For example, English learners (ELs) are the fastest growing population of learners in the U.S., yet they are among the most underrepresented group in gifted education (Coronado & Lewis, 2017; Gubbins et al., 2020; Hodges et al. 2018; Matthews, 2014; Mun et al., 2022; Siegle, 2020). English learners in a recent National Center for Research on Gifted Education (NCRGE) study of all elementary school students in three states were between a quarter and half as likely to be identified as gifted compared to students who were not EL. EL students as well as other underserved groups are clearly not having their gifts and talents recognized, and subsequently appropriately developed.

Despite being the currently recommended best practice for identification, the use of universal screening and local norms with achievement and cognitive test data still fails to fully address the

underrepresentation of underserved groups in gifted programs (Long et al., in preparation). Using these static assessment measures has simply not been effective in identifying the broad range of gifts and talents evident across diverse student populations. An identification gap, and therefore a service gap, clearly still exists for these populations. There is a pressing need for assessment systems that can be used to better identify talent across diverse populations. In Project EAGLE (*Eliciting Advanced Gifted Learning Evidence*), we address this issue of underidentification, which then results in underservicing, by implementing a dynamic approach to identify gifted behaviors. This dynamic approach involves training teachers to use an observation checklist to identify characteristics of mathematics potential and talent as they observe and interact with students engaged in problem-based activities that are designed to elicit gifted behaviors.

De Araujo et al. (2016) found little attention is “given to challenging ELs mathematically or extending their thinking” (p. 35). Mun et al. (2016) reported teachers view the period of language acquisition for ELs as a time of student deficit because of their limited English. However, proactively identifying talents in other domains during this period of language acquisition actually allows ELs to flourish (Dixson et al., 2020) and focusing on math aligns with EL identification recommendations (Mun et al., 2020). As a result of participating in this study, teachers will gain knowledge about how to better identify giftedness in EL students through use of the Project EAGLE dynamic identification approach. Students will have an opportunity to demonstrate their potential in mathematics, and more EL students will be nominated for gifted services. We are not aware of any risks other than the time teachers will spend in professional learning, and this outweighs the benefits we just described.

(7) Collaborating Site(s):

All of the research will be conducted by personnel affiliated with the University of

Connecticut. We will work with the state gifted associations and/or state education department gifted specialists in Arizona, Colorado, and Texas to recruit participants. We will also have teachers from schools across the country attend the professional learning opportunities we provide. Teachers who attend the professional learning will implement the Project EAGLE dynamic identification process in their classrooms during regular math instruction to identify mathematics talent in students, with an emphasis on EL students.

Abstract

An abstract is to be submitted in accordance with the following:

1. Abstract Requirements

- Abstracts must not exceed one page and should use language that will be understood by a range of audiences.
- Abstracts must include the project title, goals, and expected outcomes and contributions related to research, policy, and practice.
- Abstracts must include the population(s) to be served.
- Abstracts must include primary activities to be performed by the recipient.
- Abstracts must include subrecipient activities that are known or specified at the time of application submission.

For research applications, abstracts also include the following:

- Theoretical and conceptual background of the study (i.e., prior research that the 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, and dependent, independent, and control variables, as well as 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:

[Add Attachment](#)

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[View Attachment](#)

Abstract

Project EAGLE (Eliciting Advanced Gifted Learning Evidence)

English learners (ELs) are among the most underidentified of underserved populations, while being the fastest growing population. Static assessment measures (e.g., IQ and achievement tests) have not been effective in identifying the broad range of gifts evident across diverse populations, including ELs. Project EAGLE addresses this problem by refining and validating a dynamic identification approach that involves teachers reviewing a list of characteristics that mathematically talented students in Grades 3 and 4 exhibit while they interact with and observe the students engaging in problem-based activities. Through work in 4 classrooms in 2 schools during Year 1, we will validate that the problem-based activities elicit behaviors on our observation checklist. Through a field test in Year 2 (8 teachers), we will validate teachers can recognize math talent while using the checklist to observe problem-based activities. Through a pilot study (10 schools—30 teachers) in Year 3, we will validate teachers nominate more EL students using the dynamic process. Through a train-the-trainer model (5 trainers in each of 3 states each providing 5 workshops with 20 teachers in each workshop) in Year 4, we will show the process can be scaled-up and replicated (1,500 teachers who serve 6,000 students). In Year 5, we will disseminate results (at least 4 state and 2 national conferences, a website, peer-reviewed articles, and pdf practitioner guides). Data collection includes participant survey responses, classroom and workshop observations, participant interviews, workshop attendance, and EL nomination rates for gifted services (increased gifted EL nominations by at least 10%). This research meets the *Absolute Priority* and *Competitive Preference Priority 3* through testing a dynamic measure as an alternative strategy to identify gifted ELs and sets a foundation for *Competitive Preference Priorities 1 & 2* as 2e students will benefit from this approach.

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

Project EAGLE

(Eliciting Advanced Gifted Learning Evidence)

Table of Contents

Introduction and Need for the Project.....	1
Project Design.....	3
Goals, Objectives, and Outcomes	5
Meeting the Target Population Needs and Addressing the Secretary’s Priorities	9
Building Capacity	10
Up-to-Date Research and Effective Practice	10
Support from Promising Evidence.....	12
Performance Feedback and Continuous Improvement	13
Management Plan.....	14
Timeline, Responsibilities, and Milestones	14
Continuous Improvement Plan	23
Project Services.....	23
Sufficiency of Equal Access and Treatment Strategies	24
Impact of Services.....	25
Project Personnel	25
Senior Personnel	25
Other Personnel.....	27
Advisory Board	28
Adequacy of Resources.....	29

Project EAGLE

(Eliciting Advanced Gifted Learning Evidence)

Introduction and Significance of the Project

There is clear and mounting evidence that gifted education must address the serious challenges associated with the underidentification and underservicing of diverse populations of gifted students (Peters, 2022; Siegle et al., 2016; Worrell & Dixon, 2022). For example, English learners (ELs) are the fastest growing population of learners in the U.S., yet they are among the most underrepresented groups in gifted education (Coronado & Lewis, 2017; Gubbins et al., 2020; Hodges et al. 2018; Matthews, 2014; Mun et al., 2020; Siegle, 2020). In a recent National Center for Research on Gifted Education (NCRGE) study of all elementary school students in three states, English learners were between a quarter and half as likely to be identified as gifted compared to students who were not EL. Underrepresentation also persists for twice-exceptional students (2e), students from poverty, and Black, Latinx, and American Indian populations. EL students as well as other underserved groups are clearly not having their gifts and talents recognized, and subsequently appropriately developed.

Despite being the currently recommended best practice for identification, the use of universal screening and local norms with achievement and cognitive test data still fails to fully address the underrepresentation of underserved groups in gifted programs (Long et al., in preparation). Using these static assessment measures has simply not been effective in identifying the broad range of gifts and talents evident across diverse student populations. An identification gap, and therefore a service gap, clearly still exists for these populations. There is a pressing need for assessment systems that can be used to better identify talent across diverse populations. In Project EAGLE (*Eliciting Advanced Gifted Learning Evidence*), we address this issue of underidentification, which results in underservicing, by implementing a dynamic approach to identify gifted behaviors. This

dynamic approach involves teachers using an observation checklist to identify characteristics of mathematics potential and talent as they observe and interact with students engaged in problem-based activities that are designed to elicit gifted behaviors. Therefore, in Project EAGLE we integrate an observation checklist, problem-based learning activities, and teacher prompts to build a dynamic approach to identification. Although we will focus on ELs and math, the process is applicable to other underserved groups, such as 2e students, and in other talent areas.

Research suggests the key element in developing mathematically gifted students is providing advanced learning opportunities (Hoth et al., 2017; Nadjafikhah et al., 2012); therefore identifying mathematics talent in underserved students is essential so efforts can be made to provide additional advanced opportunities to develop their full potential. De Araujo et al. (2016) found little attention is “given to challenging ELs mathematically or extending their thinking” (p. 35). Mun et al. (2016) reported that teachers view the period of language acquisition for ELs as a time of student deficit because of their limited English. However, proactively identifying talents in other domains during this period of language acquisition actually allows ELs to flourish (Dixson et al., 2020; Mun et al., 2016), and focusing on math aligns with EL identification recommendations (Mun et al., 2020) including: (a) a need to shift from deficit to strengths-based thinking; (b) a call for caution using standardized tests to identify gifted ELs due to language and cultural bias; (c) the importance of using multiple, alternative measures including dynamic ones; and (d) a call for more professional learning on identifying ELs. In Project EAGLE, we apply these four recommendations with a math-based dynamic identification approach in the classroom to address the underidentification of ELs for gifted services.

A dynamic process shows promise as being more effective than static measures for equitable gifted identification (Kitano & Pedersen, 2002). Dynamic measures can be administered by teachers in the classroom, and they allow teachers to delve more deeply into mathematical concepts

for those ELs with high levels of understanding who might not show them on tests (Kitano & Pedersen, 2002). During the process, teachers use scaffolding and probing questions to gain insight into students' potential or talent. In Project EAGLE, we will first pilot and refine a dynamic approach with professional learning in several locations. Then, we will employ a train-the-trainer model in outreach to three states. The goals of this project are to: (a) develop a dynamic approach to equitably identify gifted ELs in the familiar context of classroom math instruction; (b) build classroom teachers, gifted specialists, and EL teachers' capacity for fostering and spotting gifted talent; and (c) increase the number of ELs nominated for gifted services. We believe what we develop for identifying talent in the EL population will be applicable across other underserved populations as well.

Project Design

Multiple challenges exist in establishing a universal screening dynamic approach to identify potential or talent in mathematics among underserved populations. To be accepted by educators, the system must be cost-efficient, address a recurring problem, not require extensive effort, and fit within education/classroom practices. We will accomplish this by following four critical assessment development project features (Christ et al., 2009): defensibility (psychometrically sound), feasibility (limited resource burden), efficient (easy to implement), and repeatable (allows for creation of data streams to test its effectiveness).

Our project occurs in two phases. In the first phase (Years 1, 2, and 3), we will refine and validate a dynamic approach that involves having teachers review a list of characteristics mathematically talented students in Grades 3 and 4 exhibit while the teachers interact with and observe students engaged in problem-based activities with a goal to identify mathematically talented EL students. It is the combination of the observation checklist with problem-based activities and teacher prompts that comprise the Project EAGLE dynamic approach to

identification.

We will initially work with an observation checklist developed by Project BUMP UP (Building Up Mathematics Proficiency Utilizing Push-in; Javits Award #S206A190028) called the *Sparks of Math Talent Observation Checklist*. It was developed through an iterative process of reviewing previous observation instruments and receiving feedback from researchers and practitioners and was designed to be used with problem-based activities. We will work with our Advisory Board, researchers in mathematics education, and practitioners to review and possibly update the items on the checklist. This group will also review five problem-based activities that were developed to work with the checklist. These problem-based activities cover the areas of (a) number sense and operations; (b) algebraic thinking; (c) fractions and decimals; (d) geometry; and (e) measurement, data, and analysis. Each activity elicits some behaviors on the *Sparks of Math Talent Observation Checklist*, but not others.

After a thorough review and possible modifications of the observation checklist, we will align the checklist and problem-based activities such that each characteristic on the checklist is tied to at least two problem-based activities and each problem-based activity is tied to at least three checklist items. We anticipate this alignment process between the *Sparks of Math Talent Observation Checklist* behaviors and the mathematics problem-based activities will involve multiple field tests with refinements. These will occur in two or three classrooms with 3rd and 4th grade students. We may need to add a sixth problem-based activity to fulfill our alignment needs. Our goal for Year 1 is to finalize a set of five to six problem-based activities that as a group elicit the full set of *Sparks of Math Talent Observation Checklist* behaviors that the research literature, scholars, and practitioners agree indicate talent in mathematics. We will also develop a list of accompanying critical and creative thinking questions that teachers can use as prompts with students during the problem-based activities to elicit *Sparks of Math Talent Observation Checklist* behaviors.

In the second year we will provide professional learning for eight teachers in the Connecticut, Rhode Island, and Massachusetts area to field test the Project EAGLE dynamic approach to identification. We will provide feedback throughout the process, determine its success at increasing the number of EL students nominated for gifted services, and make modifications as needed. In the third year we further test and validate the process with teachers in 10 schools as we document our success identifying EL students for gifted services.

In the second phase (Years 4 and 5), we build capacity by scaling up the project and implementing a train-the-trainer model to expand implementation of the Project EAGLE dynamic approach to identification across three states as we further validate its effectiveness. We will select 15 trainers from three states (Colorado, Arizona, and Texas). They will join us at the University of Connecticut for five days of professional learning in the summer where they will gain expertise in the Project EAGLE dynamic approach to identification and strategies to conduct effective professional learning workshops. These trainers will return to their states and conduct a minimum of five professional learning workshops each that expose educators to the Project EAGLE dynamic approach to identification process. Educators who attend these trainings will then use the process in third- and fourth-grade classrooms to increase the number of EL students they nominate for gifted services.

Goals, Objectives, and Outcomes

- **Goal 1** – Develop a dynamic approach to equitably identify gifted ELs in the familiar context of classroom math instruction.
 - Objective 1 – To validate the *Sparks of Math Talent Classroom Observation Checklist* with problem-based activities for Grades 3 and 4.

- *Outcome* – Finalized set of 8-12 observable *Sparks of Math Talent Observation Checklist* gifted behaviors that 80% of Advisory Board members and other gifted specialists and math specialists agree are relevant.
- *Outcome*– Finalized set of 5-6 problem-based math activities that 80% of Advisory Board members, gifted specialists, and math specialists agree are relevant by domain.
- *Outcome*– All 5-6 problem-based math activities align with at least 3 of 8-12 observable *Sparks of Math Talent Observation Checklist* gifted behaviors when used by teachers observing students.
- *Outcome*– Each of 8-12 observable *Sparks of Math Talent Observation Checklist* gifted behaviors align with at least 2 of 5-6 problem-based math activities when used by teachers observing students.
- Objective 2 – To develop a bank of critical and creative thinking questions to probe ELs' Sparks of Math Talent and elicit evidence of gifted behaviors.
 - *Outcome* – Finalized bank of 5-7 probing questions for each of 8-12 observable gifted thinking behaviors that 80% of Advisory Board members and other gifted specialists and math specialists agree align.
 - *Outcome* – 75% of teachers who implement Project EAGLE dynamic approach lessons will report using at least 2 probing questions during each of the 5-6 problem-based math activities they execute.
- Objective 3 – To synthesize the resources and processes into Project EAGLE lessons to elicit gifted EL behaviors in math instruction through a dynamic approach.
 - *Outcome* – 50% of trained teachers will implement at least 2 Project EAGLE dynamic approach lessons.

- *Outcome* – 80% of trained teachers who implement Project EAGLE dynamic approach lessons will recognize math talent in at least 2 EL students.
- **Goal 2** – Build classroom teachers, gifted specialists, and EL teachers’ capacity for fostering and spotting gifted talent in English learners.
 - Objective 1 – To train trainers to conduct workshops for teachers to implement Project EAGLE lessons to identify gifted EL students using a dynamic approach.
 - *Outcome* – 15 trainers will be trained to conduct Project EAGLE lessons.
 - *Outcome* – 80% of trainers will report greater comfort presenting Project EAGLE material after attending a weeklong professional learning event.
 - *Outcome* – Over 90% of trainers will show mastery of Project EAGLE material (at least 80% on the post assessment) after attending a weeklong professional learning event.
 - Objective 2 - To conduct workshops for teachers to implement Project EAGLE lessons regarding EL populations (e.g., cultural and instructional considerations, math talent, gifted behaviors) using a dynamic approach.
 - *Outcome* – Five trainers in each of three states will conduct at least five workshops each ($5 \times 3 \times 5 = 75$ workshops) for teachers within their state to implement the Project EAGLE dynamic approach.
 - *Outcome* – At least 1,500 unique teachers ($75 \times 20 = 1,500$) participate in project-specific professional learning on the Project EAGLE dynamic process, with at least 30% participation by teachers from traditionally underrepresented populations and/or teachers who are from schools with over 50% underserved student populations.
 - *Outcome* – At least 70% of teachers attending professional learning sessions demonstrate an understanding of the dynamic approach (at least 80% on post

- assessment) and report an improvement in their attitude about spotting gifted behaviors and identifying gifted ELs.
- *Outcome* – At least 20% of teachers attending professional learning sessions return to their schools, fully implement the dynamic approach, and report an improvement in their attitude about spotting gifted behaviors and identifying gifted ELs.
 - Objective 3 – To conduct online communication networks for trainers and teachers that will continue professional learning and support fidelity of implementation throughout the school year.
 - *Outcome* – At least 30% of teachers who attend professional learning sessions participate more than 4 times in the online communication network.
 - *Outcome* – 80% of trainers participate in the online communication network at least once bi-weekly during Year 4 of the project.
 - Objective 4 – To disseminate all Project EAGLE resources and processes as developed during the study and after the study concludes.
 - *Outcome* – A Project EAGLE website hosts materials, measures, and processes as they are developed and ready for dissemination and is maintained for access after the study concludes.
 - *Outcome* – Project EAGLE materials, measures, and processes are presented at four state conferences and two national conferences.
 - **Goal 3** – Increase the number of ELs nominated for gifted services.
 - Objective – To scale up the use of Project EAGLE’s dynamic approach for teachers to recognize and support gifted behaviors in ELs through math instruction.
 - *Outcome* – At least 6,000 students will be in classrooms where teachers are trained to implement Project EAGLE, and about 10% of these students will be EL.

- *Outcome* – There will be a 10% increase in the number of EL students nominated for gifted services in schools that implemented the project.

Meeting the Target Population Needs and Addressing the Secretary’s Priorities

Students from underserved populations are underidentified for gifted services. Among these underserved populations, EL students are among the most underidentified, while also being the fastest growing group (Gubbins et al., 2020; Hodges et al. 2018; Matthews, 2014). Research suggests identifying mathematics talent among EL students could be an effective path for identification (Mun et al., 2016); however, research also suggests that mathematics remediation, rather than mathematics challenge, dominates these students’ education (de Araujo et al., 2016).

Project EAGLE addresses these issues by implementing a universal dynamic identification approach in students’ classrooms where they participate in activities that are designed to elicit mathematical thinking. Using the *Sparks of Math Talent Observation Checklist*, teachers will recognize these diverse students’ strengths and be encouraged to recommend them for gifted services. Therefore, this project addresses the underidentification of EL students as well as the issue of ignoring many ELs’ mathematics talent.

This research meets the Secretary’s Absolute Priority (Identification of, and Provision of Services to, Gifted and Talented Students Who May Not Be Identified Through Traditional Assessment Methods) and Competitive Preference Priority 3 (Promoting Equity in Student Access to Educational Resources and Opportunities). We are testing an alternative strategy to identify and serve gifted students, emphasizing gifted ELs. Because both ELs and 2e students with disabilities related to language may both be underidentified with traditional methods due to language issues, our findings may also be addressing Competitive Preference Priority 1 (Training Personnel in the Identification and Education of Gifted and Talented Students Who are Children with Disabilities) and Competitive Preference Priority 2 (Identification of, and Provision of Services to, Gifted and

Talented Students Who are Children with Disabilities) as our work promotes increasing teacher capacity for equitably identifying gifted and talented students who may not otherwise be identified through traditional assessments because of language skills.

Building Capacity

First, all material we develop for this project will be available online for others to use at no cost during, as well as at the conclusion of the project. This will include all material necessary to train teachers to use the process. We will create a website to use when we and the trainers conduct workshops. It will be a resource for our participants during the project and later serve as a resource to extend our work for others at the conclusion of the project.

Second, our Phase 2 train-the-trainer component serves as a model to build capacity. The website will also include a list of trainers who are willing to continue training beyond the grant. Any district interested in implementing this work can contact one of our trainers, which extends this work beyond the timeframe of this project. Districts can also use the material on our website to create their own network of trainers, which builds capacity in their district to extend this work.

Finally, given the simplicity of using a validated checklist while observing students in problem-based activities, our dynamic approach can feasibly and efficiently be implemented in classrooms. Schools where we implement the project are likely to continue to use this no-cost identification option after the project ends.

Up-to-Date Research and Effective Practice

Dynamic Measures. Whereas most standard screening measures are static and fail to identify talent in underserved populations, dynamic measures can successfully complement them (Kitano & Pedersen, 2002) with an asset-based approach that recognizes students' strengths (Celedón-Pattichis et al., 2018). Dynamic measures (e.g., critical thinking questions, processing time, feedback, and exposure to problem-solving strategies) allow teachers to supportively intervene

during student challenges to elicit gifted behaviors (Kirschenbaum, 1998) based on Vygotsky's Zone of Proximal Development (1978). Dynamic measures have positive effects on affective aspects of EL identification (anxiety, motivation) and thinking aspects (cognition, metacognition) across the curriculum (Calero et al., 2011; Lidz & Elliot, 2006; Lidz & Macrine, 2001). Gifted EL identification must be sensitive to students' levels of English acquisition and cultural contexts (Fultz et al., 2013), and both quantitative and qualitative gifted screening measures are imperative to provide a holistic view of advanced ELs (Slocumb & Olenchak, 2006).

Eliciting and Observing Gifted Thinking in Math. As students with advanced math potential or talent may not necessarily score high on tests for a variety of reasons including acquiring English and lack of prior instruction or experience, there is value in an approach to spotting mathematical talent through observation (Assouline & Lupkowski-Shoplik, 2011; Gavin, 2011). Researchers (Krutetskii, 1976; Sheffield, 2003) recommend recognizing mathematical giftedness beyond school achievement by considering students' mathematical frame of mind, organization, creativity, curiosity, and perseverance. These approaches have been used to develop a range of gifted math observation tools (Assouline & Lupkowski-Shoplik, 2011; Gavin, 2011; Miller, 1990; Peters & Gentry, 2012; Pfeiffer & Jarosewich, 2003; Renzulli et al., 2013; Sheffield, 1994), which can help teachers identify gifted behaviors that students display during lessons (Horn, 2015).

To capitalize on using observation for identification in the math classroom, the Project BUMP UP team developed the *Sparks of Math Talent Observation Checklist* through an iterative process of reviewing previous observation instruments and receiving feedback from researchers and practitioners. These can be used with small group problem-based activities that are often open-ended and based in real-world scenarios (Jung et al., 2022) to recognize mathematics potential or talent. These activities allow teachers to observe how students respond to challenges.

Gifted ELs benefit from modification, not simplification, to reduce language load and to build on their prior knowledge and experiences (Dulong-Langley & Lusk, 2022). Therefore, asking probing questions and providing strategies (e.g., realia, sentence frames, culture-fair analogies, primary language resources, visuals, body language, translations) in the context of EL math supports can allow sparks of math talent to develop into flames. Eliciting and supporting student thinking aligns to the Cognitively Guided Instruction (CGI) professional learning model (Schoen et al., 2018) and recommendations to improve mathematical problem solving (Woodward et al., 2018) from the What Works Clearinghouse (see the *Support by Promising Evidence* section).

Train-the-Trainer. The train-the-trainer model is an effective, cost-efficient means of professional learning (Suhrehrich, 2011). This model solves the challenge of scaling up projects to reach those committed to a process (e.g., equitable gifted EL identification) who may otherwise not have access to resources (Hiner et al., 2009), thereby reaching more students (Weingarten et al., 2018). Trainers' familiarity with their state's gifted and EL standards and programming can better connect with participants during professional learning delivery (Assemi et al., 2007; Hinds et al., 2001). We will use a train-the-trainer model to scale-up the Project EAGLE intervention. Effective training for trainers must flexibly meet them at their level of readiness and must include: (a) pre-assessing prior knowledge and experience; (b) providing rich content; (c) fostering capacity for conducting efficient workshops (Pancucci, 2007); and (d) infusing practice and feedback for the trainers (Weingarten et al., 2017). Additionally, ongoing support is essential for fidelity of implementation over the course of a school year (Frazier-Goatley et al., 2022; Weingarten et al., 2017). We will create an online support community for our trainers.

Support by Promising Evidence

We based the components of Project EAGLE on research featured in the What Works Clearinghouse. Our dynamic approach of asking probing questions while observing students'

participation in problem-based activities is based on Cognitively Guided Instruction. We will further refine the problem-based activities we will use based on Woodward et al.'s (2018) What Works Clearing House recommendations.

Cognitively Guided Instruction (CGI), from the What Works Clearinghouse, is a professional learning approach to increase math teachers' understanding of students' thinking and improve problem-solving across elementary math domains (Schoen et al., 2018). Through CGI, teachers learn to better understand students' mathematical thinking (Carpenter et al., 2000) by focusing on students' cognitive processing details. It directly affects teachers' knowledge and beliefs about mathematics learning (Carpenter et al., 2020; Schoen et al., 2018). CGI has been effective with special populations, including ELs (Moscardini, 2014) and expands teachers' views on unique ways students demonstrate advanced thinking.

In complement to CGI, the What Works Clearinghouse's guide *Improving Mathematical Problem Solving* (Woodward et al., 2018) includes five relevant recommendations for practice. These are the use of (a) non-routine problems to develop thinking strategically in new ways; (b) a dynamic approach to foster metacognitive strategies; (c) visual representations; (d) flexibility in problem-solving strategies; and (e) discussion of mathematical concepts apart from numbers and operations. These five recommendations will guide the refinement of our problem-based activities.

Performance Feedback and Continuous Improvement

We have commitments (see *Other Attachments* file) from a diverse group of practitioners and scholars to serve as an Advisory Board (see page 28 for brief bios) for this project. They have experience working with ELs, designing and conducting professional learning opportunities, identifying underserved populations, and identifying and developing mathematics talent. We specifically selected members for the Advisory Board who had expertise in each component of Project EAGLE. The group will provide feedback at each stage of the project. We will initially

share our plans at each stage and solicit feedback from them on how we might best proceed. As we work through each stage, we will collect data on its effectiveness, share the data, and discuss how we might improve our work at that stage. We will test and retest each component of Project EAGLE using this process to ensure we make continuous improvement.

We will also involve project participants in our feedback loop for continuous progress. After each activity, participants will reflect on their experiences and provide feedback. For example, in Year 2 we will bring our 8 teachers back to UConn after they have implemented two of the five or six activities to reflect on their successes and challenges. We will use these data to improve the process. Our team will observe activities on site as they unfold throughout the project so we can identify issues and correct them as they occur. All activities will have post assessments. We will also develop an online communication network for trainers and participants to share their successes, challenges, and solutions to challenges with each other.

Management Plan

Timeline, Responsibilities, and Milestones

Phase 1: Years 1, 2, and 3. During the first year of the project, we will bring together our advisory board, and practitioners and scholars in gifted education and mathematics education to review and refine the list of characteristics of mathematically gifted students. We will use the behaviors listed on the *Sparks of Math Talent Observation Checklist* (see *Other Attachments* file) as a starting point. Teachers will ultimately use the *Sparks of Math Talent Observation Checklist* to determine which ones, and how many of them, students exhibit during problem-based activities, and they will use this information to identify students with advanced potential or talent in math. We currently have five problem-based mathematics activities that were developed for another mathematics project to elicit mathematics behaviors that we will modify and adapt for use with the *Sparks of Math Talent Observation Checklist*. As previously noted, the five problem-based

activities cover the mathematics domains of: (a) number sense and operations; (b) algebraic thinking; (c) fractions and decimals; (d) geometry; and (e) measurement, data, and analysis. A given problem-based activity is designed to elicit some behaviors on the *Sparks of Math Talent Observation Checklist*, but not others.

During Year 1, we will modify the five problem-based math activities and possibly develop a sixth if necessary, so the set of problem-based activities elicit the full list of behaviors on the *Sparks of Math Talent Observation Checklist*. We anticipate this alignment process between the *Sparks of Math Talent Observation Checklist* behaviors and the problem-based mathematics activities will involve multiple field tests with refinements after each. These will occur in two or three classrooms with 3rd and 4th grade students. Our goal for Year 1 is to finalize a set of five to six problem-based activities that as a group elicit the full set of *Sparks of Math Talent Observation Checklist* behaviors that the research literature, scholars, and practitioners agree indicate talent in mathematics. We will develop a list of accompanying critical and creative thinking questions that teachers can use as prompts with students during the problem-based activities to elicit *Sparks of Math Talent Observation Checklist* behaviors. It is the coupling of teachers' use of the *Sparks of Math Talent Observation Checklist* behaviors while observing students' participation in the aligned problem-based math activities that constitutes the dynamic identification component of Project EAGLE. We will also create training videos of teachers using the problem-based activities.

Finally, in Year 1 we will develop a professional learning session to use with teachers in Year 2. The professional learning session covers how to integrate the *Sparks of Math Talent Observation Checklist* with the problem-based activities and how to use questioning prompts to elicit *Sparks of Math Talent Observation Checklist* behaviors in EL students. The professional learning will include activities for teachers to better understand the characteristics of mathematically gifted ELs.

In Year 2, we will pilot the Project EAGLE professional learning sessions with eight teachers

who will then use the *Sparks of Math Talent Observation Checklist* with each of the five or six accompanying problem-based activities over the course of the year. Early in the school year, we will provide one day of professional learning at the University of Connecticut with time for the teachers to engage in activities to learn the characteristics of mathematically gifted ELs in the context of the EL population heterogeneity (e.g., native language, culture, socio-economic status, prior educational experience, current EL status). Teachers will practice using the *Sparks of Math Talent Observation Checklist* by watching videos we specifically create using our problem-based activities to determine which questions they would use to elicit gifted EL behaviors.

We anticipate recruiting educators from Massachusetts, Rhode Island, and Connecticut. Over the course of the year, each educator will implement the Project EAGLE process of using the *Sparks of Math Talent Observation Checklist* with problem-based activities five or six times (once for each of the five or six problem-based activities). Members of our research team will visit each educator twice to observe their sessions. We will stagger the observations to cover all five or six problem-based activities. After the educators have completed two sessions, we will bring the group of eight teachers back to the University of Connecticut for a one-day debriefing where they share their experiences. We will use this feedback to refine the process to make continuous progress.

In Year 3, we will implement Project EAGLE in 10 schools. We anticipate this to be approximately five districts composed of one or more schools. Our team will conduct on-site training in each district for teachers in Grades 3 and 4. Throughout the year, the teachers will use the *Sparks of Math Talent Observation Checklist* while observing student participation in the aligned problem-based math activities as they identify students who show mathematics talent. We expect these teachers to nominate students they identify for their school's gifted education services.

Project EAGLE personnel will conduct classroom observations and focus group interviews at each of the 10 schools. This data will allow us to further refine the *Sparks of Math Talent*

Observation Checklist, the problem-based activities, the questions to elicit *Spark* behaviors, and the teacher professional learning materials. During this year, we will also transform our professional learning sessions from direct provision to a train-the-trainer model in preparation for Year 4. We will determine Project EAGLE's efficacy by collecting school data on increases in the number of EL students nominated for admission for gifted services in our participating schools.

Phase 2: Years 4 and 5. In Year 4, we will implement a train-the-trainer model by building a cadre of teachers in three states to train classroom teachers, gifted specialists, and EL teachers across their state. We anticipate conducting Phase 2 (train-the-trainer) in Arizona, Texas, and Colorado during Year 4. See *Other Attachments* file for letters of interest. We will work with the state department gifted and talented specialist and/or the state gifted association to implement a statewide call for individuals who would be interested in serving as trainers. We will select five trainers in each of the three states for a total of 15 trainers. The trainers must have background in working in gifted education, conducting professional learning, and working with EL students. We will encourage participation from individuals who are members of groups who have traditionally been underrepresented in gifted programs.

We will bring the trainers to the University of Connecticut for one week in the summer of 2025 (end of Year 3). They will attend one week of Confratute, the internationally recognized conference/institute on gifted education held each summer on campus. We will build the Project EAGLE training into their Confratute experience around two areas: how to implement the Project EAGLE identification process and how to conduct an effective professional learning workshop.

The Project EAGLE identification component of their Confratute experience includes information about (a) gifted EL characteristics and diversity; (b) levels of English acquisition and models of program delivery for ELs; (c) spotting math talent in ELs (including those with multi-exceptionalities, latent versus manifest displays of talent); (d) conducting effective problem-based

activities to elicit gifted behaviors; (e) selecting effective critical and creative thinking questioning prompts to elicit math behaviors; and (f) how to use the *Sparks of Math Talent Classroom Observation Checklist* with the problem-based activities.

The professional learning component of their Confratute experience includes information about processes to (a) pre-assess participants' prior knowledge and differentiate accordingly; (b) build an atmosphere of collaboration and group problem-solving; (c) infuse creativity into essential content and delivery as warranted; (d) address participants' understanding of, attitude towards, and readiness to implement Project EAGLE; and (e) moderate an online forum to provide reminders and supports for participants throughout their implementation year. During these sessions, trainers will practice presenting and receive constructive, supportive feedback. We will develop measures to assess the participants' progress during the week. After the sessions, they will have access to a moderated train-the-trainer online forum that will provide continued collegial sharing to support successful implementation of their professional learning. This is part of our feedback and continuous progress plan.

Throughout Year 4, the trainers will provide professional learning to classroom teachers, gifted specialists, and EL teachers in one-day workshops. Educators at schools who wish to implement the Project EAGLE process to increase the number of EL students nominated for gifted services will attend the workshops. Each trainer will conduct a minimum of five workshops in their state. In addition to the research team, the state gifted specialists and/or state gifted association will assist in promoting these workshops. The workshops may be a combination of teachers from several districts attending a single workshop or a workshop for a single large district for a cohort of teachers. We anticipate 1,500 teachers will be trained in Project EAGLE across the three states.

The workshop participants will be trained and assessed in how to use the *Sparks of Math Talent Observation Checklist* with the problem-based activities in their classrooms to identify EL and

other diverse students who were overlooked in their school’s regular talent identification process. Participants will agree to implement the process in their schools and track nominations of students for gifted services based on the implementation. Throughout the year, the trainers will maintain a forum for their participants to provide continued collegial sharing to support successful implementation of the *Sparks of Math Talent Observation Checklist* use with problem-based activities. Ultimately, we will determine the efficacy of the project by the numbers of teachers who actually implement the dynamic approach and the increase in the number of EL nominations for admission for gifted services.

In Year 5, we will continue to follow the use of the identification system in the schools where it was implemented in Year 4. We will synthesize the data and write articles, summaries, and brochures. We will use what we learn from our experience and participants’ data to finalize professional learning modules on training the trainers and implementing Project EAGLE. We will additionally review the outcomes to develop recommendations for how Project EAGLE components may be used or adapted for other underrepresented populations. We will be expanding our website for use by others who will want to use our dynamic approach after the project is finished. We will also share Project EAGLE at state and national conferences. Figure 1 shows an overview of the 5 years.

The leadership team will ensure project goals, objectives, and outcomes are accomplished with the highest level of quality and in a timely manner. Table 1 shows the project milestones, a timeline of the year or years we will implement them, and who will be responsible. The following codes are used to indicate project personnel participation: 1=PI; 2=Co-PI and Director of Research; 3=Project Director; 4=Postdoctoral Research Associate; 5=Data Research Scientist; 6=Data Research Assistant; 7=Executive Program Director; 8=Technology Support; 9= Graduate Assistant; 10=Trainers/Professional Learning Providers; and 11=Teachers.

Table 1

Phase 1 Timeline, Responsibilities, and Milestones (Numbers in Parentheses Indicate Personnel Involved Using Codes on Page 19)

Milestone \ Year	Phase 1		
	Yr. 1: Development	Yr. 2: Refinement	Yr. 3: Validation
Advisory Board	-- 1 to 2 day working meeting (1, 2, 3, 4, 5, 6, 9) --		
Recruitment	Field test sites for Year 2 (1, 3, 4)	Pilot sites for Year 3 (1, 3, 4)	Implementation for Year 4 (1, 3, 4)
Literature Review	Gifted math behaviors, problem activities, questioning (3, 4, 9)	Train-the-trainer model (3, 4, 9)	
Training Development	<i>Sparks</i> checklist, lessons, videos, and questions (1, 3, 4, 9)	Project EAGLE workshop (1, 3, 4, 9)	Train-the-trainer model and online forum (1, 3, 4, 9)
Measures Development	Fidelity of implementation checklists; field test surveys; focus group interview protocols; classroom observation protocols; train-the-trainer pre, post, and end of year surveys (1, 2, 3, 4, 5, 6, 9)		
Implementation	See Figure 1 (1, 3, 4, 9)		
Data		Collect (3, 4, 9) and analyze data (checklists, surveys, focus group interviews, classroom and workshop observations; 1, 2, 3, 4, 5, 6, 9)	
Dissemination	Project EAGLE website and conference presentations (1, 2, 3, 4, 5, 6, 8, 9)		
Reports	Write and submit annual report (1, 3, 7)		

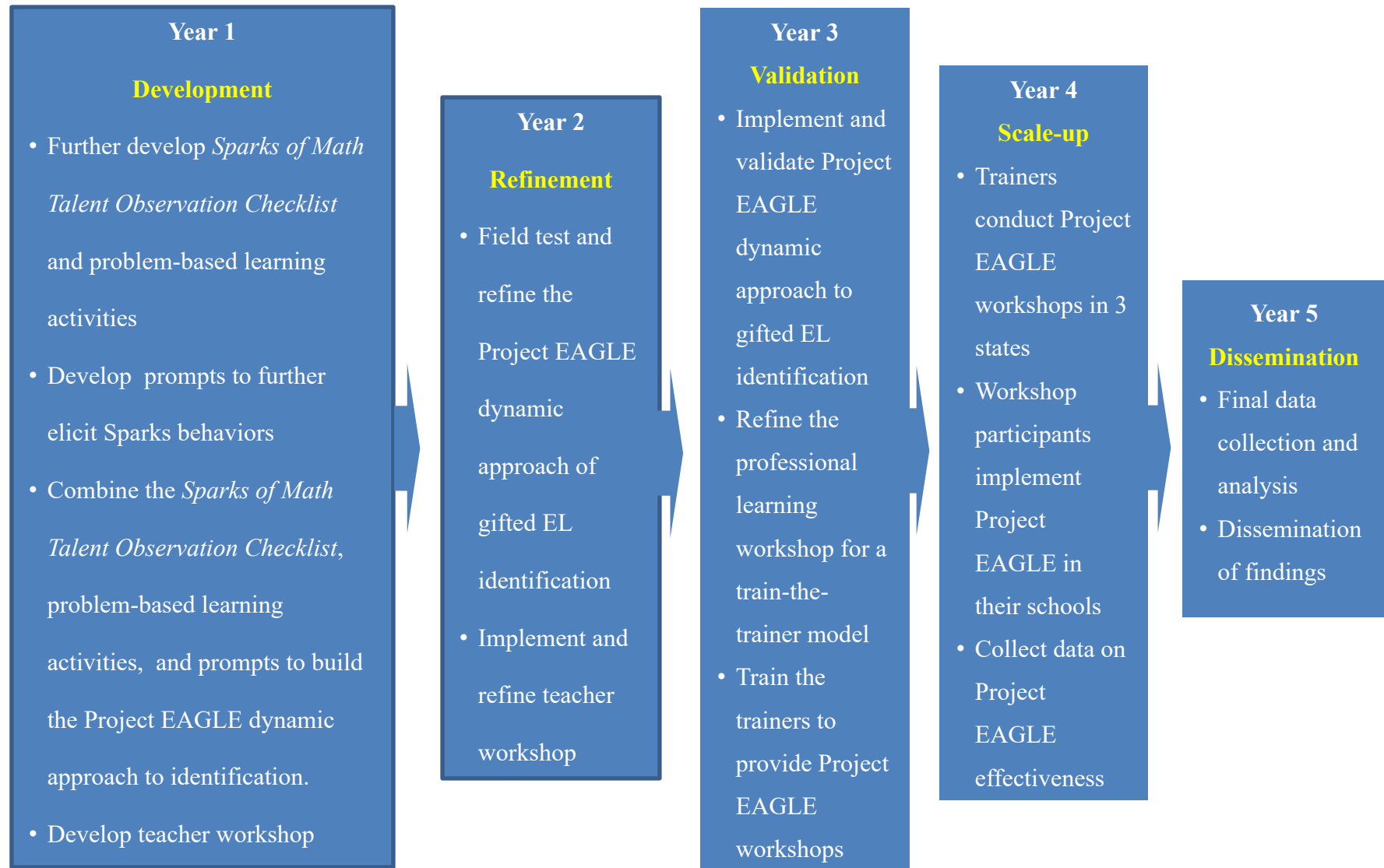
Table 2

Phase 2 Timeline, Responsibilities, and Milestones (Numbers in Parentheses Indicate Personnel Involved Using Codes on Page 19)

Year Milestone	Phase 2	
	Yr. 4: Scaling Up	Yr. 5: Dissemination
Advisory Board	-- 1-2 Day Working Meeting (1, 2, 3, 4, 5, 6, 9) --	
Implementation	Scale Up Project EAGLE: Train-the-trainers (3, 4, 9); trainers conduct workshops (10); teachers implement Project EAGLE lessons and make gifted EL nominations (11)	Some teachers continue to implement Project EAGLE lessons and make gifted EL nominations (11)
Data	Collect (3, 4, 9) and analyze data (fidelity checklists, surveys, focus group interviews, classroom and workshop observations; 1, 2, 3, 4, 5, 6, 9); Analyze gifted EL identification data (2, 5, 6)	Analyze remaining data and synthesize findings (1, 2, 3, 4, 5, 6, 9)
Dissemination	Project EAGLE website and conference presentations, articles, and brochures (1, 2, 3, 4, 5, 6, 8, 9)	
Reports	Write and submit annual report (1, 3, 7)	Write and submit final report (1, 3, 7)

Figure 1

Highlights of Five-Year Plan



Continuous Improvement Plan

Our continuous improvement plan involves planning project activities, seeking feedback from experts on our planned activities, field testing the activities, receiving feedback from stakeholders involved in the activities, revising the activities based on feedback, and ultimately implementing the activities. The 5-year plan for the project reflects continuous improvement as we move through the stages from development to refinement, to validation, to scale-up, to ultimately dissemination.

Our Advisory Board members are key to this process. They were individually selected based on their unique areas of expertise related to this project. They will be consulted as we develop activities, and we will share the outcomes of those activities with them as we seek their guidance on ways to improve our work.

Participants in our planned activities are also key to this process. Through observations of, interviews with, and feedback forms from participants, we will evaluate the success of our activities and improve them as needed. During the weeklong professional learning for the trainers, we will monitor our trainers' mastery of the dynamic approach and their comfort in conducting professional learning workshops. Data we collect from participants in their workshops (e.g., understanding of the dynamic approach, comfort implementing the dynamic approach) will allow us to evaluate the trainers' effectiveness and assist them in improving. Our review of online communication network posts will also assist us in determining the effectiveness of workshops and necessary modifications.

The Principal Investigator and Project Director will oversee all aspects of the project and ensure they occur on time. They will work with Advisory Board members to certify all activities are executed at a high level as proposed in this document.

Project Services

As previously noted, Project EAGLE consists of two phases. In the first phase, we will use the Cognitively Guided Instruction process from the What Works Clearinghouse to refine a dynamic

approach for identifying ELs with math talent. We will do this by providing all students with an opportunity to work in small groups on problem-based activities while their teacher interacts with them, observes their actions, and looks for behaviors that indicate math talent. We will spend 2 years refining and validating the effectiveness of the process to document its ability to increase the number of EL students who are nominated for gifted services.

In the second phase of the project, we will implement a train-the-trainer model to extend the impact of our work. We will train a cohort of 15 trainers across three states. These trainers will conduct free workshops in their states to educators interested in implementing a dynamic approach for increasing the number of underserved students nominated for gifted services.

Sufficiency of Equal Access and Treatment Strategies

We already have commitments from two state department gifted and talented specialists and one state gifted association director to assist with recruiting participants and promoting Project EAGLE in their states. We will also attend each state's gifted and talented state conference and promote the program. We will have an open call for teachers to serve as talent trainers, and we will make an extra effort to encourage educators from underserved groups to apply. Having state department gifted and talented specialists and state gifted association personnel assist in promoting participation across the state in the trainer workshops will also ensure equal access to attend a workshop.

The Project EAGLE talent-seeking activities are conducted in classrooms with all students. Although our primary goal is to increase the number of ELs who are nominated for gifted services, we expect that teachers will recognize talents across all student populations. Therefore, we are providing equal access to the treatment strategies across the entire classroom student population.

Our extensive testing of the Project EAGLE process during Phase 1 in classrooms with teachers ensures that the services we provide in Phase 2 through our train-the-trainer model have been

thoroughly vetted. The project services are designed to create a validated identification process that will be accepted by educators because we have a system that is cost-efficient, addresses the recurring problem of underidentification, does not require extensive effort, and fits within education/classroom practices.

Impact of Services

Our 15 trainers (5 from each of 3 states) will each provide 5 professional learning workshops on the Project EAGLE process. We expect an average of 20 participants at each workshop. This will train 1,500 classroom teachers, gifted specialists, and EL teachers. If only 20% (we expect the percentage to be closer to 40%, but we are providing a conservative estimate) of them return to their classrooms and fully implement Project EAGLE, they will reach over 6,000 students. We anticipate a 10% increase in EL nominations for gifted services in schools where teachers were trained and implemented the Project EAGLE program.

Throughout the 5 years we will build an extensive website where those who are not officially participating in the program also can learn the Project EAGLE process. We will also present our work at state and national conferences to extend the impact of services.

Project Personnel

Our team brings a track record of success on multiple research projects, including identification issues of underserved populations; expertise in working with underserved populations in different settings; and leadership in gifted education. We selected project personnel for their expertise related to the project objectives.

Senior Personnel

Del Siegle, Ph.D. will serve as PI. He is the Lynn and Ray Neag Endowed Chair for Talent Development at the University of Connecticut (UConn). He has successful grant management experience as Director and Principal Investigator of the National Center for Research on Gifted

Education (NCRGE), PI for an Exploratory Study on the Identification of EL in Gifted and Talented Programs (funded by the Office of English Language Acquisition), and PI for Project BUMP UP (Building Up Mathematics Proficiency Utilizing Push-in [funded by the Javits program]). These reflect research experience in identification of underserved populations, identification and services specific to the EL population, and identification and services for mathematics achievement with an emphasis on underserved populations. Project EAGLE reflects the intersection of this work. He is a former elementary gifted and talented teacher and former mathematics teacher. He will provide overall supervision of this project and be responsible for all communications. He will participate in developing and refining the dynamic approach material and work with the professional development team on training materials for the study participants. Dr. Siegle is a well-respected workshop presenter and leader in gifted and talented education.

Betsy McCoach, Ph.D. will serve as a co-principal investigator and director of research. She is a Professor in the Research, Measurement, and Evaluation Program at UConn. She received her Ph.D. in both research measurement and gifted education. Dr. McCoach has served on numerous federal grant review panels because of her expertise in research design. Dr. McCoach will lead the project's methodological team, overseeing all issues related to study design, data gathering and data management, measurement, and statistical analyses. Dr. McCoach has co-authored over 200 peer-reviewed journal articles, book chapters, and books. She has served as Principal Investigator, Co-Principal Investigator, and research methodologist for numerous federally-funded projects.

Susan Dulong Langley, Ph.D. will oversee the project as a post doc. She serves as the director for Project BUMP UP at UConn with responsibilities for (a) developing advanced elementary math differentiation; (b) delivering professional learning to spot math talent in underrepresented populations; and (c) conducting classroom observations and interviews. She is a former K–8 gifted specialist and professional learning provider in a diverse district (70 world

languages). She provided pullout and push-in services. She implemented *Primary Education Thinking Skills* activities (Nichols et al., 2012) to help classroom teachers spot talent in underrepresented populations. She is the author (3rd ed.) and co-author (4th ed.) of “Accommodations for English Language Learners” in *Content-based Curriculum for High-Ability Learners*. As Project Director, she will coordinate: (a) refining checklists, lessons, and questions; (b) designing professional learning; (c) overseeing fidelity of implementation and observations; (d) conducting observations and focus group interviews; and (e) co-writing reports with Dr. Siegle.

Other Personnel

Postdoctoral Research Associate to be Named. We will hire a post doc with experience working with ELs. We will encourage applications from persons who are members of groups that have traditionally been underrepresented and who are also fluent in Spanish, the predominant language of ELs in the states where we expect to work. The post doc will assist in refining the *Sparks of Math Talent Observation Checklist* and problem-based activities, developing and providing the professional learning sessions, recruiting participants, and conducting interviews and observations.

Daniel Long, Ph.D. will serve as a research scientist. Prior to joining the University of Connecticut as a research scientist for the NCRGE, he worked for the Philadelphia Education Research Consortium. Dr. Long has extensive experience in data management and statistical analysis. He will collaborate with Dr. McCoach on data analysis, as well as preparing manuscripts for publication.

Sarah Newton, Ph.D. will serve as research assistant. She has experience managing databases and data management systems for funded research projects. She will assist with refinement of measurement instruments and will help develop and oversee the implementation of the data

management plan and system.

Lisa Muller will serve as the Executive Program Director. She has coordinated multiple previous grants through the Renzulli Center and the National Research Center on the Gifted and Talented. Her primary responsibilities will include arranging professional development efforts and providing support for budget management.

Siamak Vahidi, Ph.D. will assist with technology needs that include graphic designing of training material and maintaining the project website.

Advisory Board

Our previous grant experiences demonstrated the importance of having an Advisory Board. Therefore, we are proposing a diverse group of policymakers, scholars, and practitioners. The five members will meet as a group once each year and will be consulted on all aspects of this Project. They will monitor progress, including instrumentation development and testing, professional development for participants, data analysis, and outreach activities. *This board feedback loop ensures review of, and continuous improvement in, the project operations.* Advisory Board members will include:

Jaime A. Castellano, Ph.D. has expertise in identification, assessment, recruitment, and retention of low-income, culturally and linguistically different gifted students. Dr. Castellano has had success increasing the numbers of ELs in gifted programs in districts across the country. He has served as a gifted specialist, assistant principal, principal supervising gifted programs, district-level gifted coordinator and director, and state department of education specialist in the field. He has authored multiple chapters, articles, and monographs on underserved populations.

Dina Brulles, Ph.D. is the Gifted Program Coordinator with the Mary Lou Fulton Teachers College and director of gifted education in the Paradise Valley Unified School District in Arizona. Her work emphasizes inclusive identification and programming in gifted education. She received

the 2020 and the 2019 NAGC Book of the Year Award (Practitioners), the 2014 NAGC Gifted Coordinator Award, and NAGC's Professional Development Network Award in 2013. She has actively supported and served as a mentor for the Javits-Frasier Scholarship Program since 2010 and has supported others in developing diverse gifted learners' passions, potential, and aspirations.

Kathy Escamilla, Ph.D. is a Professor of Education in the Division of Social, Bilingual and Multicultural Foundations at the University of Colorado – Boulder. She has served two terms as the president of the National Association for Bilingual Education, was recently appointed as a co-editor of the *Bilingual Research Journal* and has served as the chairperson of the Bilingual SIG for the American Education Research Association (AERA).

Marcy Voss, M.Ed. serves as an EL Coach, curriculum writer, and staff development trainer. She is the author of the Academic Language Cards, which provide activities using sentence stems requiring higher level thinking. As a former elementary and middle school educator, she has extensive experience working with and identifying gifted EL students.

M. Katherine Gavin, Ph.D. has over 30 years of experience in education as a mathematics teacher, math district coordinator, elementary assistant principal, and associate professor. The focus of her research is the development and evaluation of advanced math curriculum. She directed Project M³: Mentoring Mathematical Minds and NSF Project M²: Mentoring Young Mathematicians. She has published numerous articles and book chapters on gifted mathematics education.

Our diverse Advisory Board combined with our research team provides an array of expertise in identification of gifted EL students, professional development, math education, research design and data analysis, gifted education programming, and educational issues related to underserved populations.

Adequacy of Resources

Founded in 1881, the **University of Connecticut** is a school of choice for academically talented students and has been repeatedly ranked as the top public university in New England and is designated a Carnegie Foundation Research University-Extensive, a distinction shared by fewer than four percent of America's higher education institutions. UConn's Office of the Vice President for Research offers a full suite of support services for externally funded projects. The **Neag School of Education** is a major contributor to the University's instructional and research programs. The Neag School is consistently ranked among the top 20 schools of education in the nation. The Neag School has two dedicated personnel who offer pre- and post-award support for funded projects. The **Renzulli Center for Creativity, Gifted Education, and Talent Development** is one of the leading centers in the world in the area of gifted education and talent development. A central emphasis of the Center is a focus on the development of potential or talent in groups not ordinarily included in special programs for the gifted and talented. Located in its own building, the Center houses a staff experienced in grant management, the latest technology, and spacious areas to accommodate the Project EAGLE research team.

In the budget narrative, we provide details how the project activities will be financially supported. We also describe the role each personnel will play in the project.

Each year, tens of thousands of talented young people are overlooked for gifted services simply because they learned a language other than English as a child. Their teachers focus on their limited English skills and fail to recognize the brilliant mind they possess. Project EAGLE addresses this issue by creating learning situations where their math talent and potential can be recognized. Over the course of the project, we anticipate training 1,500 teachers in Project EAGLE's dynamic approach. As a result, thousands of students will have an opportunity to demonstrate their math talent and possibly be identified for gifted services. Project EAGLE will make this possible.

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Table of Contents for Other Attachments

Project EAGLE

(Eliciting Advanced Gifted Learning Evidence)

Bibliography	2
Individual Resumes for Key Personnel and Select Other Personnel	10
Del Siegle.....	10
D. Betsy McCoach	14
Susan Dulong Langley	18
Daniel Long	22
Sarah Newton.....	26
Letters of Support	30
Colorado Department of Education	30
Arizona Department of Education	31
Texas Association for the Gifted	32
Neag School of Education Dean.....	33
Copies of Email Confirmations from Each Advisory Board Member	34
Sparks of Talent Checklist.....	37
SF 424 Answers to Questions 14 and 16b.....	38
University of Connecticut Indirect Cost Rate Agreement.....	40

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EDUCATION:

- Ph.D. in Special Education (Gifted and Talented/Educational Psychology), University of Connecticut, Storrs, CT, 1995.
- M.Ed. in Curriculum (Gifted and Talented Education), Montana State University–Billings (Eastern Montana College), Billings, MT, 1989.
- B.S. in Elementary Education (Mathematics Emphasis), Montana State University–Billings (Eastern Montana College), Billings, MT, graduated Summa Cum Laude, 1983.

UNIVERSITY POSITIONS:

- 2020- *Lynn and Ray Neag Endowed Chair for Talent Development*
- 2017- 2019 Associate Dean for Research and Faculty Affairs, Neag School of Education, University of Connecticut
- 2011-2017 Head, Department of Educational Psychology, University of Connecticut
- 2011- Full Professor, Department of Educational Psychology, University of Connecticut
- 2003-2011 Associate Professor (granted tenure 2003); Department of Educational Psychology; University of Connecticut
- 2001-2003 Assistant Professor; Department of Educational Psychology; University of Connecticut
- 1999-2001 Assistant Professor in Residence; Department of Educational Psychology; University of Connecticut
- 1995-1999 Assistant Professor; Department of Foundations, Technology, and Secondary Education; Boise State University

RECENTLY FUNDED NATIONAL GRANTS:

- Siegle, D. (PI), McCoach, D. B., Gubbins, E. J., Little, C. A., & Rhoads, C. (September 2020-August 2025). National Center for Research on Gifted Education. Funded \$5,000,000.
- Siegle, D. (PI), Gubbins, E. J., & McCoach, D. B. (October. 2019-September. 2024). Building Up Mathematics Proficiency Utilizing Push-in. U.S. Department of Education. Funded, \$2,806,175.
- Siegle, D. (PI), McCoach, D. B., Callahan, C. M., Gubbins, E. J., & Rhoads, C. (Oct. 2017-Sept. 2019). National Center for Research on Gifted Education: What Works. IES. Funded, \$2,000,000.
- Siegle, D. (PI), McCoach, D. B., Callahan, C. M., Gubbins, E. J., & Rhoads, C. (Oct. 2017-Sept. 2019). *National Center for Research on Gifted Education: What Works*. IES. Funded, \$2,000,000.
- Siegle, D. (PI), McCoach, D. B., Callahan, C. M., Gubbins, E. J., Rhoads, C., & Montrosse-Moorhead, B. (Oct. 2016-Sept. 2017). *National Center for Research on Gifted Education: What Works*. IES. Funded \$1,000,000.

- Siegle, D. (PI), McCoach, D. B., Callahan, C. M., & Gubbins, E. J. (May. 2016 – Dec. 2016). *National Center for Research on Gifted Education: Incentive Supplement*. IES. Funded \$40,131.
- Siegle, D. (PI), McCoach, D. B., Callahan, C. M., Gubbins, E. J., Plucker, J.A.,...Renzulli, J. S. (Oct. 2014 – Dec. 2016). *National Center for Research on Gifted Education: What Works: Supplement*. IES. Funded \$125,576.
- Siegle, D. (PI), McCoach, D. B., & Gubbins, E. J. (February, 2015 – December, 2016). *National Center for Research on Gifted Education: EL Project*. IES. Funded \$600,000.
- Siegle, D. (PI), McCoach, D. B., Callahan, C. M., Gubbins, E. J., Plucker, J.A.,...Renzulli, J. S. (Oct. 2014 – Dec. 2016). *National Center for Research on Gifted Education: What Works*. IES. Funded \$2,000,000.

SELECT EDITORIAL POSITIONS:

- *Gifted Child Quarterly*, co-editor, 2012 – 2017
- *Journal of Advanced Academics*, co-editor, 2006 – 2011
- *Gifted Child Today* Editorial Advisory Board, 2001 – present

SELECT AWARDS:

- 2021 National Association for Gifted Children Ann F. Isaacs Founders Memorial Award
- 2018 National Association for Gifted Children Distinguished Scholar
- 2016 University of Denver Palmarium Award 2018 National Association for Gifted Children Distinguished Scholar
- 2014 Montana Association for Gifted and Talented Education (Montana AGATE) Friend of AGATE Award.
- 2012 Connecticut Association for the Gifted (CAG) Friend of the Gifted Award
- 2011 National Association for Gifted Children Distinguished Service Award
- 2004 ITAG Gem Award
- 2004 University of Connecticut Teaching Fellow.
- 2004 Neag School of Education Outstanding Alumni Young Investigator Research.
- 2001 National Association for Gifted Children Early Leader Award
- 2001 Pi Lambda Theta Beta Sigma Outstanding Educator

SELECT RECENT PUBLICATIONS:

- Gubbins, E. J., Siegle, D., Ottyone-Cross, K. Dulong Langley, S., Callahan, C., Brodersen, A., Caughey, M., & McCoach, D. B. (2021). Identifying and serving gifted and talented students: Are identification and services connected? *Gifted Child Quarterly*, 65(2), 115-131. <https://doi.org/10.1177/0016986220988308>
- Siegle, D., & McCoach, D. B. (2020). Underachievers. In In J. Plucker & C. Callahan (Eds.), *Critical issues and practices in gifted education: What the research says* (3rd. ed., pp 521-534). Prufrock Press.
- Hamilton, R., Long, D., McCoach, D. B., Hemmler, V., Siegle, D., Newton, S. D., Gubbins, E. J., & Callahan, C. M. (2020). Proficiency and giftedness: The role of language comprehension in gifted identification and achievement. *Journal for the Education of the Gifted*, 43(4), 370-404. <https://doi.org/10.1177/0162353220955225>

- Gubbins, E. J., Siegle, D., Peters, P. M., Carpenter, A. Y., Hamilton, R., McCoach, D. B., Puryear, J. S., Langley, S. D., & Long, D. (2020). Promising practices for improving identification of English learners for gifted and talented programs. *Journal for the Education of the Gifted*, 43(4), 336-369. <https://doi.org/10.1177/0162353220955241>
- Mun, R. U., Hemmler, V., Langley, S. D., Ware, S., Gubbins, E. J., Callahan, C. M., McCoach, D. B., & Siegle, D. (2020). Identifying and serving English learners in gifted education: Looking back and moving forward. *Journal for the Education of the Gifted*, 43(4), 297-335. <https://doi.org/10.1177/0162353220955230>
- McCoach, D. B., Siegle, D., & Rubenstein, L. D. (2020). Pay attention to inattention: Exploring ADHD symptoms in a sample of underachieving gifted students. *Gifted Child Quarterly*, 62(2), 100-116. <https://doi.org/10.1177/0016986219901320>
- Hamilton, R., McCoach, D. B., Tutwiler, M. S., Siegle, D., Gubbins, E. J., Callahan, C. M., Brodersen, A. V., & Mun, R. A. (2018). Disentangling the roles of institutional and individual poverty in the identification of gifted students. *Gifted Child Quarterly*, 62, 6-24. <https://doi.org/10.1177/0016986217738053>
- Rimm, S. B., & Siegle, D., Davis, G. A. (2018). *Education of the gifted and talented* (7th ed.). Boston, MA: Pearson.
- Siegle, D., McCoach, D. B., & Roberts, A. (2017). Why I achieve determines whether I achieve. *High Ability Studies*, 28, 59-72. <https://doi.org/10.1080/13598139.2017.1302873>
- Siegle, D., Gubbins, E. J., O'Rourke, P., Dulong Langley, S., Mun, R. U., Luria, S. R., Little, C. A., McCoach, D. B., Knupp, T., Callahan, C. M., & Plucker, J. A. (2016). Barriers to underserved students' participation in gifted programs and possible solutions. *Journal for the Education of the Gifted*, 39, 103-131. <https://doi.org/10.1177/0162353216640930>

SELECT ORGANIZATION LEADERSHIP POSITIONS:

- 2021-2023 Treasurer, Research on Giftedness, Creativity and Talent SIG of American Educational Research Association
- 2021-2022 U.S. Delegate to World Council for Gifted and Talented Children
- 2014-2016 Chair, Research on Giftedness, Creativity and Talent of the American Educational Research Association
- 2007-2009 President, National Association for Gifted Children (NAGC)
- 1997-2011 National Board of Directors – Council for Exceptional Children – The Association for the Gifted Division (CEC-TAG)

SELECT CONFERENCE PRESENTATIONS:

International Presentations

- Siegle, D. (2021, Aug. 31 - Sept. 2). *Understanding motivation: What I believe determines whether I achieve*. Gifts and Talents: Values for the Future. 17th International ECHA Virtual Conference, Porto, Portugal. <https://echa2021.org>
- Siegle, D. (2020, November 14). *Understanding and addressing underachievement motivation issues* [Keynote]. 9th National Meeting of ConBraSD and 2nd International Forum on Education Solutions – Connections 2020, Brazil, Virtual.
- Siegle, D., & Reis, S. M. (2020, February 1). *Motivation* [Keynote]. I XORNADA SEMGAL: Training Program for SEMGAL Schools, Pontevedra, Spain.
- Siegle, D. (2019, April). Keynote: *Getting to the heart of the matter: What I've learned from gifted children*. Keynote at the International Research Association for Talent Development

- and Excellence, Taipei, Taiwan.
- Siegle, D. (2018, September). Keynote: *Understanding gifted students' motivation and underachievement*. Keynote at the 6. Munsterscher Bildungskongress, Munster, Germany.
- Siegle, D. (2016, October). Keynote: *Contributing factors to students' underachievement and possible solutions*. Australian Association for Education of Gifted and Talented, Sidney, Australia.
- Siegle, D. (2016, May). *The special needs of gifted students: An international perspective*. Keynote at the 1st International Conference of Intellectual Giftedness, Mexico City, Mexico.
- Siegle, D. (2014, August). Keynote: *Making a difference—Factors that contribute to an achievement orientation attitude*. The 13th Asian Pacific Federation on Giftedness Conference on Giftedness, Beijing, China.
- National Presentations**
- Siegle, D. (2022, March 13-15). *Current issues in gifted education and possible directions forward*. 2022 NAGC Leadership and Advocacy Conference, Alexandria, VA.
- Gubbins, E. J., Haas, B., Peters, S., Siegle, D., Assouline, S. (2021, November 10-14). *Identifying current issues in gifted identification*. Panel discussion at the 68th annual convention of the National Association for Gifted Children, Denver, CO.
- Siegle, D., & McCoach, D. B. (2021, November 8-10). *Rethinking gifted education: Where is gifted education going from here?* Presentation at the Council for State Directors of Programs for the Gifted (CSDPG) Meeting, Virtual.
- Siegle, D., Behrens, W., Hafenstein, N., & Kaplan, S. (2021, October 27-28). *Implications for gifted identification and services based on NCRGE research*. Presentation at the U.S. Department of Education's Javits Program Directors' Meeting, Virtual.
- Langley, S. D., Siegle, D., Gubbins, E. J., & Little, C. A. (2021, April 9-12). *Identifying discourses about gifted English learners for equitable identification*. Accepting Educational Responsibility: 2021 AERA Virtual Annual Meeting.
- Siegle, D., & Gubbins, E. J. (2021, March 11-12). *15 tips for improving identification of gifted EL students*. William & Mary National Curriculum Network Conference, Virtual.
- Siegle, D. (2019, March). *Strategies to increase equity: What we are learning from research (NCRGE's first three years' findings)*. Presentation at the National Association for Gifted Children's Leadership & Advocacy Conference, Washington, DC.
- Siegle, D., Gubbins, E. J., Callahan, C. M., Hamilton, R., & Brodersen, A. V. (2018, November). *NCRGE's first three years' findings on identifying and serving underserved populations*. Presentation at the 65th annual convention of the Association for Gifted Children, Minneapolis, MN.
- Siegle, D. (2018, July). Keynote: *Why increasing equity in gifted education is important and what you can do about it*. Edufest, Boise, ID.
- Siegle, D., McCoach, D. B., Gubbins, E. J., Long, D., & Hamilton, R. (2018, November). *Gifted identification gap: When just as good is not good enough*. Presentation at the Institute of Education Sciences' Annual Principal Investigators Meeting. Arlington, VA.
- Gubbins, E. J., Puryear, J., Hamilton, R., Siegle, D., Mun, R. U., Carpenter, R., Peters, P., & Bloomfield, E. (2017, November). *Exploratory study on the identification of English learners in gifted and talented programs*. Presentation at the 64th annual convention of the Association for Gifted Children, Charlotte, NC.

D. Betsy McCoach, Ph.D.

Professor, Research Methods, Measurement, and Evaluation program
Neag School of Education, University of Connecticut

ORCID 0000-0001-9063-6835

Education

2003 Ph.D. in Educational Psychology, University of Connecticut, Storrs, CT

Professional Experience

2003- *Professor*, Educational Psychology Department, University of Connecticut.
Responsibilities include teaching graduate level courses in latent variable modeling, quantitative research methods, measurement, and instrument design. (Professor, 2014-present, Associate 2008-2013, Assistant 2003-2008).

Funded Grants

2020-2025 Co-Principal Investigator, National Center for Research on Gifted Education. Funding Source: Institute for Education Sciences, U. S. Department of Education. (\$5 million). (PI- Del Siegle.)

2019-2024 Co-Principal Investigator, Project Bump Up. Department of Education (PR/Award#S206A190028). \$2.5 Million (PI: Siegle)

2019-2024 Co-Principal Investigator, Evaluating the Impact of Integrated Behavior and Reading Multi-Tiered Systems of Support in Elementary Schools (R324A190012). Funding Source: Institute for Education Sciences (\$3,999,589). PI: Michael Coyne.

2017-2022 Co-Principal Investigator, *Science of learning, from neurobiology to real-world application: a problem-based approach*. Funding Source: NSF (\$3 million) PI: James Magnuson.

2017-2019 Co-Principal Investigator, *Factors Affecting Comprehension by Teens During Online Reading in Science: The FACTORS Project*. Funding Source: IES (\$600,000). PI: Don Leu.

2014-2020 Co-Principal Investigator, National Center for Research on Gifted Education. (CFDA Number 84.305C). (\$5.7 million). PI- Del Siegle.

2014-2018 Co-Principal Investigator, *Project Exploring the Status and Impact of School-Based Behavior Screening Practices in a National Sample: Implications for Systems, Policy, and Research*. Funding Source: IES (\$1.6 million), PI- Sandra Chafouleas

2012-2015 Principal Investigator, *Project PAPER: Preparing Academicians in Psychometrics and Educational Research*. U. S. Department of Education. (\$399,000).

2011-2016 Co-Principal Investigator, *School Structure and Science Success: Organization and Leadership Influences on Student Success*, funded by the National Science Foundation, (\$2,700,000). PI- John Settlage.

2011-2016 Co-Principal Investigator, *Project EVI: Early Vocabulary Intervention*. U. S. Department of Education, Institute of Education Sciences, Reading & Writing Research – Special Education Research (Goal 3 – Efficacy). \$4,097,835. PI: Mike Coyne.

Select Published Books

- O'Connell, A. A., **McCoach, D. B.**, & Bell, B. A. (in press). *Multilevel Modeling Methods with Introductory and Advanced Applications*. Information Age Press.
- McCoach, D. B.** & Cintron, D. W.* (2021). *Introduction to Modern Modeling Methods*. SAGE.
- McCoach, D. B.**, Gable, R. K., & Madura, J. (2013). *Instrument design in the affective domain. (Third Edition)*. New York: Springer.
- Peters, S., McBee, M., Matthews, M., & **McCoach, D. B.** (2013). *Beyond gifted education: Designing and implementing advanced academic programs*. Waco, TX: Prufrock Press.
- O'Connell, A.A. & **McCoach, D.B.** (2008). *Multilevel modeling of educational data*. (Eds.) Charlotte, NC: Information Age Publishing.

Select Sample of Peer Reviewed Journal Articles in the last 10 years (Over 100 peer review journal articles published over the last 20 years)

- Dineen, J., Chafouleas, S., Briesch, A. M., **McCoach, D. B.**, Newton, S. D., & Cintron, D. W. (in press). Exploring Approaches to Identifying and Supporting Students' Social, Emotional, and Behavioral Needs in U.S. Public School Districts. *American Educational Research Journal*.
- McCoach, D. B.** (2022). Achieving Equity Within Public Education. *Gifted Child Quarterly*, 66(2), 103-104.
- Gubbins, E. J., Siegle, D., Cross, K., **McCoach, D. B.**, Dulong Langley, S., Callahan, C., Brodersen, A., & Caughey, M. (2021). Identifying and Serving Gifted and Talented Students: Are Identification and Services Connected? *Gifted Child Quarterly*, 65(2), 115-131.
- Gubbins, E. J., Siegle, D., Peters, P. M., Carpenter, A. Y., Hamilton, R., **McCoach, D. B.**, Puryear, J. S., Langley, S. D., & Long, D. A. (2020). Promising practices for improving identification of English learners for gifted and talented programs. *Journal for the Education of the Gifted*, 43 (4), 336-369
- McCoach, D. B.**, Siegle, D., & Rubenstein, L. (2020). Pay attention to inattention: Exploring ADHD symptoms in a sample of underachieving gifted students. *Gifted Child Quarterly*, 64(2) 100–116. <https://doi.org/10.1177/0016986219901320>
- Coyne, M. D., **McCoach, D. B.**, Ware, S., Austin, C. R., Loftus-Rattan, S. M., & Baker, D. L., (2019). Racing Against the Vocabulary Gap: Matthew Effects in Early Vocabulary Instruction and Intervention. *Exceptional Children*, 85, 163-179.
- Kooken, J*., **McCoach, D. B.**, & Chafouleas, S. M. (2019). The Impact and Interpretation of Residual Non-invariance in Growth Mixture Modeling. *Journal of Experimental Education*, 87(2), 214-237. <https://doi.org/10.1080/10705511.2017.1374187>
- Hamilton, R., **McCoach, D. B.**, Tutwiler, M. S., Siegle, D., Callahan, C., Gubbins, E. J., & Brodersen, A. (2018). Disentangling the roles of institutional and individual poverty in the identification of gifted students. *Gifted Child Quarterly*, 62, 6-24.
- McCoach, D. B.**, Rifenbark, G.*, Newton, S. D.*, Li, X.*, Kooken, J.*, Yomtov, D.*, Gambino, A.*, & Bellara, A. (2018). Does the package matter? A Comparison of Five Common Multilevel Modeling Software Packages. *Journal of Educational and Behavioral Statistics*, 43, 594-627.
- Miller, F., Johnson, A. H., Yu*, H. H., Chafouleas, S. M., **McCoach, D. B.**, Riley-Tillman, T. C., Fabiano, G. A., & Welsh, M. E. (2018). Methods Matter: A Multitrait-Multimethod Analysis of Student Behavior. *Journal of School Psychology*.
- Adelson, J., **McCoach, D. B.**, Rogers, H. J., Adelson, J. & Sauer, T. (2017). Developing and Applying the Propensity Score to Make Causal Inferences: Variable Selection and Stratification. *Frontiers in Quantitative Psychology and Measurement*.

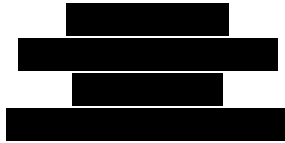
- Flake, J.* & **McCoach, D. B.** (2017). An Investigation of the Alignment Method with polytomous indicators under conditions of partial measurement invariance. *Structural Equation Modeling*. Online First: <http://dx.doi.org/10.1080/10705511.2017.1374187>
- McCoach, D. B.**, Yu, H. H., Gottfried, A. W., Gottfried, A. E. (2017). Developing Talents: A Longitudinal Examination of Intellectual Ability and Academic Achievement. *High Ability Studies*. <http://dx.doi.org/10.1080/13598139.2017.1298996>
- Goldstein, J., **McCoach, D. B.**, & Yu, H. (2016). The Predictive Validity of Kindergarten Readiness Judgments: Lessons from One State. *Journal of Educational Research*.
- McCoach, D. B.**, Newton, S. D., Siegle, D., Baslanti, U, & Picho, K. (2016). Is Having Low Motivation the Same as Not Having High Motivation? Comparing the CSAS-R and the SAAS-R. *High Ability Studies*. DOI: 10.1080/13598139.2015.1103209
- McCoach, D. B.** & Kenny, D. A. (2014). A Few Thoughts on the Similarities and the Differences Between Causal or Reflective Indicators of Latent Variables. *Measurement: Interdisciplinary Perspectives*, 12, 151-154.
- Kenny, D. A., *Kaniskan, B., & **McCoach, D. B.** (2014). How small is too small? The performance of RMSEA in models with small df. *Sociological Research Methods*.
- McCoach, D. B.**, Gubbins, E. J., Foreman, J., Rubenstein, L., & Rambo, K., (2014). Evaluating the Efficacy of Using Pre-differentiated and Enriched Mathematics Curricula for Grade 3 Students. *Gifted Child Quarterly*.
- *Rambo, K. & **McCoach, D. B.** (2014). Using summer growth patterns to assess the impact of schools on high achieving and gifted students' reading skills. *Journal of Educational Research*.
- McCoach, D. B.**, Rambo, K., & Welsh, M. (2013). Assessing the growth of gifted students. *Gifted Child Quarterly*, 57, 56-67.
- *Adelson, J. L., **McCoach, D. B.**, & Gavin, M. K. (2012). Examining the effects of gifted programming in mathematics and reading using the ECLS-K. *Gifted Child Quarterly*, 56, 25-39.
- *Black, A. C., Harel, O., & **McCoach, D. B.** (2011). Missing data techniques for multilevel data: implications of model misspecification. *Journal of Applied Statistics*, DOI: 10.1080/02664763.2010.529882
- Gable, R. K., Ludlow, L. L. **McCoach, D. B.**, & Kite, S. L. (2011). Development and validation of the Survey of Internet Risk and Internet Behavior. *Educational and Psychological Measurement*, 71, 217–230.
- Goldstein, J. & **McCoach, D. B.** (2011). The starting line: Developing a structure for teacher ratings of students' skills at kindergarten entry. *Early Childhood Research and Practice*, 13.
- Reis, S. M., **McCoach, D. B.**, Little, C. A., Muller, L., & Kaniskan, B.* (2011). The effects of differentiated instruction and enrichment pedagogy on reading achievement in five elementary schools. *American Educational Research Journal*. 48, 462-501.
- Coyne, M., **McCoach, D. B.**, Loftus, S., Zipoli, R., Ruby, M., Crevecoeur, Y. C., & Kapp, S. (2010). Direct and extended vocabulary instruction in kindergarten: Investigating transfer effects. *Journal of Research on Educational Effectiveness*, 3, 93-120.
- McCoach, D. B.** (2010). Dealing with dependence (Part II): A gentle introduction to Hierarchical Linear Modeling. *Gifted Child Quarterly*, 54, 252-256.
- McCoach, D. B.** & Adelson, J. (2010). Dealing with dependence (Part I): Understanding the effects of Clustered Data. *Gifted Child Quarterly*, 54, 152-155.
- McCoach, D. B.**, & Colbert, R. D. (2010). Factors underlying the Collective Teacher Efficacy Scale and their mediating role in the effect of socioeconomic status on academic achievement at the school level. *Measurement and Evaluation in Counseling and Development*, 43, 31-47.
- McCoach, D. B.**, Goldstein, J., Behuniak, P., Reis, S. M., Black, A. C., Rambo, K., & Sullivan, E. (2010). Examining the unexpected: Outlier analyses of factors affecting student achievement. *Journal of Advanced Academics*, 21, 426-268.

- McCoach, D. B.** & Kaniskan, B. (2010). Using time-varying covariates in multilevel growth models. *Frontiers in Quantitative Psychology and Measurement*, 1:17. DOI: 10.3389/fpsyg.2010.00017
- McCoach, D. B.**, & Siegle (2007). What predicts teachers' attitudes toward the gifted? *Gifted Child Quarterly*, 51, 246-255.
- McCoach, D. B.**, Black, A. C., & O'Connell, A. A. (2007). Errors of inference in structural equation modeling. *Psychology in the Schools*, 44, 461-470.
- McCoach, D. B.**, O'Connell, A. A., & Levitt, H. (2006). Ability grouping across kindergarten using an early childhood longitudinal study. *Journal of Educational Research*, 99, 339-345.
- McCoach, D. B.**, O'Connell, A. A., Reis, S. M., & Levitt, H. (2006). Growing readers: A hierarchical linear model of children's reading growth during the first two years of school. *Journal of Educational Psychology*, 98, 14-28.
- O'Connell, A. A., & **McCoach, D. B.** (2004). Applications of Hierarchical Linear Modeling for evaluations of health interventions: Demystifying the methods and interpretations of multilevel models. *Evaluation in the Health Professions*, 27, 119-151.
- McCoach, D. B.** (2003). SEM isn't just the Schoolwide Enrichment Model anymore: Structural Equation Modeling in gifted education. *Journal for the Education of the Gifted*, 27, 36-61.
- Kenny, D. A. & **McCoach, D. B.** (2003). Effect of the number of variables on measures of fit in Structural Equation Modeling. *Structural Equation Modeling*, 10, 333-351.
- McCoach, D. B.**, & Siegle, D. (2003). Factors that differentiate underachieving gifted students from high achieving gifted students. *Gifted Child Quarterly*, 47, 144-154.
- McCoach, D. B.** & Siegle, D. (2003). The School Attitude Assessment Survey - Revised: A new instrument to identify academically able students who underachieve. *Educational and Psychological Measurement*, 63, 414-429.

Select Sample of Book Chapters

- McCoach, D. B.** & Bell, B. A. (2022). Individual Growth Curve Models for Longitudinal Data. In A.A. O'Connell, D. B. McCoach, & B. A. Bell (Eds.) *Multilevel Modeling Methods with Introductory and Advanced Applications*. Information Age Press.
- McCoach, D. B.**, Newton, S. D., & Gambino, A.* (2022). Evaluating the fit and adequacy of multilevel models. In A.A. O'Connell, D. B. McCoach, & B. A. Bell (Eds.) *Multilevel Modeling Methods with Introductory and Advanced Applications*. Information Age Press.
- McCoach, D. B.**, Dineen, J. N., Chafouleas, S. M., & Briesch, A. (2020). Reproducibility in the era of Big Data: Lessons for developing robust data management and data analysis procedures. In C. A. Hill, P. P. Biemer, T. D. Buskirk, L. Japac, A. Kirchner, S. Kolenikov, & L. E. Lyberg (Eds.) *Big Data Meets Survey Science: A Collection of Innovative Methods*. John Wiley and Sons.
- McCoach, D. B.** (2018). Multilevel modeling. In G. R. Hancock & R. O. Mueller (Eds.) *The reviewer's guide to quantitative methods in the social sciences (Revised)*. New York: Routledge.
- McCoach, D. B.**, & Rambo, K. (2018). Issues in the analysis of change. In C. Secolsky (Ed.) *Handbook of measurement, assessment, and evaluation in higher education (Second edition)*.
- McCoach, D. B.** & Newton, S. D. (2017). Confirmatory Factor Analysis. In BERA-SAGE *Handbook of Research Methods in Education*.
- McCoach, D. B.** & Yu, H. H. (2016). Using individual growth curve models to understand reading fluency development. *The Fluency Construct*. New York. Springer.
- O'Connell, A. A., Yeomans-Maldonado, G., & **McCoach, D. B.** (2016.) Residual Diagnostics and Model Assessment in a Multilevel Framework: Recommendations toward Best Practice. In J. Harring, L. Stapleton, & T. Beretvas (Eds.) *Advances in Multilevel Modeling for Educational Research*. Charlotte, NC: Information Age.

Susan Dulong Langley



EDUCATION

2020 University of Connecticut, Ph.D. in Educational Psychology: Creativity, Gifted Education, and Talent Development
2013 American International College, M.Ed. in Administration: Superintendent Licensure
2002 University of Connecticut, M.A. in Educational Psychology, Gifted and Talented Education
1990 University of Massachusetts Lowell, B.A. in Music Education

UNIVERSITY POSITIONS

2020-present Project Building Up Mathematics Proficiency Utilizing Push-in, Postdoctoral Research Assistant
2018-2020 National Research Center on Gifted Education, Doctoral Research Assistant
2002-2016 University of Connecticut, Adjunct Lecturer
2014-2016 National Center for Research on Gifted Education at UConn, Doctoral Research Assistant
2009-2014 Framingham State University, Adjunct Lecturer
2009-2012 Cambridge University, Adjunct Lecturer

GRADUATE COURSES TAUGHT

2002-2016 University of Connecticut, *EPSY300 Talent Development in the Arts*
2012-2014 Framingham State University, Exploring Pathways: 21st C. Teaching Tools for Comprehensive Lesson Planning (Regular Education and Special Education)
2012 Framingham State University, Integrating the Arts into Math
2011 Framingham State University, Tiering Literacy Instruction Through Bloom's Taxonomy
2009-2010 Cambridge University, Meeting the Needs of Exceptional Learners in the Classroom
2009-2010 Framingham State University, Teaching Tools for the 21st Century and Practical Applications for Teaching G&T in the Classroom

MASSACHUSETTS CERTIFICATIONS

Superintendent/Assistant Superintendent, All Levels
Academically Advanced, PK-8

PUBLIC SCHOOL EXPERIENCE

2005-2018 K-8 Teacher of the Gifted & Talented, Framingham Public Schools, Framingham, MA

- Equitable gifted identification
 - Collaboration with the Office of Equity and Achievement to identify commensurate numbers of diverse learners within a population of students speaking over 70 unique languages
 - A multiple-measures approach to foster equitable identification of students from underrepresented populations (e.g., NNAT-2; SAGES-3; Torrance Test of Creative Thinking)
 - Piloting new approaches to better identify gifted learners from underrepresented populations (e.g., Universal screening, CogAT, Torrance Tests of Creative Thinking)
 - Co-teaching *Primary Education Thinking Skills* – Critical and creative thinking lessons to build teachers' capacity for spotting talent in and subsequently referring diverse learners for gifted services
- Student Services
 - Sage Services – Pull-out services for identified gifted learners including language-based strategies for gifted English learners
 - Sage Inclusion Model – Integrative classroom services in collaboration with classroom and English as a Second Language teachers to meet students' advanced learning needs across the curriculum

- *Independent Investigation Method* – Coordination of independent student investigations incorporating authentic research and higher order thinking skills to answer a problem statement and produce a student-designed product
- Advanced opportunities open to all students (*Math League, WordMasters*)
- “*Step Up to Math*” Gifted and Talented Grant, co-developed to increase mathematical thinking in k-5 classrooms
- Differentiation and RtI Coaching – Supporting teachers in responding to student needs and preventing/reversing latent achievement

1999-2005 Enrichment Specialist, Woodland Elementary School, Milford, MA

- Whole class enrichment to infuse critical and creative thinking across the curriculum
- Small group instruction for advanced math and advanced writing
- Special projects’ coordinator (e.g., 12 issues of the *Boston Sunday Globe Fun Pages, Creative Problem-Solving Program*)

FUNDED AND ADMINISTERED GRANTS

Modest, D., & Dulong-Langley, S. (2006–2007; 2007-2009). MA Department of Elementary and Secondary Education G&T Implementation Center

Wheltle, S., Modest, D., Overholser, J., Dunn, B. Q., Effrat, A., Stephens, N., & Dulong-Langley, S. (2005-2008). MA Department of Education Javits Grant, Commonwealth of Massachusetts

Modest, D. Guernsey, S., & Dulong-Langley, S. (2005). Step Up to Math, MA Department of Gifted & Talented Grant, Framingham Public Schools, Framingham, MA.

Dulong-Langley, S., & Roda, A. R. (2003). Computer Aided Instruction for the Elementary Classroom, Woodland Elementary School, Milford, MA.

PROFESSIONAL LEARNING PROVIDER

2017-2018	Framingham Public Schools, <i>Essential Questions in the Elementary Classroom</i>
2016-2017	Framingham Public Schools, <i>Tiering for Cognitive Complexity</i>
	Framingham Public Schools, <i>Critical and Creative Thinking Across the Curriculum</i>
2011-2014	Framingham Public Schools, <i>Differentiation across the Curriculum</i>
2009	Maynard, MA, <i>Primary Education Options for Meeting the Needs in the Classroom</i>
2009	Barnstable, MA Public Schools, <i>Advanced, Talented, and Creative Learners</i>
2008-2010	MA Department of Elementary & Secondary Education G&T Implementation Center, Framingham, MA
2006-2008	University of Massachusetts Amherst, <i>An Introduction to the Education of Advanced, Talented and Creative Learners</i>
2006	Medford’s Javits Initiative, <i>Introduction to Gifted & Talented</i>
2006	Norwood Public Schools, <i>Meeting the Needs of the Gifted & Talented</i>
2003	Milford Public Schools, <i>Differentiating by Product for the Written Word</i>

PRESENTATIONS

KEYNOTES

Dulong-Langley, S. (April, 2017). *The Gifted and Talented Student in Today’s Classroom: Empowering Thinking and Learning*. Presentation at the meeting of the Massachusetts Association for Gifted Education.

Dulong-Langley, S. (October, 2015). *The Gifted and Talented Student in Today’s Classroom: Infusing Critical and Creative Thinking across the CCSS*. Presentation at the meeting of the Maine Educators of the Gifted and Talented.

CONVENTION PRESENTATIONS

- Dulong Langley, S.** (2021, November). *Identifying discourses about gifted English learners for equitable identification*. Combined presentation at the National Association for Gifted Education's Annual Convention.
- Dulong Langley, S.** (2021, November). *Identifying discourses about gifted English learners for equitable identification*. Concurrent presentation at the National Association for Gifted Education's Annual Convention.
- Hemmler, V., Kenney, A. W., **Dulong Langley, S.**, Gubbins, E. J., & Callahan, C. M. (2021, November). District pacing guide policies, pressures, and instruction for gifted learners. Concurrent presentation at the National Association for Gifted Education's Annual Convention.
- Dulong Langley, S.**, Carpenter, A. Y., Wright, K. J., Gubbins, E. J., & Siegle, D. (2021, November). *Professional learning to foster effective teacher collaboration for gifted students*. Concurrent presentation at the National Association for Gifted Education's Annual Convention.
- Dulong Langley, S.**, Siegle, D., Gubbins, E. J., & Little, C. A. (2021, May). *Identifying discourses for equitable identification of gifted English learners*. Paper presentation at the American Educational Research Association Annual Convention, Online.
- Hemmler, V. L., Kenney, A. W., **Dulong Langley, S.**, Gubbins, E. J., & Callahan, C. M. (2021, May). *Elementary teachers' perceptions and enactment of autonomy from prescribed pacing guides*. Round table presentation at the American Educational Research Association Annual Convention, Online.
- Kenney, A. W., **Dulong Langley, S.**, Hemmler, V. L., Gubbins, E. J., & Callahan, C. M. (2021, May). *Different or differentiated? Recoupling policy and practice in an era of accountability*. Round table presentation at the American Educational Research Association Annual Convention, Online.
- Siegle, D., Gubbins, E. J., Carpenter, A. Y., & **Dulong-Langley, S.** (2020, November). *Creating Collaborative Connections to Promote High-Level Learning*. Presentation at the meeting of the National Association of Gifted Children, Online.
- Mun, R., & **Dulong-Langley, S.** (2017, April). *Identifying and Serving English Learners for Gifted and Talented Education: A Systematic Literature Review*. Presented at the meeting of the American Educational Research Association Meeting, San Antonio, TX.
- Gubbins, E. J., Siegle, D., O'Rourke, P., **Dulong-Langley, S.**, Cross, K., Callahan, C. M., Brodersen, A. V., Caughey, M., and Renzulli, J. S. (2017, April). *Means and Ends of Gifted and Talented Identification: New Developments*. Presented at the meeting of the American Educational Research Association Meeting, San Antonio, TX.
- Dulong-Langley, S., & Monte, L. A. (2015, November). *Innovating Intuition: Creative Thinking Strategies for Affective Development*. Presentation at the meeting of the National Association for Gifted Children, Phoenix, AZ.
- Dulong-Langley, S. (2015, October). *Identification of Gifted Culturally and Linguistically Diverse Learners: On a Pathway to Understanding*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Cromwell, CT.
- Dulong-Langley, S. (November, 2011). *Beyond the Core: Infusing Critical and Creative Thinking into the Curriculum*. Presentation at the meeting of the National Association for the Gifted, New Orleans, LA.
- Dulong-Langley, S. (2010, October). *Bloom's Taxonomy as Easy as Pi(e)*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Hartford, CT.
- Dulong-Langley, S. (2009, October). *Bloom's Taxonomy as Easy as Pi(e)*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Nashua, NH.
- Dulong-Langley, S. (2006, October). *Art Smart: Addressing Social, Emotional, and Cognitive Needs*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Warwick, RI.
- Dulong-Langley, S. (2005, October). *Art Smart: Authentic Integration of the Arts Across the Curriculum*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Killington, VT.
- Dulong-Langley, S. (2004, October). *Arts Avenues: Character Education within the Arts*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Mystic, CT.
- Dulong-Langley, S. (2003, October). *When is Excellence Enough? Psychological Implications for Excellence in the Arts*. Presentation at the meeting of the New England Conference on the Gifted and Talented, Nashua, NH.

PUBLICATIONS

IN PRESS

Dulong-Langley, S., & Lusk, S. D. (in press). Accommodations for English language learners. In J. VanTassel, & C. A. Little (Eds.), *Content-based curriculum for high-ability learners* (4th ed., in press). Routledge.

PUBLISHED ARTICLES IN PEER-REVIEWED JOURNALS

- Gubbins, E. J., Siegle, D., Ottone-Cross, K., **Dulong-Langley, S.**, Callahan, C., Brodersen, A., Caughey, M., & McCoach, D. B. (2021). Identifying and serving gifted and talented students: Are identification and services connected? *Gifted Child Quarterly*, 65(2), 115–131. <https://doi.org/10.1177%2F0016986220988308>
- Hemmler, V. L., Kenney, A. W., **Langley, S. D.**, Callahan, C. M., Gubbins, E. J., & Holder, S. (2020). Beyond a coefficient: An interactive process for achieving inter-rater consistency in qualitative coding. *Qualitative Research*. Advance online publication. <https://doi.org/10.1177%2F1468794120976072>
- Gubbins, E. J., Siegle, D., Peters, P. M., Carpenter, A. Y., Hamilton, R., McCoach, D. B., Puryear, J. S., **Langley, S. D.**, & Long, D. (2020). Promising practices for improving identification of English learners for gifted and talented programs. *Journal for the Education of the Gifted*, 43(4), <https://doi.org/10.1177/0162353220955241>
- Mun, R. U., Hemmler, V., **Langley, S. D.**, Ware, S., Gubbins, E. J., Callahan, C. M., McCoach, D. B., & Siegle, D. (2020). Identifying and serving English learners in gifted education: Looking back and moving forward. *Journal for the Education of the Gifted*, 43(4). <https://doi.org/10.1177/0162353220955230>
- Choi, D., Hatcher, C., **Dulong-Langley, S.**, Liu, X., Bray, M. A., & Courville, T. (2017). What do children's phonological processing errors tell us about their skills in reading, writing, and oral language? *Journal of Psychoeducational Assessment*, 35, 1-2, 24-46.
- Hatcher, R. C., Breaux, K. C., Liu, X., Bray, M. A., Ottone-Cross, K. L., Courville, T., Luria, S. R., **Langley, S. D.** (2017). Analysis of children's errors in comprehension and expression. *Journal of Psychoeducational Assessment*, 35, 1-2, 57-73.
- Ottone-Cross, K., **Dulong-Langley, S.**, Root, M. M., Gelbar, N., Bray, M. A., Luria, S. R., Choi, D., Kaufman, J. C., Courville, T., & Pan, X. (2017). Beyond the mask: Analysis of error patterns on the KTEA-3 for students with giftedness and learning disabilities. *Journal of Psychoeducational Assessment*, 35, 74-93.
- Siegle, D., Gubbins, E. J., McCoach, D. B., O'Rourke, P., **Dulong-Langley, S.**, Mun, R. U., Luria, S. R., Little, C. A., McCoach, D. B., Knupp, T., Callahan, C. M., & Plucker, J. A. (2016). Barriers to Underserved Students' Participation in Gifted Programs and Possible Solutions. *Journal for the Education of the Gifted*, 39(2), 103-131.

PUBLISHED ARTICLES IN EDITORIAL BOARD PUBLICATIONS

- Dulong-Langley, S. (2016, February 1). Identifying gifted linguistically diverse learners: On a pathway to understanding. *National Association for Gifted Children* in partnership with the *Thomas B. Fordham Institute Blog*.
- Dulong-Langley, S. (2014). A warm welcome goes a long way. *Parenting for High Potential*, 3(4), 2-3.
- Danielian, J., & **Dulong-Langley, S.** (2013-2014). Connecting for high potential. *National Association for Gifted Children's Compass Points*, Issues 16-24.

BOOK CHAPTERS

- Siegle, D., & **Dulong-Langley, S.** (2015). Promoting optimal mindsets among gifted children. In M. Neihart, S. I. Pfeiffer, & T. L. Cross (Eds.), *The social and emotional development of gifted children* (2nd ed.). Waco, TX: Prufrock Press.

HONORS

2014	Massachusetts Association for Gifted Education Lifetime Achievement Award
2013	Pre-Doctoral Fellowship, University of Connecticut
2008	New England Advocacy Award for Gifted & Talented Education
2002	University of Connecticut Highest Achievement on the Super Comprehensive Graduate Examination

Daniel A. Long, Ph.D.

Research Scientist. National Center for Research on Gifted Education.
Department of Educational Psychology, University of Connecticut

EDUCATION

2006 Ph.D., Sociology, University of Wisconsin-Madison.

2001 M.S., Sociology, University of Wisconsin-Madison.

1994 B.A., Economics, Swarthmore College.

POSITIONS HELD

2017-present. Research Scientist (2018-present) and Postdoctoral Fellow (2017-2018). Department of Educational Psychology, Neag School of Education. University of Connecticut. Analysis of gifted education policy and under-representation of low-income students, racial/ethnic minorities, and English language learners in gifted education programs using propensity score and multi-level modeling, growth curve modeling, quasi-experimental methods, and machine learning methods.

2016-2017. Director of Research and Senior Education Policy Fellow. Connecticut Voices for Children. New Haven, CT. Conducted research on education policy, college and career readiness, and early care and education. Received coverage in local media and NPR. Supervised staff, analyzed state budget, advocacy for programs for children and families at the State Legislator.

2015-2016. Director of Quantitative Research. Research for Action. Philadelphia, PA. Provided expertise in experimental and quasi-experimental methods, survey design, multilevel modeling, event history analysis, and GIS. Helped develop research proposals, conduct quantitative analysis, and train staff. Directed local, regional, and national surveys. Was the primary investigator or co-author for 10 reports and briefs; Supervised the quantitative research and surveys for 20 projects; was the lead in acquiring \$600,000 in funding to support research; and provided methodological advice that helped acquire an additional \$1,000,000 in research funding from national foundations, state departments of education, & school districts.

2006-2014. Assistant Professor. Department of Sociology. Wesleyan University. Co-founder of the Wesleyan National Survey Center and the Wesleyan Quantitative Analysis Center. Taught methods, sociology of education, educational policy, introduction to sociology, sociology of race and ethnicity, and statistics classes.

2003-2016. Evaluation, Methodological, and Statistical Consultant. Designed experimental and quasi-experimental evaluation strategies for Child Trends, Washington, D.C. Evaluated teacher evaluation programs for Hamden, CT school district and the Connecticut Education Association, Hartford, CT. Quasi-experimental research on the effects of early childhood education for the Wisconsin Center for Educational Research, Madison, WI. Estimated growth curve models of academic achievement, multilevel modeling, multiple imputations, and factor analysis using the Early Child Longitudinal Survey for a researcher at Vanderbilt University. Event-history analysis of the effects of distant-education on 4-year college retention rates for an NYU researcher.

2002-2005 Lecturer and Teaching Assistant, Department of Sociology, University of Wisconsin-Madison. Taught Statistics and Race /Ethnicity courses, Teaching Assistant for two semesters of Statistics I.

1996-2000 Project Assistant, Department of Sociology, University of Wisconsin-Madison. Researched education and demographic topics using event history analysis and other quantitative methods.

1994-1996 6th Grade Bilingual Math and Science Teacher, Drew Middle School, South-Central Los Angeles, CA.

ACADEMIC ARTICLES AND CHAPTERS

- Long, D. A. (2022). Equity, not just equality: How equality of educational outcome policies could help narrow excellence and identification gaps. *Gifted Child Quarterly*, 66(2), 105–107. <https://doi.org/10.1177/00169862211037944>
- Gubbins, E. J., Siegle, D., Peters, P. M., Carpenter, A. Y., Hamilton, R., McCoach, D. B., Puryear, J. S., Langley, S. D., & Long, D. (2020). Promising practices for improving identification of English learners for gifted and talented programs. *Journal for the Education of the Gifted*, 43(4), 336–369. <https://doi.org/10.1177/0162353220955241>
- Hamilton, R., Long, D., McCoach, D. B., Hemmler, V., Siegle, D., Newton, S. D., Gubbins, E. J., & Callahan, C. M. (2020). Proficiency and Giftedness: The Role of Language Comprehension in Gifted Identification and Achievement. *Journal for the Education of the Gifted*, 43(4), 370–404. <https://doi.org/10.1177/0162353220955225>
- Long, D. A. (2014). Cross-National educational inequalities and opportunities to learn: Conflicting views of instructional time. *Educational Policy*, 28(3), 351–192. <https://doi.org/10.1177/0895904812465108>
- Long, D. A., Kelly, S., & Gamoran, A. (2012). Whither the virtuous cycle: Past and future trends in black-white inequality in educational attainment. *Social Science Research*, 41(1), 16–31. <https://doi.org/10.1016/j.ssresearch.2011.09.002>
- Desimone, L., & Long, D. A. (2010). Teacher effects and the achievement gap: Do teacher and teaching quality influence the achievement gap between Black and White and high- and low-SES students in the early grades? *Teachers College Record*, 112(12), 3024–3073. <https://doi.org/10.1177/016146811011201206>
- Long, D. A. (2009.) Book review [Review of the book *The structure and agency of women's education*, edited by M. A. Maslak], *Comparative Education Review*, 53(3), 455–457. <https://www.jstor.org/stable/10.1086/605524>
- Gamoran, A., & Long, D. A. (2007). Equality of educational opportunity: A 40-year retrospective. In R. Teese, S. Lamb, & M. Duru-Bellat (Eds.), *Education and equity: International perspectives on theory and policy* (pp. 23–47). Springer/Kluwer.
- Nystrand, M., Wu, L. L., Gamoran, A., Zeiser, S., & Long, D. A. (2003). Questions in time: Investigating the structure and dynamics of unfolding classroom discourse. *Discourse Processes* 35(2), 135–198. https://doi-org.ezproxy.lib.uconn.edu/10.1207/S15326950DP3502_3
- Wu, L. L., Martin, S. P., Long, D. A. (2001). Comparing data quality of fertility and first sexual intercourse histories. *Journal of Human Resources* 36(3), 520–555. <https://doi.org/10.2307/3069629>

POLICY AND EVALUATION REPORTS

- Long, D. A., & Updegrave, N. (2017). Care 4 Kids in Connecticut: The impact of program closure on children, parents, and providers. *Connecticut Voices for Children*.
- Updegrave, N., Ruth, L., & Long, D. A. (2017). The changing state of early childhood in 2016. *Connecticut Voices for Children*.
- Noonan, R., Updegrave, N., & Long, D. A. (2017). The economic benefits of high-quality early care. *Connecticut Voices for Children*.
- Ruth, L., Ricks, A., Leventhal-Weiner, R., & Long, D. A. (2017). Connecticut youth opportunity atlas. *Connecticut Voices for Children*.
- Lapp, D., Long, D. A., Jenkins, D., & Barnes, M. (2016). Losing confidence, losing learning: The PASAPASBO report on school district budgets. A survey of all school districts in Pennsylvania. *Research for Action*.
- Long, D. A., & Barnes, B. (2016). Inside-Out: An Evaluation of the Inside-Out prison exchange

- program in the Philadelphia area—A study of the effectiveness of college courses in Philadelphia area prisons and jails. *Research for Action*.
- Norton, M. A., Kim, D. Y., & Long, D.A. (2016). 2015. Project LIFT: Year three student outcomes memo.— A study of the effects of a district wide reform effort in the Charlotte-Mecklenburg School District in North Carolina. *Research for Action*.
- Long, D. A., & Beaver, J. K. (2015). *Delaware Performance Appraisal System Second Edition (DPAS-II) evaluation report*. Prepared for the Delaware Department of Education by Research for Action. A survey of all teachers and administrators in Delaware. *Research for Action*.
- Long, D. A., & Beaver, J. K. (2015). Fidelity of implementation of DPAS-II. *Research for Action*.
- Morison K. A., Long, D. A., & Beaver, J. K. (2015). The importance of DPAS-II training and communication for teachers and specialists. *Research for Action*.
- Beaver, J. K. & Long, D. A. (2015). The role of formative feedback in DPAS- II for teachers and specialists *Research for Action*.
- Shaw, K. M., Norton, M. A., Sludden, J., Long, D. A., & Barnes, M. (2015). PA Keystone Exams: Analysis of 2013-14 publicly-available data. *Research for Action*.
- Schott, Adam, Long, D. A., & Marvin Barnes. (2015). Continued cuts: The PASA-PASBO report on school district budgets--A survey of all school districts in Pennsylvania. *Research for Action*.
- Callahan, M. K., Long, D. A., Westmaas, L., & Meehan, K. (2015). Year 1 report: Preliminary results from a two-year study of the effects of extended learning opportunities on student outcomes in New Hampshire. *Research for Action*.

SELECTED PRESENTATIONS

- Long, D. A., McCoach, B., & Rhoads, C. (2021, September 27). *Examining the effects of gifted classes on mathematics and reading/language arts achievement* [Conference presentation]. Annual convention of the Society for Research on Educational Effectiveness Conference, Arlington, VA, Hybrid, United States.
- McCoach, D. B., Long, D. A., Kenney, A. W., Hemmler, V., Siegle, D., Callahan, C. M., Gubbins, E. J., Rhoads, C., Langley, S. D., & Carpenter, A. (2021, April 9-12). *A class by any other name, but which does the same: Accepting educational responsibility* [Conference presentation]. Annual convention of the American Educational Research Association, Virtual.
- Long, D. A., Siegle, D., Callahan, C. M., Gubbins, E. J., & McCoach, D. B. (2020, November). *Does modification of identification policies increase the diversity of gifted students?* [Conference presentation]. 67th annual convention of the National Association for Gifted Children, Virtual.
- Long, D., Siegle, D., Gubbins, E. J., & Callahan, C. M. (2019, November 9). *Effects of gifted math and English Language arts classes: A natural experiment* [Conference presentation]. 66th annual convention of the National Association for Gifted Children, Albuquerque, NM, United States.
- Long, D., & Siegle, D. (2019, November 9). *Can district policies address underrepresentation in gifted education?* [Conference presentation]. Presentation at the 66th Annual convention of the National Association for Gifted Children, Albuquerque, NM, United States.
- Hamilton, R., McCoach, D. B., Siegle, D., & Long, D. (2019, April). *What really happens in gifted education: A portrait of 3 States* [Conference presentation]. Annual convention of the American Educational Research Association, Toronto, ON, Canada.
- Long, D. A., McCoach, D. B., Hamilton, Siegle, D., Gubbins, E. J., & Callahan, C. M. (2019, April) *The effects of ability grouping of gifted students on gifted and non-gifted achievement growth* [Conference presentation]. Annual convention of the American Educational Research Association, Toronto, ON, Canada.
- Siegle, D., McCoach, D. B., Gubbins, E. J., Long, D. A., Alfeld, C. (2018) *Gifted identification gap: When*

- just as good is not good enough* [Presentation]. Institute for Educational Sciences Annual Principal Investigators' Meeting, Arlington, VA, United States.
- Long, D. A., Coven, C., & Kochhar, S. (2013, April). *Instructional time and the academic achievement gap in elementary schools: A cross-classified growth curve model* [Conference presentation]. Annual convention of the American Educational Research Association. San Francisco, CA, United States.
- Long, D. A., & Peretz, C. (2013, April). *The effects of accountability and incentives under no child left behind: A study of top-down and bottom-up assessment policies* [Conference presentation]. Annual convention of the American Educational Research Association, San Francisco, CA, United States.
- Long, D. A. (2013, April). *Accountability, testing, and academic achievement in comparative perspective* [Conference presentation]. Annual conference of the Comparative and International Education Society, New Orleans, LA, United States.
- Long, D. A., & Doren, C. (2012, May). *Educational markets, testing, accountability, and academic achievement in comparative perspective* [Conference presentation]. International Sociological Association-Stratification Section (RC28) Conference, Hong Kong, China.
- Long, D. A., & Doren, C. (2012, April). *School choice and academic achievement in comparative Perspective*. [Conference presentation]. Annual convention of the American Educational Research Association. Vancouver, Canada and Eastern Sociology Society. New York, NY, United States.
- Long, D. A. (2010, May). *Decentralization and educational inequalities in comparative perspective* [Conference presentation]. International Sociological Association-Stratification Section (RC28) Conference. Haifa, Israel.
- Long, D. A. (2010, April). *School choice in Chile from 1980-2008: The role of selection, peer effects, competition, and school reform* [Conference presentation]. American Educational Research Association Conference. Denver, CO, United States.
- Long, Daniel A. (2009, December). Educational inequalities and instructional time in comparative perspective. [Invited Presentation] Geary Institute, University College Dublin for the Youth Inequalities Conference. Dublin, Ireland.
- Long, D. A., & Weis, M. (2009, August). *Private schools and peer effects in 63 countries* [Conference presentation]. Annual conference of the American Sociological Association, San Francisco, CA, United States.
- Long, D. A. (2009, August). *Educational inequalities and opportunities to learn in comparative perspective* [Conference presentation]. International Sociological Association-Stratification Section (RC28) Conference. New Haven, CT, United States.
- Long, D. A. (2008, May). *The gender gap in educational attainment both within and between continents* [Paper presentation]. International Sociological Association- Stratification Section (RC28) Conference, Florence, Italy and CIES 52nd Annual Conference, New York, New York.
- Long, D. A. (2007, May). Private schools, school autonomy, and inequalities in academic achievement in latin america [Conference presentation]. ISA-Stratification Section (RC28) Conference. Brno, Czech Republic.

SERVICE TO THE DISCIPLINE

2007-present Reviewer for Sociology of Education, the American Sociological Review, American Journal of Sociology, Social Science Research, Educational Evaluation and Policy Analysis journal, the Comparative Education Review, American Educational Research Association Conference Paper Selection, Society for Educational Research Conference Paper Selection

SARAH D. NEWTON, PH.D.

Associate Director of Online Programs in Research Methods, Measurement, and Evaluation
Postdoctoral Research Associate, Dept. of Educational Psychology, University of Connecticut

ORCID: 0000-0001-7981-7256

Education

- 2020 Ph.D. in Educational Psychology - Research Methods, Measurement, and Evaluation, University of Connecticut, Storrs, CT. Dissertation: "Multilevel Model Selection and Effective Sample Size—In Information Criteria We Trust"
- 2018 M.A. in Educational Psychology – Research Methods, Measurement, and Evaluation, University of Connecticut, Storrs, CT.
- 2011 M.S. in Criminal Justice, Central Connecticut State University [CCSU], New Britain, CT. Thesis: "Examination of the psychometric properties of, and relationship between, the Belief Scale and the Criminogenic Thinking Profile"
- 2009 B.A. in Criminology with completed course requirements in Psychology, Central Connecticut State University, New Britain, CT.

Current Research Grant-Funded University Positions

- 2019-2024 Named Project Personnel. Project Building Up Mathematics Proficiency Utilizing Push-in. Department of Education (PR/Award#S206A190028). \$2.5 Million. PI: Siegle.
- 2019-2024 Project Personnel. Evaluating the Impact of Integrated Behavior and Reading Multi-Tiered Systems of Support in Elementary Schools (R324A190012). Institute for Education Sciences [IES]. \$3,999,589. PI: Coyne.

Recent/Select Recognition, Fellowships, and Scholarships

- 2020, Fall I-MTSS Research Network Early Career Scholar (Cohort 2) recognition
- 2020, Fall University of Connecticut (Graduate School) Doctoral Dissertation Fellowship
- 2017, 2012-13 University of Connecticut Pre-Doctoral Fellowship
- 2017, 2012 Friends & Colleagues of Francis X. Archambault, Jr. Fellowship
- 2013-2016 Graduate Assistance in Areas of National Need (GAANN) Fellowship
- 2015 J. Raymond and Augusta Gerberich Fellowship
- 2015, 2012 Robert K. Gable Scholarship

Select University Teaching Experience (Instructor of Record [IOR], Teaching Assistant [TA], or Workshop Presenter)

- ^O = Online; ^C = Campus-based
- ^O[IOR] Quantitative Methods in Research I, University of Connecticut (UConn), Storrs, CT.
- ^{CO}[IOR] Principles and Methods in Educational Research, UConn, Storrs, CT.
- ^C[TA] Advanced Modeling Using Latent Variable Techniques, UConn, Storrs, CT.
- ^C[TA] Structural Equation Modeling, UConn, Storrs, CT.
- ^C[TA] Introduction to Quantitative Methods I, UConn, Storrs, CT.
- ^OData Cleanup in Aisle 2!, I-MTSS Early Career Scholars Workshop, UConn, Storrs, CT.
- ^CData Management and Analysis Using Excel. EPSY5195 Workshop, UConn, Storrs, CT.
- ^C[TA] Multilevel Modeling using HLM, DATIC Workshop, UConn, Storrs, CT.

- ^C[TA] Longitudinal Modeling using *Mplus*, DATIC Workshop, UConn, Storrs, CT.
- ^C[TA] Structural Equation Modeling using *Mplus*, DATIC Workshop, UConn, Storrs, CT.
- ^C[TA] Structural Equation Modeling, DATIC Workshop, UConn, Storrs, CT.

Peer-Reviewed Publications

- Dineen, J. N., Chafouleas, S. M., Briesch, A. M., McCoach, D. B., **Newton, S. D.**, & Cintron, D. W. (2022). Exploring social, emotional, and behavioral screening approaches in U.S. public school districts. *American Educational Research Journal*, 59(1), 146-179. <https://doi.org/10.3102/00028312211000043>
- Hamilton, R., Long, D., McCoach, D. B., Hemmler, V., Siegle, D., **Newton, S. D.**, Gubbins, E. J., & Callahan, C. M. (2020). Proficiency and giftedness: The role of language comprehension in gifted identification and achievement. *Journal for the Education of the Gifted*. Advanced online publication. <https://doi.org/10.1177/0162353220955225>
- McCoach, D. B., Rifkenbark, G., **Newton, S. D.**, Li, X., Kookan, J., Yomtov, D., Gambino, A., & Bellara, A. (2018). Does the package matter? A comparison of five common multilevel modeling software packages. *Journal of Educational and Behavioral Statistics*, 43(5), 594-627. <https://doi.org/10.3102/1076998618776348>
- Lawless, K. A., Brown, S. W., Rhoads, C., Lynn, L., **Newton, S. D.**, & the GlobalEd2 Research Team^[1]. (2018). Promoting students' science literacy skills through a simulation of international negotiations: The GlobalEd 2 project. *Computers in Human Behavior*, 78, 389-396. <http://dx.doi.org/10.1016/j.chb.2017.08.027>
- Brown, S. W., Lawless, K. A., Rhoads, C., **Newton, S. D.**, & Lynn, L. (2016). Increasing students' science writing skills through a PBL simulation. In D. Sampson, J. M. Spector, D. Ifenthaler & P. Isaias (Eds.), *Proceedings of the 13th IADIS International Conference on Cognition and Exploratory Learning in Digital Age (CELDA)* (pp. 86-94). Mannheim, Germany: International Association for Development of the Information Society. Selected as 2016 CELDA Best Paper.
- McCoach, B., **Newton, S. D.**, Siegle, D., Baslanti, U., & Picho, K. (2016). Is having low motivation the same as not having high motivation? Comparing the CSAS-R and the SAAS-R. *High Ability Studies*, 27(1), 61-81. <https://doi.org/10.1080/13598139.2015.1103209>

Book Chapters

- McCoach, D. B., Gambino, A. J., & **Newton, S. D.** (in review). Multilevel modeling. In A. L. Nichols & J. E. Edlund (Eds.), *Cambridge handbook of research methods and statistics for the social and behavioral sciences (Vol. 1)* (pp. xxx). Cambridge University Press.
- McCoach, D. B., **Newton, S. D.**, & Gambino, A. J. (in review). Multilevel model selection: Balancing model fit and adequacy. In M. S. Khine (Ed.), *Methodology for multilevel modeling in educational research: Concepts and applications* (pp. xxx). Springer Nature.
- McCoach, D. B., **Newton, S. D.**, & Gambino, A. J. (2022). Evaluation of model fit and adequacy. In A. A. O'Connell, D. B. McCoach, & B. A. Bell (Eds.), *Multilevel modeling methods with introductory and advanced applications* (pp. xxx). Information Age Publishing.
- McCoach, D. B., & **Newton, S. D.** (2017). Confirmatory factor analysis. In D. Wyse, N. Selwyn, E. Smith, & L. E. Suter (Eds.), *The BERA/SAGE handbook of educational research (Vol. 2)* (pp. 851-872). London: Sage Publications.

Select International, National, and Regional Conference Presentations

- Newton, S. D.,** McCoach, D. B., Dineen, J. N., Chafouleas, S. M., & Briesch, A. (2019, May). Using multinomial logistic regression models to distinguish districts by social, emotional, and behavioral screening practices. Poster presentation at the annual convention of the Association for Psychological Science, Washington, DC.
- Newton, S. D.,** & McCoach, D. B. (2019, May). Simulating multilevel/longitudinal data: Exploring different approaches to data generation. Poster presentation at the annual convention of the Association for Psychological Science, Washington, DC.
- Newton, S. D.,** Song, S., Wang, M. S., Brown, S. W., & Lawless, K. A. (2017, May). Conceptualizations of reliability in practice—Moving beyond Cronbach’s alpha. Poster presentation at the annual convention of the Association for Psychological Science, Boston, MA.
- Newton, S. D.,** McCoach, D. B., Mitchell, D., & Tafrate, R. C. (2016, May). Criminogenic Thinking Profile factor model fits better among probationers than college students. Poster presented at the annual meeting of the Association of Psychological Science, Chicago, IL.
- Newton, S. D.,** & McCoach, D. B. (2016, April). Mirror, mirror, on the wall—Which criterion performs best of all? Paper presented in a Multilevel Modeling SIG session at the annual meeting of the American Educational Research Association, Washington, DC.
- Newton, S. D.,** & McCoach, D. B. (2015, April). Growth modeling: Akaike and Bayesian Information Criteria and sample size considerations. Paper presented in a Multilevel Modeling SIG session at the annual meeting of the American Educational Research Association, Chicago, IL.
- Newton, S. D.,** & McCoach, D. B. (2014, April). Selecting correct multilevel models: Investigating Akaike and Bayesian Information Criteria and “sample size” issues. Paper presentation in a Multilevel Modeling SIG session at the annual meeting of the American Educational Research Association, Philadelphia, PA.
- Newton, S. D.** (2014, April). Applying item response theory to a mathematics competition assessment. Research presented at the Division H In-Progress Research Roundtable Session at the annual meeting of the American Educational Research Association, Philadelphia, PA.
- Newton, S. D.,** & McCoach, D. B. (2013, May). Measuring goal valuation: An approach to addressing underachievement. Poster presentation at the annual convention of the Association for Psychological Science, Washington, DC.
- Newton, S.,** & Yakimowski, M. (2012, April). Fostering an assessment culture: Using an online application system to assist in the provision of data and analyses. Presentation at the RosEvaluation Conference, Terra Haute, IN.

Recent/Select Relevant Professional Experience

2020-present Postdoctoral Research Associate, Project Building Up Mathematics Proficiency Utilizing Push-in (Project BUMP UP) & Evaluating the Impact of Integrated Behavior and Reading Multi-Tiered Systems of Support in Elementary Schools (I-MTSS). University of Connecticut, Storrs, CT.

~Duties: [Project BUMP UP] provide methodological support as needed; assist with preparation of IRB proposal and amendments; develop and refine instrumentation for measuring project variables of interest; create a comprehensive longitudinal data collection system using both REDCap (e.g., for siloed, teacher-level entry of longitudinal data across instructional units) and Qualtrics (e.g., for student-level, public-facing survey data collection) to gather project data; manage data collection system; routinely monitor collected data in accordance with project’s data management plan; provide

training to staff and study participants on general use and data entry within the data collection system (as needed).

~Duties: [I-MTSS] provide methodological support as needed; assist with preparation of IRB proposal, amendment, and audit documentation; create comprehensive longitudinal data collection systems for each sub-study in this project using REDCap and/or Qualtrics to gather project data (including administrative data for participants at all levels—students/teachers/schools, public-facing surveys, invitation-only surveys, classroom observation data, intervention fidelity data, etc.); develop a new application for electronically collecting momentary time sampling data in Qualtrics; manage data collection systems; routinely monitor collected data in accordance with project's data management plan; provide training to staff on general use and data entry using each data collection system; develop, contribute to, and update project-level protocols to guide/document research processes; clean, screen, wrangle, and analyze data reproducibly, in accordance with the Open Science Framework; report results of data analysis for project-level dissemination efforts; contribute to research team dissemination efforts; attend all UConn research team and research network-wide meetings.

2014-2020 Data Manager, GlobalEd 2 [GE2] and GlobalEd 3 [GE3] projects, University of Connecticut, Storrs, CT.

~Duties: motivate and manage a team of up to nine scorers and Data Entry Specialists; coordinate with project's Chicago site staff to ensure consistency of policies, procedures, materials, and analyses; make recommendations to improve the efficiency of both my team and the overall study for current and future administrations of the GE2 research project; contribute to improvement/ modification of study assessments, for new project scenario content; oversee all aspects of assent/consent/data collection and scoring at the Connecticut site; build supports for teacher data collection efforts; prepare Specialists to complete specific research tasks; teach Specialists how to score administered assessments using rater training data sets, on-site rater training sessions, and on-site/cross-site training conferences; conduct within-site and cross-site reliability checks to ensure rater consistency across the four administered project assessments; collaborate with Chicago's Data Manager to verify, validate, and finalize collected data; conduct preliminary data analyses and report results to staff with varying levels of statistical expertise; develop Data Entry Team [DET] protocols/manuals for use in future study years; contribute to personnel decisions for the DET (includes: making initial hiring recommendations, engaging new hires in general project training, participating in decisions to re-hire/release personnel); track and ensure that all GE2 staff members complete CITI training course, in compliance with the University's Institutional Research Board and federal grant requirements; hold weekly DET meetings to reflect on individual and team progress, challenges, solutions, and suggestions; fulfill requests for data and results from internal staff members; consult with information technology staff to improve electronic data storage, access, and security; write the description of GE2 instrumentation for the [IES] grant application to fund GE3; serve as the GE3 Data Management Consultant for the 2017-2018 project year (due to project funding constraints).



COLORADO
Department of Education

Exceptional Student Services Unit
1560 Broadway, Suite 1100
Denver, CO 80202-5149

Dr. Del Siegle
NEAG School of Education
University of Connecticut
2131 Hillside Road Unit 3007
Storrs, CT 06269-3007

March 28, 2022

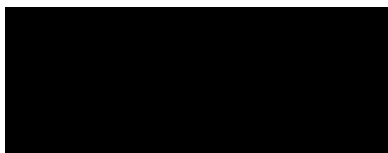
Dear Dr. Siegle,

Thank you for reaching out regarding a potential partnership through Project EAGLE. The project's focus on eliciting advanced gifted learning evidence aligns to our ongoing goal to achieve equitable gifted identification for our high population of English learners (11.4%).

Project EAGLE's train-the-trainer model aligns with our regional network professional development for Administrative Units (AUs). Specifically, our Gifted Education Regional Consultants (GERCs) work collaboratively with their regions to provide professional development and technical support that is relevant to their diverse needs and interests of stakeholders. It would be beneficial for our GERCs to learn Project EAGLE content to share with teachers (e.g., advanced math and gifted EL characteristics, dynamic identification, and problem-solving activities) as well as further advance their expertise as professional development providers. The ongoing communication network would provide a framework for strengthening our outreach to and support of teachers throughout the year, as well.

Beyond the advantage of increased professional learning for our GERCs and teachers, Project EAGLE's dynamic approach aligns with our second pathway for identifying students without a qualifying cognitive score (95th percentile or above on a cognitive assessment). When cognitive data do not meet gifted criteria, identification in a specific academic aptitude (e.g., math) requires an examination of multiple data points to examine trends over time. Our guidelines state "At any time when the team needs more time to make a determination, ongoing opportunities in the specific domain are needed to ensure the child's continued growth and engagement in the content area." Project EAGLE's focus on problem-solving activities and probing questions would support this for ELs in the math classroom, while the *Sparks of Math Talent Observation Checklist* would be a helpful framework for teachers to spot talent and encourage its growth.

I look forward to working with you.



1560 Broadway, Suite 1100, Denver, CO 80202-5149 P 303.866.6694 F 303.866.6767
Katy Anthes, Ph.D., Commissioner of Education | www.cde.state.co.us





Arizona Department of Education
Office of Gifted Education and Advanced Learning

March 31, 2022

Dear Dr. Siegle,

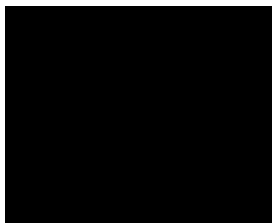
We would be interested in promoting Project EAGLE in Arizona.

Project EAGLE would support our state-level work providing differentiated leadership and assistance to Arizona LEAs and schools to improve access for traditionally underrepresented student populations. This project would especially address our state's large population of students who are culturally and linguistically diverse.

As part of Arizona's state law, school districts must develop a Scope and Sequence for Gifted Education Programs and Services that includes their process for equitably identifying gifted learners. Project EAGLE's dynamic approach through math instruction aligns with the Scope and Sequence requirement for diagnostic gifted identification that provides useful information on how an individual child thinks and learns. Project EAGLE's problem-solving activities and questioning probes would provide an added benefit by addressing gifted process such as higher order thinking, to help inform instruction and curriculum modifications for gifted students. Finally, the dynamic assessment approach in grades 3 and 4 would complement the 2nd grade universal screening opportunity using the Cognitive Abilities Test (CogAT) currently available to all schools in SY 2021-2022.

With limited state funding and resources, we would greatly benefit from Project EAGLE's workshops for teachers to learn more about gifted English language learner characteristics and math talent to improve gifted identification. We would also benefit from the train-the-trainer model as it would provide us with a pool of experienced trainers for future efforts.

Thank you for this unique opportunity to partner with Project EAGLE to help enhance our ability to identify and develop talent and potential for our culturally and linguistically diverse students!



Policy Advisor & Strategic Projects
Policy Development & Government Relations
Arizona Department of Education

Equity for all students to achieve their full potential
www.azed.gov – 602-364-3842 – 1535 West Jefferson Street, Bin #64 Phoenix, Arizona 85007



TEXAS ASSOCIATION FOR THE
GIFTED & TALENTED

April 4, 2022

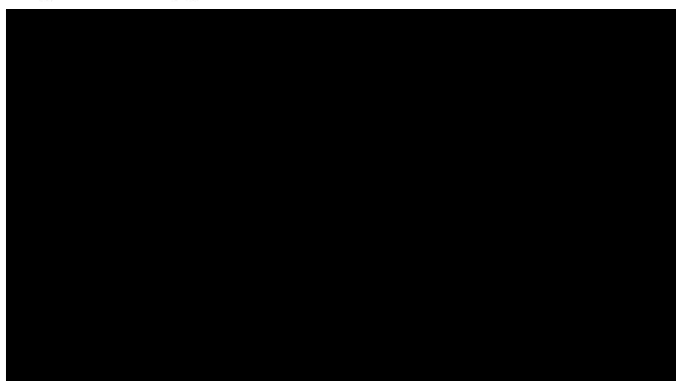
Dear Dr. Siegle,

I am writing to inform you of our interest in your proposed Javits study, Project EAGLE.

The Texas Association for the Gifted & Talented (TAGT) is the largest state gifted association with over 3,000 members. Since our founding over 40 years ago, we have advocated to meet the unique needs of the gifted and talented. Our efforts include those on behalf of special populations of learners, including creating and supporting professional learning opportunities and partnerships for educators around special populations.

We are interested in Project EAGLE's approach to professional learning and in-class method of identifying talent in our English Language Learners. The Texas State Plan for the Education of Gifted/Talented Students includes mathematics as one of the Specific Academic Fields in which students may possess superior ability or potential, aligning to Project EAGLE's focus on math. The State Plan also includes a call for qualitative measures in the identification process, including observations, anecdotal records, and checklists.

Once a partnership is established, we would like to promote Project EAGLE through our professional learning outreach to teachers. We view our role as an advocacy organization to provide concrete, strategic approaches equitable G/T identification and services. We believe Project EAGLE's dynamic approach to support equitably identifying gifted English Language Learners within the classroom may be a dynamic approach with benefits that will last beyond the project's duration.



3305 Steck Ave., Ste. 200 • Austin, TX 78757 • 512.499.8248 • txgifted.org

April 1, 2022

Del Siegle, Ph.D.
Lynn and Ray Neag Endowed Chair for Talent Development
Neag School of Education
University of Connecticut
Storrs, CT 06269-3007

Dear Professor Siegle,

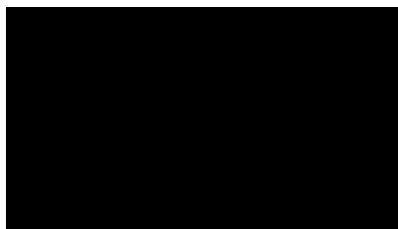
I am pleased to provide this letter in support of your proposed project **EAGLE** (**E**liciting **A**dvanced **G**ifted **L**earning **E**vidence), a proposal you will submit to the U.S. Department of Education Javits Program. As the current Dean of the Neag School of Education at the University of Connecticut, I fully support your efforts in the proposed project.

You and the other members of your team are well known nationally and internationally for your expertise in gifted education. Additionally, your research and service have been recognized by the National Association for Gifted Children and the Neag School. The proposed project addresses a critical issue within the field of gifted education—the underrepresentation of underserved students in gifted programs, particularly those who are English learners.

The Neag School of Education will provide you and all the support members for your team with office space and technology access. I understand that you will utilize these and other resources at the University of Connecticut to carry out the proposed project, and I fully support these efforts.

Your proposed co-investigators from the Neag School of Education are Dr. D. Betsy McCoach and Dr. Susan Dulong Langley. Dr. McCoach is a valuable, highly productive faculty member and Dr. Dulong Langley has excelled at directing Project BUMP UP, another Javits funded project.

I have full confidence that your team can successfully implement the project you are proposing, and I look forward to reviewing the outcome of this research.



249 GLENBROOK ROAD, UNIT 3064
STORRS, CT 06269-3064
PHONE 860.486.3815
jason.irizarry@uconn.edu
education.uconn.edu

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Copies of Email Confirmations from Each Advisory Board Member

From: Dina Brulles [REDACTED]
Sent: Tuesday, March 15, 2022 1:13 PM
To: Langley, Susan Dulong
Cc: Siegle, Del
Subject: Re: Reconnecting - Advisory Board Request

Hi Susan,
Very nice to hear from you. I hope you are doing well.
I would be pleased to participate in your grant if it gets funded. Sounds like a very worthy venture. I am retiring in June so will have more time for projects such as this.
Good luck with the proposal,
Dina

Subject: Re: Reconnecting - Advisory Board Request
Date: Thursday, March 17, 2022 at 10:01:51 AM Eastern Daylight Time
From: Jaime Castellano
To: Siegle, Del, Langley, Susan Dulong

Good Morning Susan:
I'm in! Your grant sounds like an exciting opportunity. I look forward to joining you, Del, and others on this venture. Please keep me posted. And thanks for the invitation! Take care and have a great day.

Juntos somos la diferencia/Together we are the difference.

Dr. Jaime A. Castellano, Professor
Florida Atlantic University
Department of Special Education
Behavioral Health Case Manager
Multilingual Psychotherapy Centers, Inc.
Award-Winning Educator and Principal
Award-Winning Author and Scholar

Siegle, Del
From: Kathy M Escamilla [REDACTED]
Sent: Tuesday, March 15, 2022 10:57 AM
To: Siegle, Del
Cc: Langley, Susan Dulong
Subject: Re: Reconnecting

Hello,

I do remember you very well and I was so impressed with the work you did. Congratulations on the award given your paper - I know it was richly deserved and you are working in an area of great need for which we need to know much more.

I would be very happy to serve on an advisory group for this project if it is funded so count me in and let me know what I need to do and good luck to you.

Kathy

Kathy Escamilla, Ph.D.

Professor

Bob & Judy Charles Endowed Chair

Educational Equity & Cultural Diversity

[REDACTED]

School of Education, Room 246

University of Colorado Boulder

249 UCB, Boulder, CO 80309

Siegle, Del

From: Gavin, M. Katherine

Sent: Wednesday, March 16, 2022 10:36 AM

To: Siegle, Del; Langley, Susan Dulong

Subject: Re: Reconnecting

Hi Del,

So great to hear from you.

Of course, I would love to be part of the advisory group for your new grant. Thank you so much for inviting me. It is always a rewarding and fun experience for me and I hope I can contribute to moving the grant forward with each meeting.

All the best,

Kathy

Siegle, Del

From: Marcy Voss [REDACTED]

Sent: Tuesday, March 15, 2022 1:46 PM

To: Siegle, Del

Cc: Langley, Susan Dulong

Subject: Re: FW: Reconnecting

Dr. Siegle,

The NABE Conference went well. Again, we are so appreciative of your kindness in making the video to share information with those in attendance. It was definitely well-received!

I am so excited about your research on using dynamic assessment to identify gifted ELs, and I am very honored to be asked to serve on your advisory board. At this point, I do not see any problem with committing to the 5-year study and would absolutely love to be a part of it.

Thank you again for this wonderful opportunity!

Marcy

Sparks of Math Talent

Classroom Observation Checklist

Mathematically talented students exhibit many of the following behaviors. Students who exhibit several of these behaviors should be considered for differentiated mathematics instruction.

1. Is motivated and persists in solving difficult math problems.
2. Organizes data and information in a variety of ways to discover mathematical patterns.
3. Recognizes patterns in mathematical data.
4. Learns new concepts in mathematics quickly.
5. Applies mathematical concepts to real-world situations.
6. Demonstrates creative ways of approaching math problems.
7. Demonstrates a strong number sense (e.g., makes sense of numbers, estimates easily and appropriately).
8. Demonstrates understanding of abstract concepts without the need for concrete materials.
9. Shows flexibility in using a variety of thinking and problem-solving strategies.
10. Makes inferences based on logical reasoning.
11. Displays spatial abilities.
12. Asks complex questions to explore mathematical concepts.

Developed through Project BUMP UP (*Building Up Mathematics Proficiency Utilizing Push-in*; Javits Award # S206A190028) from the following sources:

Fairfax County Public Schools. (n.d.). *Gifted Behaviors Rating Scale with commentary*.

https://www.fcps.edu/sites/default/files/media/forms/AAPGiftedBehaviorRatingScale_0.pdf

Gavin, M. K. (2011). *Identifying and nurturing math talent: The practical strategies series in gifted education*. Prufrock Press.

Pfeiffer, S. I., & Jarosewich, T. (2003). *The Gifted Rating Scales*. Psychological Corporation/Pearson Assessment.

Renzulli, J. S., Smith, L. H., White, A. J., Callahan, C. M., Hartman, R. K., Westberg, K. L.,

Gavin, M. K., Reis, S. M., Siegle, D., & Sytsma, R. E. (2013). *Scales for Rating the Behavioral Characteristic of Superior Students (Renzulli Scales)*. Prufrock Press.

Sheffield, L. J. (2003). *Extending the challenge in mathematics*. Corwin.

Project EAGLE – SF 424

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

The following areas will be affected by Project EAGLE:

- Connecticut – potential for all cities and counties
- Massachusetts – potential for all cities and counties
- Rhode Island – potential for all cities and counties
- Arizona – potential for all cities and counties
- Texas – potential for all cities and counties
- Colorado – potential for all cities and counties

Project EAGLE – SF 424

16b. Congressional Districts affected by Project EAGLE:

- CT-all
- MA-all
- RI-all
- AZ-all
- CO-all
- TX-all



DEPARTMENT OF HEALTH & HUMAN SERVICES

Program Support Center
Financial Management Portfolio
Cost Allocation Services

26 Federal Plaza, Room 3412
New York, NY 10278
PHONE: (212) 264-2069
FAX: (212) 264-5478
EMAIL: CAS-NY@psc.hhs.gov

April 22, 2021

Ms. Patricia Casey
Associate Vice President, Financial Operations and Controller
University of Connecticut
343 Mansfield Road, Unit 1074
Storrs, CT 06269-1074

Dear Ms. Casey:

A negotiation agreement is being sent to you for signature. This agreement reflects an understanding reached between your institution and a member of my staff concerning the rates or amounts that may be used to support your claim for costs on grants and contracts with the Federal Government. The agreement must be signed by a duly authorized representative of your institution and emailed to me; retain a copy for your file. Our email address is cas-ny@psc.hhs.gov. We will reproduce and distribute the agreement to awarding agencies of the Federal Government for their use.

Requirements for adjustments to costs claimed under Federal Grants and Contracts resulting from this negotiation are dependent upon the type of rate contained in the negotiation agreement. Information relating to these requirements is enclosed.

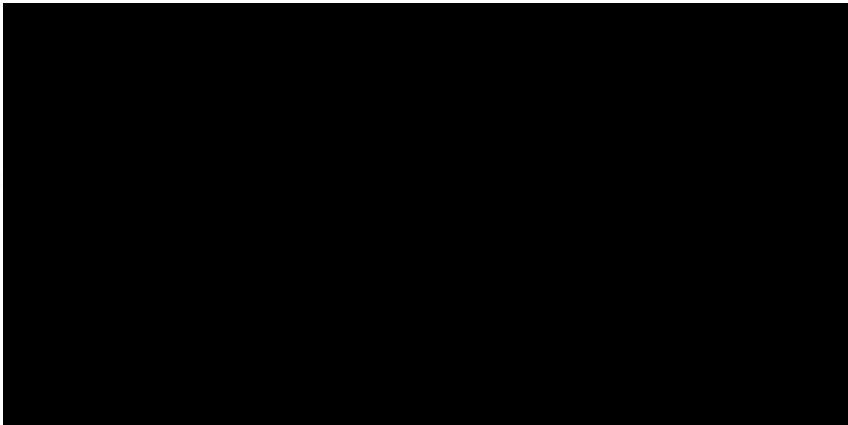
In consideration of this negotiation, the following was agreed to:

1. The carry-forward under-recovery of [REDACTED] resulting from the settlement of your actual Professional fringe benefit rate for fiscal year ended June 30, 2020 will be taken into consideration in computing the actual fringe benefit rate for your fiscal year ending June 30, 2022.
2. The carry-forward under-recovery of [REDACTED] resulting from the settlement of your actual Faculty fringe benefit rate for fiscal year ended June 30, 2020 will be taken into consideration in computing the actual fringe benefit rate for your fiscal year ending June 30, 2022.
3. The carry-forward over-recovery of [REDACTED] resulting from the settlement of your actual Graduate Assistants fringe benefit rate for fiscal year ended June 30, 2020 will be taken into consideration in computing the actual fringe benefit rate for your fiscal year ending June 30, 2022.
4. The carry-forward under-recovery of [REDACTED] resulting from the settlement of your actual Special Payroll fringe benefit rate for fiscal year ended June 30, 2020 will be taken into consideration in computing the actual fringe benefit rate for fiscal years ending June 30, 2022 [REDACTED] and June 30, 2024 [REDACTED].
5. The carry-forward over-recovery of [REDACTED] resulting from the settlement of your actual Student Labor fringe benefit rate for fiscal year ended June 30, 2020 will be taken into consideration in computing the actual fringe benefit rate for your fiscal year ending June 30, 2022.
6. Your fringe benefit proposal for your fiscal year ending June 30, 2021 will be due by December 31, 2021.

An indirect cost rate proposal, together with the supporting information, is required to substantiate your claim for indirect costs under grants and contracts awarded by the Federal Government. Thus, your next proposal based on actual costs for the fiscal year ending 6/30/2022 is due in our office by 12/31/2022. If you are unable to submit your proposal by the prescribed date, you may request an extension. This request must be submitted prior to the due date of the proposal and must contain a justification for the extension and the date the proposal will be submitted. Please submit your next proposal electronically via email to CAS-NY@psc.hhs.gov. In addition, please acknowledge your concurrence with the comments and conditions cited above by signing this letter in the space provided below and returning it to me via email, along with the enclosed negotiation agreement.



Enclosures



SECTION I: INDIRECT COST RATES

EFFECTIVE PERIOD

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ORGANIZATION: University of Connecticut

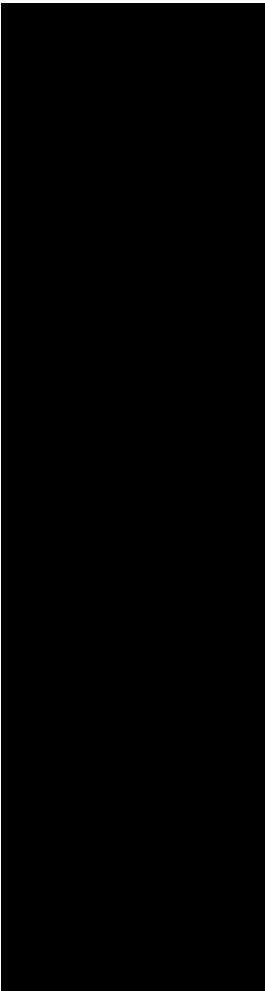
AGREEMENT DATE: 4/22/2021

*BASE

Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first [REDACTED] of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of [REDACTED]. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.

ORGANIZATION: University of Connecticut
AGREEMENT DATE: 4/22/2021

SECTION I: FRINGE BENEFIT RATES**

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE (%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
FIXED	7/1/2020	6/30/2021			Professional
FIXED	7/1/2020	6/30/2021			Faculty
FIXED	7/1/2020	6/30/2021			Graduate Assistants
FIXED	7/1/2020	6/30/2021			Special Payroll
FIXED	7/1/2020	6/30/2021			Student Labor
FIXED	7/1/2021	6/30/2022			Professional
FIXED	7/1/2021	6/30/2022			Faculty
FIXED	7/1/2021	6/30/2022			Graduate Assistants
FIXED	7/1/2021	6/30/2022			Special Payroll
FIXED	7/1/2021	6/30/2022			Student Labor
PROV.	7/1/2022	Until amended			Professional
PROV.	7/1/2022	Until amended			Faculty
PROV.	7/1/2022	Until amended			Graduate Assistants
PROV.	7/1/2022	Until amended			Special Payroll
PROV.	7/1/2022	Until amended			Student Labor

** DESCRIPTION OF FRINGE BENEFITS RATE BASE:
Salaries and wages.

ORGANIZATION: University of Connecticut

AGREEMENT DATE: 4/22/2021

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

ORGANIZATION: University of Connecticut

AGREEMENT DATE: 4/22/2021

(1) For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Grants or contracts will not be subject to more than one indirect cost rate. If more than 50% of a project is performed off-campus, the off-campus rate will apply to the entire project.

(2) The Fringe Benefit rates include the following: Pension, Unemployment Compensation, Worker's Compensation, Health Services, Group Life Insurance, Social Security, and Medical Insurance.

(3) The following is a list of the locations to which the On-Campus indirect cost rate is applicable to:

Storrs - Main Campus
Greater Hartford Campus:
Hartford Branch
School of Law
School of Social Work
School of Insurance
Institute of Public Services

Southeastern Location:
Groton, CT
Southeastern Branch
Marine Services Institute

Waterbury Branch, Torrington Branch, Stamford Branch

(4) Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds [REDACTED]

(5) A fringe benefit proposal based on actual costs for the fiscal year ended June 30, 2021 is due by December 31, 2021. A Facilities & Administrative cost proposal based on actual costs for the fiscal year ending June 30, 2022 is due by December 31, 2022.

This rate agreement updates fringe benefit rates only.

ORGANIZATION: University of Connecticut

AGREEMENT DATE: 4/22/2021

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative cost pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant or other agreement is reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

University of Connecticut

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES



U.S. Department of Education
Evidence Form

OMB Number: 1894-0001
Expiration Date: 05/31/2022

1. Level of Evidence

Select the level of evidence of effectiveness for which you are applying. See the Notice Inviting Applications for the relevant definitions and requirements.

☐ Demonstrates a Rationale ☐ Promising Evidence ☐ Moderate Evidence ☒ Strong Evidence

2. Citation and Relevance

Fill in the chart below with the appropriate information about the studies that support your application.

A. Research/Citation	B. Relevant Outcome(s)/Relevant Finding(s)	C. Project Component(s)/Overlap of Populations and/or Settings
<p>Schoen, R. C., LaVenía, M., & Tazaz, A. M. (2018). <i>Effects of the first year of a three-year CGI teacher professional development program on grades 3–5 student achievement: A multisite cluster-randomized trial</i> (Research Report No. 2018-25). Learning Systems Institute, Florida State University. http://doi.org/10.33009/fsu.1562595733</p> <p>Meets WWC standards with reservations; at least one statistically significant positive finding; and Tier 2 Moderate evidence under Teacher Training, Evaluation, and Compensation Review Protocol 3.2 and Review Standards 3.0 (https://ies.ed.gov/ncee/wwc/Study/86089)</p>	<p>(p. 2) The intervention was professional learning for grades 3–5 teachers on implementing Cognitively Guided Instruction (CGI). CGI includes two frameworks: (a) Problem Types Frameworks of how problem structures influence students’ mathematical thinking; and (b) Solution Strategy Frameworks of students’ developmental progressions in mathematical thinking.</p> <p>(p. 2) The study’s purpose was to estimate the impact of the first year of a three-year teacher professional learning program for grades 3–5 math teachers to determine the effect of the CGI 3–5 program on student achievement.</p> <p>(p. 11) Figure 1. CGI 3-5 Theory of Change: Focusing teachers’ attention on students’ cognitive processes in solving math problems and encouraging them to use what they learn about students to drive instructional decisions is thought to (a) directly increase teachers’ mathematical teaching knowledge, their beliefs about mathematics teaching, and implementation of CGI in the classroom; and (b) indirectly increase student achievement and problem-solving in elementary mathematics.</p>	<p>“The reviewed study included one hundred forty-nine grades 3–5 teachers—representing 32 schools, nine public school districts, and the geographic, socioeconomic, and cultural diversity of the central and northern regions of the state of Florida—participated in the study. Students in the analytic sample represented grades 3, 4, and 5” (p. 3).</p> <p>Our project involves providing professional learning for elementary teachers of Grades 3 and 4 on using a dynamic measure to allow English learners’ sparks of math talent to be observed in math problem-solving activities. Thus, both our project and the Schoen et al. study use the CGI process to understand students’ mathematic thinking.</p> <p>The reviewed study’s focus on professional learning for implementing CGI aligns with the proposed study’s professional learning on using questions to further elicit gifted thinking behaviors as CGI is “a formative assessment process wherein teachers observe students solving problems and explaining their thinking processes. Teachers use these observations to draw inferences about students’ mathematical</p>

	<p>(p. 7) The relevant outcome was successful teacher professional learning led to classroom implementation of CGI in which students were supported in developing intuitive strategies to solve math problems by developing their own approach.</p> <p>(p. 6) The CGI 3–5 PD program was found to significantly impact student mathematics achievement ($p = .007$) in the first year of the 3-year program.</p>	<p>understanding. Students in CGI classrooms learn mathematics by engaging in problem solving, explaining their problem-solving strategies to the teacher and to their peers, and listening to various ways of solving problems” (p. 3).</p>
<p>Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2018). <i>Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055; Revised 2018)</i>. National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/.</p> <p>Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70–71).</p>	<p>(p. 10) Recommendation 1 (“Prepare problems and use them in whole-class instruction”) is characterized as backed by “minimal evidence.”</p> <p>(p. 54) The panel noted that although evidence is minimal due to limited studies, part of the practice (i.e., choose non-routine problems) holds promise for improving students’ mathematical problem solving.</p>	<p>One aspect is of Recommendation 1 is promising for the proposed project. “When the primary goal of instruction is to develop students’ ability to think strategically, teachers should choose non-routine problems that force students to apply what they have learned in a new way” (p. 29). Our study’s problem-based activities do this.</p>
<p>Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). <i>Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055)</i>. National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/.</p> <p>Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70–71).</p>	<p>(p. 17) Recommendation 2 (“Assist students in monitoring and reflecting on the problem-solving process”) is characterized as backed by “strong evidence.”</p> <p>(p. 18) Five studies found that student performance improved when teachers modeled a self-questioning process and then asked students to practice it.</p>	<p>This recommendation includes (a) providing students with a list of prompts to help them monitor and reflect during the problem-solving process; (b) modeling how to monitor and reflect on the problem-solving process; and (c) using student thinking about a problem to develop students’ ability to monitor and reflect (pp. 17–22). These three suggestions will support the proposed project’s dynamic measure intervention of teachers providing instruction designed to elicit advanced mathematical thinking behaviors. We are developing prompts based on this concept.</p>

<p>Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). <i>Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide</i> (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/.</p> <p>Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70–71).</p>	<p>(p. 23) Recommendation 3 (“Teach students how to use visual representations”) is characterized as being backed by “strong evidence.”</p> <p>(p. 23) Studies found “Both general education students and students with learning disabilities performed better when taught to use visual representations” (p. 26). Some students were taught to differentiate between types of math problems and others were taught an alternative problem-solving approach integrated with visual representations. Both resulted in higher achievement.</p>	<p>The 3 visual strategies of this recommendation will be helpful for teachers providing dynamic measure interventions to English learners: 1. Select visual representations that are appropriate for students and the problems they are solving. 2. Use think-alouds and discussions to teach students how to represent problems visually. 3. Show students how to convert the visually represented information into mathematical notation. (pp. 23–31)</p>
<p>Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). <i>Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide</i> (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/.</p> <p>Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70–71).</p>	<p>(p. 32) Recommendation 4 (“Expose students to multiple problem-solving strategies”) is characterized as being backed by “moderate evidence.”</p> <p>(p. 31) Studies found when “students were instructed in using multiple strategies to solve the same problem, procedural knowledge improved; however, all of these studies included additional instructional components (checklists and visual aids) that may have produced the positive results.”</p>	<p>Recommendation 4 is helpful to a dynamic approach through its three instructional strategies to 1. Provide instruction in multiple strategies. 2. Provide opportunities for students to compare multiple strategies in worked examples. 3. Ask students to generate and share multiple strategies for solving a problem (pp. 32–38). The proposed study also includes the use of checklists and visual aids that may contribute to positive results.</p>
<p>Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). <i>Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide</i> (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/.</p> <p>Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70–71).</p>	<p>(p. 39) Recommendation 5 (“Help students recognize and articulate mathematical concepts and notation”) is characterized as being backed by “strong evidence.”</p> <p>A study found “student achievement improved when teachers discussed math problems conceptually (without numbers) and then represented them visually” (p. 39).</p>	<p>Recommendation 4 supports a dynamic approach through two of its instructional strategies for teachers: 1. Describe relevant mathematical concepts and notation and relate them to the problem-solving activity. 2. Ask students to explain each step used to solve a problem in a worked example (pp. 39–44). Project EAGLE’s problem-based activities are designed to elicit sparks of math talent in English learners through conceptual math challenges. Allowing students to initially show what they know in response to conceptual challenges will reduce potential computational/prior experience barriers.</p>

Instructions for Evidence Form

1. **Level of Evidence.** Check the box next to the level of evidence for which you are applying. See the Notice Inviting Applications for the evidence definitions.
2. **Citation and Relevance.** Fill in the chart for each of the studies you are submitting to meet the evidence standards. If allowable under the program you are applying for, you may add additional rows to include more than four citations. (See below for an example citation.)
 - a. **Research/Citation.** For Demonstrates a Rationale, provide the citation or link for the research or evaluation findings. For Promising, Moderate, and Strong Evidence, provide the full citation for each study or WWC publication you are using as evidence. If the study has been reviewed by the WWC, please include the rating it received, the WWC review standards version, and the URL link to the description of that finding in the WWC reviewed studies database. Include a copy of the study or a URL link to the study, if available. Note that, to provide promising, moderate, or strong evidence, you must cite either a specific recommendation from a WWC practice guide, a WWC intervention report, or a publicly available, original study of the effectiveness of a component of your proposed project on a student outcome or other relevant outcome.
 - b. **Relevant Outcome(s)/Relevant Finding(s).** For Demonstrates a Rationale, describe how the research or evaluation findings suggest that the project component included in the logic model is likely to improve relevant outcomes. For Promising, Moderate and Strong Evidence, describe: 1) the project component included in the study (or WWC practice guide or intervention report) that is also a component of your proposed project, 2) the student outcome(s) or other relevant outcome(s) that are included in both the study (or WWC practice guide or intervention report) and in the logic model (theory of action) for your proposed project, and 3) the study (or WWC intervention report) finding(s) or WWC practice guide recommendations supporting a favorable relationship between a project component and a relevant outcome. Cite page and table numbers from the study (or WWC practice guide or intervention report), where applicable.
 - c. **Project Component(s)/Overlap of Population and/or Settings.** For Demonstrates a Rationale, explain how the project component(s) is informed by the research or evaluation findings. For Promising, Moderate, and Strong Evidence, explain how the population and/or setting in your proposed project are similar to the populations and settings included in the relevant finding(s). Cite page numbers from the study or WWC publication, where applicable.

EXAMPLES: For Demonstration Purposes Only (the three examples are not assumed to be cited by the same applicant)

A. Research/Citation	B. Relevant Outcome(s)/Relevant Finding(s)	C. Project Component(s)/Overlap of Populations and/or Settings
Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., Kim, J., Lyskawa, J., Olson, C. B., & Smither Wulsin, C. (2016). <i>Teaching secondary students to write effectively</i> (NCEE 2017-4002). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from the NCEE website: https://ies.ed.gov/ncee/wwc/PracticeGuide/22 . This report was prepared under Version 3.0 of the WWC Handbook (p. 72).	<p>(Table 1, p. 4) Recommendation 1 ("Explicitly teach appropriate strategies using a Model – Practice – Reflect instructional cycle") is characterized as backed by "strong evidence."</p> <p>(Appendix D, Table D.2, pp. 70-72) Studies contributing to the "strong evidence" supporting the effectiveness of Recommendation 1 reported statistically significant and positive impacts of this practice on genre elements, organization, writing output, and overall writing quality.</p>	(Appendix D, Table D.2, pp. 70-72) Studies contributing to the "strong evidence" supporting the effectiveness of Recommendation 1 were conducted on students in grades 6 through 12 in urban and suburban school districts in California and in the Mid-Atlantic region of the U.S. These study samples overlap with both the populations and settings proposed for the project.

A. Research/Citation	B. Relevant Outcome(s)/Relevant Finding(s)	C. Project Component(s)/Overlap of Populations and/or Settings
<p>U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2017, February). Transition to College intervention report: Dual Enrollment Programs. Retrieved from https://ies.ed.gov/ncee/wwc/Intervention/1043. This report was prepared under Version 3.0 of the WWC Handbook (p. 1).</p>	<p>(Table 1, p. 2) Dual enrollment programs were found to have positive effects on students' high school completion, general academic achievement in high school, college access and enrollment, credit accumulation in college, and degree attainment in college, and these findings were characterized by a "medium to large" extent of evidence.</p>	<p>(pp. 1, 19, 22) Studies contributing to the effectiveness rating of dual enrollment programs in the high school completion, general academic achievement in high school, college access and enrollment, credit accumulation in college, and degree attainment in college domains were conducted in high schools with minority students representing between 32 and 54 percent of the student population and first generation college students representing between 31 and 41 percent of the student population. These study samples overlap with both the populations and settings proposed for the project.</p>
<p>Bettinger, E.P., & Baker, R. (2011). The effects of student coaching in college: An evaluation of a randomized experiment in student mentoring. Stanford, CA: Stanford University School of Education. Available at https://ed.stanford.edu/sites/default/files/bettinger_baker_030711.pdf</p> <p>Meets WWC Group Design Standards without Reservations under review standards 2.1 (http://ies.ed.gov/ncee/wwc/Study/72030).</p>	<p>The intervention in the study is a form of college mentoring called student coaching. Coaches helped with a number of issues, including prioritizing student activities and identifying barriers and ways to overcome them. Coaches were encouraged to contact their assignees by either phone, email, text messaging, or social networking sites (pp. 8-10). The proposed project for Alpha Beta Community College students will train professional staff and faculty coaches on the most effective way(s) to communicate with their mentees, suggest topics for mentors to talk to their mentees, and be aware of signals to prevent withdrawal or academic failure.</p> <p>The relevant outcomes in the study are student persistence and degree completion (Table 3, p. 27), which are also included in the logic model for the proposed project.</p> <p>This study found that students assigned to receive coaching and mentoring were significantly more likely than students in the comparison group to remain enrolled at their institutions (pp. 15-16, and Table 3, p. 27).</p>	<p>The full study sample consisted of "13,555 students across eight different higher education institutions, including two- and four-year schools and public, private not-for-profit, and proprietary colleges." (p. 10) The number of students examined for purposes of retention varied by outcome (Table 3, p. 27). The study sample overlaps with Alpha Beta Community College in terms of both postsecondary students and postsecondary settings.</p>

Paperwork Burden Statement: 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. The valid OMB control number for this information collection is 1894-0001. The time required to complete this information collection is estimated to vary from 1 to 4 hours per response, with an average of 1.5 hours per response, including the time to review instructions, search existing data sources, gather the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, D.C. 20202-4537. If you have comments or concerns regarding the status of your individual submission of this form, write directly to the Office of Innovation and Improvement, U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202

PR/Award # S206A220040

Budget Narrative File(s)

* **Mandatory Budget Narrative Filename:**

Add Mandatory Budget Narrative

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

Add Optional Budget Narrative

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View Optional Budget Narrative

Project EAGLE
University of Connecticut
Budget Narrative
October 1, 2022-September 30, 2023 (Year 1)

1. Personnel

The total of personnel costs for all University of Connecticut faculty, staff, graduate assistants, and undergraduate student workers is [REDACTED] for Year 1. There are no participant support costs for Year 1. The total of personnel for Year 1 is [REDACTED]

Senior Personnel

Dr. Del Siegle, Principal Investigator. Dr. Del Siegle, Professor and Director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut, will be funded at 20% of his academic year salary (1.80 academic months effort) in Year 1 (annual salary of [REDACTED]). In addition, one month of summer support, 33.34% summer, is requested to be funded in Year 1 (3 months summer salary of [REDACTED]). Dr. Siegle will provide overall supervision of the project and be responsible for all communications with the granting agency. He will participate in the development and refinement of the dynamic measure materials, work with the professional development team on training materials for the study participants, and dissemination of project results and annual reports. Among his duties in Year 1 are securing IRB approval, organizing the first Advisory Board meeting, hiring the post doc, and recruiting sites for field-testing. Dr. Siegle's specific expertise and his leadership and supervision on the project are important to ensuring the project is successful in achieving its goals and objectives.

Dr. D. Betsy McCoach, Co-Principal Investigator and Research Director. Dr. D.

Betsy McCoach, Professor at University of Connecticut, will be funded at 5% of her academic year salary (.45 academic months effort) in Year 1 (academic year salary of [REDACTED]). In addition, two weeks of summer support, 16.67% is requested to be funded in Year 1 (3 months summer salary of [REDACTED]). Dr. McCoach will lead the project's methodological team, overseeing all issues related to research design, data collection and management, measurement, and statistical analyses. She will oversee refinement of the measurement instruments and research design. Her Year 1 duties include designing post assessment instruments for field-testing. Dr. McCoach will contribute to the project's success through her expertise in research methodology to ensure a focus on the project's goals and outcomes.

Dr. Susan Dulong Langley, Co-Principal Investigator and Project Director. Dr. Dulong Langley, Postdoctoral Research Associate, University of Connecticut will be funded at 50% (6 calendar months) in Year 1 (annual salary of [REDACTED]) as the project director. Her responsibilities will include the coordination of the checklists, lessons, and questions, designing professional learning, overseeing fidelity of implementation and observations, conducting observations and focus group interviews, and assistance with project dissemination including annual reports. Among her Year 1 duties are coordinating with the postdoc and research assistant on literature reviews and refining the observation instrument and problem-based activities. Dr. Dulong Langley's experience directing projects will contribute to the project's success through organized implementation of the project's activities in meeting all goals and objectives.

Other Personnel

Research Scientist – Dr. Daniel Long. Dr. Long will be funded at 20% (2.40 calendar months) in Year 1 (annual salary of [REDACTED]) to coordinate with Dr. McCoach on data analyses and will assist with the preparation of measurement instruments, annual reports, and manuscripts

for publication. Among his Year 1 duties is designing post assessment instruments for field-testing. His extensive experience with data management and statistical analyses will contribute to the project's success by ensuring a focus on the project's goals and objectives.

Postdoctoral Research Associate – Dr. Sarah Newton. Dr. Newton will be funded at 10% (1.20 calendar months) in Year 1 (annual salary of [REDACTED]) to assist with the refinement of measurement instruments and the development and success of the implementation of the data management plan and system. Among her Year 1 duties are designing post assessment instruments for field-testing and setting up the data management system. Her experience managing databases and data management for funded research projects will ensure the project's success.

Postdoctoral Research Associate. A Postdoctoral Research Associate will be hired and funded at 100% of his/her calendar year salary in Year 1 (12 calendar months, anticipated salary of [REDACTED]). This individual will have experience working with English Learners, be fluent in Spanish, and assist with the refining of the checklist and problem-based activities. In addition, the Postdoctoral Research Associate will be involved in developing and providing the professional learning sessions, recruiting participants, and conducting interviews and observations. All these project activities are integral to the success of Project EAGLE in meeting the goals and objectives.

Graduate Assistant. In Year 1, one level two GA (academic year salary of [REDACTED]) will provide academic year support (9 academic months, 20 hours/week) and will provide summer support to the project for 20 hours per week (3 months effort; summer salary of [REDACTED]). This GA will be part of a team preparing materials for participant professional learning and will assist senior personnel in all aspects of the project, including instrument refinement and classroom

observations, focus groups, and interviews. Given the number of observations, focus groups, and interviews, the GA will contribute to the project's rigorous data collection, analysis, and interpretation of findings to contribute to ongoing effective professional learning.

Undergraduate Students. Funds are requested to support 214.29 hours of student workers in Year 1 at [REDACTED] per hour (Connecticut minimum wage) for a total of [REDACTED]. These persons will assist in project-related tasks in the office, including preparation of materials, and data entry. Their support ensures that GAs and other personnel can address project tasks requiring more advanced expertise and thus support project objectives.

Executive Program Director. Lisa Muller, M.S., will serve as the Executive Program Director for 10% (1.2 calendar months effort) of her time in Year 1 (annual salary of [REDACTED]). Ms. Muller will be responsible for the coordination and planning of professional development efforts, coordination of the Advisory Board, budget management, and completion and submission of annual reports. Among her duties in Year 1 is setting up the financial reimbursement system for the Advisory Board members. Her efforts ensure the project meets its objectives in a timely manner and that the project also meets all budget and reporting requirements.

Program Specialist. Dr. Siamak Vahidi will serve as the Program Specialist for 20% (2.4 months effort) in Year 1 (annual salary of [REDACTED]). Dr. Vahidi will assist with technology needs of the project, which include the graphic designing of the training materials. He will also co-develop and maintain the project website. His work on Project EAGLE will help to ensure that the project meets the dissemination goals.

Participant Support Costs – N/A

There are no participant support costs for Year 1.

2. Fringe Benefits

The fringe benefit rates used in the proposal budget are based on the rates approved by the Department of Health and Human Services. An estimated cost escalation has been included in the out years per University budgeting guidance. The following is a list of the fringe benefit rates by job title. Fringe benefits will only be charged on salaried employees at the University of Connecticut and do not apply to teacher stipends.

Senior Personnel:	Fringe Rate %	
Principal Investigator-Based on Academic Year Salary		
Principal Investigator-Based on 3 Month Summer Salary		
Co-Principal Investigators-Based on Academic Year Salary		
Co-Principal Investigators-Based on 3 Month Summer Salary		
Co-Principal Investigator-Based on Calendar Year Salary		
Other Personnel:		
Research Scientist-Based on Annual Salary		
Postdoctoral Research Associates-Based on Annual Salary		
Graduate Assistant-Based on Academic Year Salary		
Graduate Assistant-Based on 3 Month Salary		
Undergraduate Students-Based on Hourly Rate		
Executive Program Director-Based on Annual Salary		
Program Specialist-Based on Annual Salary		

3. Travel

Travel costs include mileage reimbursement and travel costs for trips to the schools in the

project for recruitment and aspects of project implementation. Governmental mileage reimbursement and per diem rates and appropriate modes of transportation will be used. Travel in Year 1 supports project success through encouraging project understanding, where possible in-person recruitment sessions will be held to initiate project engagement. Estimated travel costs for Year 1 total [REDACTED]. Specific details are provided below.

a. Travel to Project Site

Near the end of Year 1, project staff will visit potential project schools to provide informational meetings, recruit schools and teachers to participate in the project. The budget includes funding to reimburse project staff for mileage to and from the school districts. Potential project schools include those within driving distance of the University of Connecticut specifically within Connecticut, Massachusetts, and Rhode Island.

We estimate that some of the districts likely to be involved in the project range in their distance from the university from 20 miles to 100 miles (one way). Using about the mid-point of that range (60 miles one way) as an average and estimating about 6 trips in Year 1 at a mileage rate of [REDACTED] we estimate about [REDACTED] for travel to project schools in Year 1.

4. Equipment – N/A

5. Supplies

Supplies to be purchased for the project include assessment materials and resources for classroom activities and project support activities. Supplies purchased with federal funds directly benefit the grant project and are necessary for achieving the goals of the project. Estimated supply costs for Year 1 total [REDACTED]. Specific details are provided below.

a. Project Supplies

The project requests [REDACTED] be allocated for project supplies for additional resources

required by the project team to support the development and implementation of professional development activities including math manipulatives, resource books, and project specific supplies (e.g., envelopes, letterhead), paper, toner cartridges, and other supporting materials.

Project EAGLE will purchase up to one laptop (██████) for a newly hired Postdoctoral Research Associate. The laptop will be used to support the project success by supporting the recruitment of participants, development of professional learning, and data collection. Total laptop purchase in Year 1 will be ██████

A total of ██████ is requested to provide 6 team members with access to qualitative software to be used to code data. The cost per team member for a year access to the software is ██████

6. Contractual

Project EAGLE will hire consultants to create an Advisory Board for the project and a videographer to support development of video material for the project to use during professional learning trainings. All contractual hires will follow the procedures for procurement under 2 CFR 200.317-200.326. Estimated contractual costs for Year 1 total ██████

a. Consultants – Advisory Board Members

The Project EAGLE five-member advisory board will consist of policymakers, scholars, and practitioners and will meet one time each year and consult on all aspects of the project, including instrumentation development and testing, professional development for participants, data analysis, and outreach activities. We will seek to establish a contract with each advisory board member to include a ██████ honorarium and ██████ for travel expenses to attend one meeting in Year 1 at the University of Connecticut in Storrs, CT. Flights are estimated at ██████ per person. Lodging will not exceed ██████ per night for two nights each trip (total of ██████).

Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation to and from the airport is estimated at [REDACTED] per person. Estimated contractual costs for Year 1 total [REDACTED].

b. Consultant - Videographer

Funds have been allocated to hire a videographer to work with the project team to create the videos of the math lessons to assist research participants in practicing using the *Sparks* instrument. The research team will hire a videographer to videotape each of the 6 problem-based activities created for the project within local CT schools. The footage will be edited into short 4-minute videos to be used to assist in training the research participants. Project EAGLE estimates all 6 videos will total 24 minutes in length and will cost [REDACTED] per finished minute for videotaping and editing).

7. Construction – N/A

8. Other

Other expenses will include printing for project team training.

a. Printing

Costs to print paperwork for the project are estimated at [REDACTED] in Year 1, to include printing of materials for the professional learning activities as well as other project materials (e.g., consent forms, copies of pilot teacher checklist). Cost estimates are based on 5,000 pages at .10 per page to print, collate, and bind.

9. Total Direct Costs

The total direct costs for Year 1 are [REDACTED] (total of categories 1-8).

10. Indirect Costs

Indirect costs have been calculated at the University's off-campus Modified Total Direct

Cost (MTDC) of 26%. MTDC is Direct Costs minus certain exclusions. The rates are based on the University's federally negotiated agreement with the Department of Health and Human Services. The total indirect costs for Year 1 are [REDACTED]

11. Training Stipends – N/A

12. Total Costs

The total costs for Year 1 are [REDACTED] (total of budget categories 9-10).

Project EAGLE
University of Connecticut
Budget Narrative
October 1, 2023-September 30, 2024 (Year 2)

1. Personnel

Note: University of Connecticut's Sponsored Programs Service assumes a 5% raise increase each year for all faculty, staff, and undergraduate student workers, a 3% increase for postdoctoral research associates, and a 2% raise increase for graduate assistants on all grant proposals.

The total of personnel costs for all University of Connecticut faculty, staff, graduate assistants, and undergraduate student workers is [REDACTED] for Year 2. The total of participant support costs for Year 2 is [REDACTED]. The total of personnel for Year 2 is [REDACTED].

Senior Personnel

Dr. Del Siegle, Principal Investigator. Dr. Del Siegle, Professor and Director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut, will be funded at 20% of his academic year salary (1.80 academic months effort) in Year 2 (annual salary of [REDACTED]). In addition, one month of summer support, 33.34% summer, is requested to be funded in Year 2 (3 months summer salary of [REDACTED]). Dr. Siegle will provide overall supervision of the project and be responsible for all communications with the granting agency. He will participate in the development and refinement of the dynamic measure materials, work with the professional development team on training materials for the study participants, and dissemination of project results and annual reports. Among his Year 2 duties are overseeing the field test, providing professional learning, and recruiting Year 3 pilot sites. Dr. Siegle's specific

expertise and his leadership and supervision on the project are important to ensuring the project is successful in achieving its goals and objectives.

Dr. D. Betsy McCoach, Co-Principal Investigator and Research Director. Dr. D. Betsy McCoach, Professor at University of Connecticut, will be funded at 5% of her academic year salary (████ academic months effort) in Year 2 (academic year salary of █████). In addition, two weeks of summer support, 16.67% is requested to be funded in Year 2 (3 months summer salary of █████). Dr. McCoach will lead the project's methodological team, overseeing all issues related to research design, data collection and management, measurement, and statistical analyses. Among her Year 2 duties is overseeing refinement of the post assessment measures. Dr. McCoach will contribute to the project's success through her expertise in research methodology to ensure a focus on the project's goals and outcomes.

Dr. Susan Dulong Langley, Co-Principal Investigator and Project Director. Dr. Dulong Langley, Postdoctoral Research Associate, University of Connecticut will be funded at 50% (6 calendar months) in Year 2 (annual salary of █████) as the project director. Her responsibilities will include the coordination of the checklists, lessons, and questions, designing professional learning, overseeing fidelity of implementation and observations, conducting observations and focus group interviews, and assistance with project dissemination including annual reports. Among her Year 2 duties are providing professional learning for teachers and conducting focus groups and interviews with the post doc and graduate student's assistance. Dr. Dulong Langley's experience directing projects will contribute to the project's success through organized implementation of the project's activities in meeting all goals and objectives.

Other Personnel

Research Scientist – Dr. Daniel Long. Dr. Long will be funded at 20% (2.40 calendar

months) in Year 2 (annual salary of [REDACTED]) to coordinate with Dr. McCoach on data analyses and will assist with the preparation of measurement instruments, annual reports, and manuscripts for publication. Among his Year 2 duties is revising the post assessment instruments. His extensive experience with data management and statistical analyses will contribute to the project's success by ensuring a focus on the project's goals and objectives.

Postdoctoral Research Associate – Dr. Sarah Newton. Dr. Newton will be funded at 10% (1.20 calendar months) in Year 2 (annual salary of [REDACTED]) to assist with the refinement of measurement instruments and the development and success of the implementation of the data management plan and system. Among her Year 2 duties is assessing the data management system for efficiency in handling participant participation forms and assessments. Her experience managing databases and data management for funded research projects will ensure the project's success.

Postdoctoral Research Associate. A Postdoctoral Research Associate will be hired and funded at 100% of his/her calendar year salary in Year 2 (12 calendar months, anticipated salary of [REDACTED]). This individual will have experience working with English Learners, be fluent in Spanish, and assist with the refining of the checklist and problem-based activities. In addition, the Postdoctoral Research Associate will be involved in developing and providing the professional learning sessions, recruiting participants, and conducting interviews and observations. Among their Year 2 duties will be observing teachers in the field and conducting focus groups. All these project activities are integral to the success of Project EAGLE in meeting the goals and objectives.

Graduate Assistant. In Year 2, one level two GA (academic year salary of [REDACTED]) will provide academic year support (9 academic months, 20 hours/week) and will provide summer

support to the project for 20 hours per week (3 months effort; summer salary of [REDACTED]). This GA will be part of a team preparing materials for participant professional learning and will assist senior personnel in all aspects of the project, including instrument refinement and classroom observations, focus groups, and interviews. Given the number of observations, focus groups, and interviews, the GA will contribute to the project's rigorous data collection, analysis, and interpretation of findings to contribute to ongoing effective professional learning.

Undergraduate Students. Funds are requested to support 210 hours of student workers in Year 2 at [REDACTED] per hour (Connecticut minimum wage) for a total of [REDACTED]. These persons will assist in project-related tasks in the office, including preparation of materials, and data entry. Their support ensures that GAs and other personnel can address project tasks requiring more advanced expertise and thus support project objectives.

Executive Program Director. Lisa Muller, M.S., will serve as the Executive Program Director for 10% (1.2 calendar months effort) of her time in Year 2 (annual salary of [REDACTED]). Ms. Muller will be responsible for the coordination and planning of professional development efforts, coordination of the Advisory Board, budget management, and completion and submission of annual reports. Her efforts ensure the project meets its objectives in a timely manner and that the project also meets all budget and reporting requirements.

Program Specialist. Dr. Siamak Vahidi will serve as the Program Specialist for 20% (2.4 calendar months effort) in Year 2 (annual salary of [REDACTED]). Dr. Vahidi will assist with technology needs of the project, which include the graphic designing of the training materials. He will also co-develop and maintain the project website. His work on Project EAGLE will help to ensure that the project meets the dissemination goals.

Participant Support Costs

Funds are requested to support project participants through stipends and travel for their engagement in the project's professional learning activities in Year 2. The total amount allocated for participant support costs in Year 2 is [REDACTED]

Project EAGLE will recruit 8 teachers to pilot the EAGLE process. They will attend 2 days of professional development workshops and complete Project EAGLE dynamic assessment activities within their classrooms during the academic year. Funds have been allocated at [REDACTED] per hour for 26 hours of professional learning workshops and activities for these teachers. Each teacher will receive a total of [REDACTED] and the total for all 8 participating pilot teachers is [REDACTED]

2. Fringe Benefits

The fringe benefit rates used in the proposal budget are based on the rates approved by the Department of Health and Human Services. An estimated cost escalation has been included in the out years per University budgeting guidance. The following is a list of the fringe benefit rates by job title. Fringe benefits will only be charged on salaried employees at the University of Connecticut and do not apply to teacher stipends.

Senior Personnel:	Fringe Rate %
Principal Investigator-Based on Academic Year Salary	[REDACTED]
Principal Investigator-Based on 3 Month Summer Salary	[REDACTED]
Co-Principal Investigators-Based on Academic Year Salary	[REDACTED]
Co-Principal Investigators-Based on 3 Month Summer Salary	[REDACTED]
Co-Principal Investigator-Based on Calendar Year Salary	[REDACTED]
Other Personnel:	
Research Scientist-Based on Annual Salary	[REDACTED]
Postdoctoral Research Associates-Based on Annual Salary	[REDACTED]

Graduate Assistant-Based on Academic Year Salary			
Graduate Assistant-Based on 3 Month Salary			
Undergraduate Students-Based on Hourly Rate			
Executive Program Director-Based on Annual Salary			
Program Specialist-Based on Annual Salary			

3. Travel

Travel costs include mileage reimbursement and travel costs for trips to the schools in the project for recruitment and aspects of project implementation. Governmental mileage reimbursement and per diem rates and appropriate modes of transportation will be used. Travel funds are also included for the participating pilot teachers in Year 2 to travel to professional development workshops. Estimated travel costs for Year 2 total [REDACTED]. Specific details are provided below.

a. Travel to Project Sites

During Year 2 project staff will visit the 8 pilot teachers to conduct two classroom observations per teacher. Potential project schools for the pilot teachers include those within driving distance of the University of Connecticut specifically within Connecticut, Massachusetts, and Rhode Island.

We estimate that some of the districts likely to be involved in the project range in their distance from the university from 20 miles to 100 miles (one way). Using about the mid-point of that range (60 miles one way) as an average and estimating about 16 trips in Year 2 at a mileage rate of [REDACTED], we estimate [REDACTED] for travel to project schools in Year 2.

b. Project Staff Travel

Project staff will need to travel in Year 2 to Arizona, Colorado, and Texas to present about the research project at the states' gifted and talented conferences to recruit participants for the research study. Travel funds at the rate of [REDACTED] per person are included for 2 team members to travel to each of the 3 states in Year 2. Flight estimates are [REDACTED] per person. Lodging will not exceed [REDACTED] per night including taxes for three nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] 4 per day for 3 days (total of [REDACTED]). Transportation at each state conference site will not exceed [REDACTED] per trip for trips to and from the airport. The total amount of funds allocated for travel to state conferences in Year 2 is [REDACTED]

Project staff will need to travel in Year 2 for dissemination efforts. Estimates are based on travel for 2 team members to engage dissemination activities at national conferences for a total of [REDACTED]. Flight estimates are [REDACTED] per person. Lodging is estimated at [REDACTED] per night including tax for two nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each presentation will not exceed [REDACTED] per trip for trips to and from the airport. The total cost per conference trip is estimated at [REDACTED]

c. Travel for Participants

Funds are also requested to support travel costs for the 8 treatment teachers to attend 2 days of professional development workshops at the University of Connecticut campus in Storrs, Connecticut. These teachers will be recruited from Connecticut, Massachusetts, and Rhode Island. We estimate that some of the pilot teachers involved will be from districts that range in distance from the university from 20 miles to 100 miles (one way). Using about the mid-point of that range (60 miles one way) as an average and estimating about 2 trips per pilot teacher at a mileage rate of [REDACTED] we estimate about [REDACTED] for travel per pilot teacher to attend the professional development workshops. The total allocated for travel for the pilot teachers in Year

2 is [REDACTED]

4. Equipment – N/A

5. Supplies

Supplies to be purchased for the project include resources for classroom activities, project support activities, and instructional materials (e.g., math manipulatives) for participating classroom teachers. Supplies purchased with federal funds directly benefit the grant project and are necessary for achieving the goals of the project. Estimated supply costs for Year 2 total [REDACTED]. Specific details are provided below.

a. Project Supplies

The project requests [REDACTED] be allocated for project supplies for additional resources required by the project team to support the continued implementation of professional development activities including math manipulatives, resource books, and project specific supplies (e.g., envelopes, letterhead), paper, toner cartridges, and other supporting materials.

A total of [REDACTED] is requested to provide 6 team members with access to qualitative software to be used to code data. The cost per team member for a year access to the software is [REDACTED].

b. Instructional Materials for Teachers

Project EAGLE has allocated [REDACTED] per pilot teacher for instructional materials necessary to implement the problem-based learning activities. These materials will include such items as manipulatives for mathematics activities and resource books to support questioning activities. The teachers will use the materials to implement the program within their classrooms. We estimate [REDACTED] for these materials to be purchased in Year 2 ([REDACTED]/teacher for 8 teachers).

6. Contractual

Project EAGLE will hire consultants to create an Advisory Board for the project. The five-member advisory board of policymakers, scholars, and practitioners will meet one time each year and consult on all aspects of the project, including instrumentation development and testing, professional development for participants, data analysis and outreach activities.

All contractual hires will follow the procedures for procurement under 2 CFR 200.317-200.326. We will seek to establish a contract with each advisory board member to include a [REDACTED] honorarium to attend one virtual meeting in Year 2. Estimated contractual costs for Year 2 total [REDACTED]

7. Construction – N/A

8. Other

Other expenses will include printing and postage for project implementation.

a. Printing

Costs to print paperwork for the project are estimated at [REDACTED] in Year 2, to include printing of materials for the professional learning activities as well as other project materials (e.g., consent forms, copies of *Spark* checklist). Cost estimates are based on 10,000 pages at .10 per page to print, collate, and bind.

b. Postage

A total of [REDACTED] is allocated for postage in Year 2. Part of the cost estimate is based on 3 mailing per teacher (8 teachers) at [REDACTED] per 9 X 12 envelope for a total of [REDACTED]. A total of [REDACTED] per teacher for 8 teachers) has been allocated to mail participating teachers any additional instructional and educational materials necessary.

9. Total Direct Costs

The total direct costs for Year 2 are [REDACTED] (total of categories 1-8).

10. Indirect Costs

Indirect costs have been calculated at the University's off-campus Modified Total Direct Cost (MTDC) of 26%. MTDC is Direct Costs minus certain exclusions. The rates are based on the University's federally negotiated agreement with the Department of Health and Human Services. Per federal guidelines indirect costs will not be charged to participant support costs.

The total indirect costs for Year 2 are [REDACTED]

11. Training Stipends – N/A

12. Total Costs

The total costs for Year 2 are [REDACTED] (total of budget categories 9-10).

Project EAGLE
University of Connecticut
Budget Narrative
October 1, 2024-September 30, 2025 (Year 3)

1. Personnel

Note: University of Connecticut's Sponsored Programs Service assumes a 5% raise increase each year for all faculty, staff, and undergraduate student workers, a 3% increase for postdoctoral research associates, and a 2% raise increase for graduate assistants on all grant proposals.

The total of personnel costs for all University of Connecticut faculty, staff, graduate assistants, and undergraduate student workers is [REDACTED] for Year 3. The total of participant support costs for Year 3 is [REDACTED]. The total of personnel for Year 3 is [REDACTED].

Senior Personnel

Dr. Del Siegle, Principal Investigator. Dr. Del Siegle, Professor and Director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut, will be funded at 20% of his academic year salary (1.80 academic months effort) in Year 3 (annual salary of [REDACTED]). In addition, one month of summer support, 33.34% summer, is requested to be funded in Year 3 (3 months summer salary of [REDACTED]). Dr. Siegle will provide overall supervision of the project and be responsible for all communications with the granting agency. He will participate in the development and refinement of the dynamic measure materials, work with the professional development team on training materials for the study participants, and dissemination of project results and annual reports. Among his Year 3 duties are overseeing the pilot in 10 schools and recruiting and providing professional learning for 15 trainers from three

states. Dr. Siegle's specific expertise and his leadership and supervision on the project are important to ensuring the project is successful in achieving its goals and objectives.

Dr. D. Betsy McCoach, Co-Principal Investigator and Research Director. Dr. D. Betsy McCoach, Professor at University of Connecticut, will be funded at 5% of her academic year salary (■■■ academic months effort) in Year 3 (academic year salary of ■■■■). In addition, two weeks of summer support, 16.67% is requested to be funded in Year 3 (3 months summer salary of ■■■■). Dr. McCoach will lead the project's methodological team, overseeing all issues related to research design, data collection and management, measurement, and statistical analyses. She will oversee refinement of the measurement instruments and research design. Among her Year 3 duties is overseeing analysis of the field test data. Dr. McCoach will contribute to the project's success through her expertise in research methodology to ensure a focus on the project's goals and outcomes.

Dr. Susan Dulong Langley, Co-Principal Investigator and Project Director. Dr. Dulong Langley, Postdoctoral Research Associate, University of Connecticut will be funded at 100% (12 calendar months) in Year 3 (annual salary of ■■■■) as the project director. Her responsibilities will include the coordination of the checklists, lessons, and questions, designing professional learning, overseeing fidelity of implementation and observations, conducting observations and focus group interviews, and assistance with project dissemination including annual reports. Among her duties in Year 3 are providing professional learning for the field test and for the train-the-trainer trainers, conducting interviews and observations with support from the post doc and graduate student, and setting up the qualitative data analysis system. Dr. Dulong Langley's experience directing projects will contribute to the project's success through organized implementation of the project's activities in meeting all goals and objectives.

Other Personnel

Research Scientist – Dr. Daniel Long. Dr. Long will be funded at 35% (4.2 calendar months) in Year 3 (annual salary of [REDACTED] to coordinate with Dr. McCoach on data analyses and will assist with the preparation of measurement material, annual reports, and manuscripts for publication. Among his duties in Year 3 is analysis of field test data. His extensive experience with data management and statistical analyses will contribute to the project's success by ensuring a focus on the project's goals and objectives.

Postdoctoral Research Associate – Dr. Sarah Newton. Dr. Newton will be funded at 10% (1.20 calendar months) in Year 3 (annual salary of [REDACTED]) to assist with the refinement of measurement instruments and the development and success of the implementation of the data management plan and system. Among her duties in Year 3 is finalizing the structure of the data management system. Her experience managing databases and data management for funded research projects will ensure the project's success.

Postdoctoral Research Associate. A Postdoctoral Research Associate will be hired and funded at 100% of his/her calendar year salary in Year 3 (12 calendar months, anticipated salary of [REDACTED]). This individual will have experience working with English Learners, be fluent in Spanish, and assist with the refining of the checklist and problem-based activities. In addition, the Postdoctoral Research Associate will be involved in developing and providing the professional learning sessions, recruiting participants, and conducting interviews and observations. Among their duties in Year 3 are assisting with the train-the-trainer training, conducting observations and interviews, and analyzing qualitative data. All these project activities are integral to the success of Project EAGLE in meeting the goals and objectives.

Graduate Assistant. In Year 3, one level two GA (academic year salary of [REDACTED]) will

provide academic year support (9 academic months, 20 hours/week) and will provide summer support to the project for 20 hours per week (3 months effort; summer salary of [REDACTED]). This GA will be part of a team preparing materials for participant professional learning and will assist senior personnel in all aspects of the project, including instrument refinement and classroom observations, focus groups, and interviews. Given the number of observations, focus groups, and interviews, the GA will contribute to the project's rigorous data collection, analysis, and interpretation of findings to contribute to ongoing effective professional learning.

Undergraduate Students. Funds are requested to support 206.75 hours of student workers in Year 3 at [REDACTED] per hour (estimated Connecticut minimum wage) for a total of [REDACTED]. These persons will assist in project-related tasks in the office, including preparation of materials, and data entry. Their support ensures that GAs and other personnel can address project tasks requiring more advanced expertise and thus support project objectives.

Executive Program Director. Lisa Muller, M.S., will serve as the Executive Program Director for 10% (1.2 calendar months effort) of her time in Year 3 (annual salary of [REDACTED]). Ms. Muller will be responsible for the coordination and planning of professional development efforts, coordination of the Advisory Board, budget management, and completion and submission of annual reports. Her efforts ensure the project meets its objectives in a timely manner and that the project also meets all budget and reporting requirements.

Program Specialist. Dr. Siamak Vahidi will serve as a Program Specialist for 20% (2.4 calendar months effort) in Year 3 (annual salary of [REDACTED]). Dr. Vahidi will assist with technology needs of the project, which include the graphic designing of the training materials. He will also co-develop and maintain the project website. His work on Project EAGLE will help to ensure that the project meets the dissemination goals.

Participant Support Costs

Funds are requested to support project participants through stipends and travel for their engagement in the project's professional learning activities in Year 3. The total amount allocated for participant support costs in Year 3 is [REDACTED]

Project EAGLE will recruit 10 schools and an estimated 30 teachers to attend 2 days of professional development workshops. Funds have been allocated at [REDACTED] per hour for 16 hours of professional learning workshops for these teachers. Each teacher will receive a total of [REDACTED] and the total for all 30 participating teachers is [REDACTED]

Project EAGLE will recruit 15 teachers from Arizona, Colorado, and Texas (5 per state) to be trained as trainers and to implement the project during the 2025-2026 academic year. These individuals will travel to the University of Connecticut in Storrs, CT to attend professional development workshops during Confratute. Confratute is the one-week internationally recognized conference/institute on gifted education held each summer at the University of Connecticut. Funds have been allocated at [REDACTED] per hour for 33.5 hours of professional development workshops over the course of the one-week Confratute. Each trainer will receive a total of [REDACTED] for attending the workshops and the total for all 15 participating trainers is [REDACTED]

2. Fringe Benefits

The fringe benefit rates used in the proposal budget are based on the rates approved by the Department of Health and Human Services. An estimated cost escalation has been included in the out years per University budgeting guidance. The following is a list of the fringe benefit rates by job title. Fringe benefits will only be charged on salaried employees at the University of Connecticut and do not apply to teacher stipends.

Senior Personnel:	Fringe Rate %	
Principal Investigator-Based on Academic Year Salary		
Principal Investigator-Based on 3 Month Summer Salary		
Co-Principal Investigators-Based on Academic Year Salary		
Co-Principal Investigators-Based on 3 Month Summer Salary		
Co-Principal Investigator-Based on Calendar Year Salary		
Other Personnel:		
Research Scientist-Based on Annual Salary		
Postdoctoral Research Associates-Based on Annual Salary		
Graduate Assistant-Based on Academic Year Salary		
Graduate Assistant-Based on 3 Month Salary		
Undergraduate Students-Based on Hourly Rate		
Executive Program Director-Based on Annual Salary		
Program Specialist-Based on Annual Salary		

3. Travel

Travel costs include mileage reimbursement and travel costs for trips to the participating schools and states in the project for recruitment, project implementation--including trainings and data collection, and dissemination of project results. Governmental mileage reimbursement and per diem rates and appropriate modes of transportation will be used. Travel funds are also included for the trainers to travel and attend Confratute for professional development training. Estimated travel costs for Year 3 total [REDACTED] Specific details are provided below.

a. Travel to Project Sites

In Year 3, the research team will visit potential project schools to provide informational meetings, recruit schools and teachers to participate in the project, conduct professional development workshops, and collect data that includes classroom observations and focus groups. The budget includes funding to reimburse project staff for mileage to and from the school districts. Potential project schools include those within driving distance of the University of Connecticut as well as other schools at a greater distance.

We estimate that some of the districts likely to be involved in the project range in their distance from the university from 20 miles to 100 miles (one way). Using about the mid-point of that range (60 miles one way) as an average and estimating about 15 trips in Year 3 at a mileage rate of [REDACTED] we estimate [REDACTED] for travel to project schools in Year 3 for recruitment, onsite professional development workshops, and data collection.

Project staff will also recruit, conduct onsite professional development workshops, and collect data in other states across the country. Travel funds are requested for 12 school trips to participating schools in non-local states in Year 3. Two Project EAGLE staff members will participate in each school trip. Flight estimates are [REDACTED] per person. Lodging is estimated at [REDACTED] per night including tax for three nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each recruiting site will not exceed [REDACTED] per trip for trips to and from the airport as well as to schools. The total cost per person for each school trip is estimated at [REDACTED]. The total cost for 12 school trips for 2 project staff in Year 3 is [REDACTED].

b. Project Staff Travel

Project staff will need to travel in Year 3 to Arizona, Colorado, and Texas to present about the research project at the states' gifted and talented conferences to recruit participants for

the research study. Travel funds at the rate of [REDACTED] per person are included for 2 team members to travel to each of the 3 states in Year 3. Flight estimates are [REDACTED] per person. Lodging will not exceed [REDACTED] per night including taxes for three nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each state conference site will not exceed [REDACTED] per trip for trips to and from the airport. The total amount of funds allocated for travel to state conferences in Year 3 is [REDACTED]

Project staff will need to travel in Year 3 for dissemination efforts. Estimates are based on travel for 2 team members to engage dissemination activities at national conferences for a total of [REDACTED]. Flight estimates are [REDACTED] per person. Lodging is estimated at [REDACTED] per night including tax for two nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each presentation will not exceed [REDACTED] per trip for trips to and from the airport. The total cost per person is estimated at [REDACTED]

c. Travel for Participants

Funds are also requested to support travel costs for the 15 trainers to attend Confratute at the University of Connecticut campus in Storrs, Connecticut. A total of [REDACTED] per trainer has been allocated for travel costs. Flight estimates are [REDACTED] per person. Transportation to and from the airport is estimated at [REDACTED]. Trainers will be reimbursed for mileage to and from their local airports at the rate of [REDACTED] per mile. We have estimated a total of 40 miles (one way) for a total of [REDACTED] in mileage reimbursement per trainer. Trainers will also be reimbursed for parking at their local airports. Parking is estimated at [REDACTED] per day for 6 days. The total estimate for parking per trainer is [REDACTED]. Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 2 travel days (total of [REDACTED]). The total cost for the 15 trainers to travel to Confratute is estimated at [REDACTED].

Project EAGLE will pay for each trainer to attend Confratute. The estimate for the 2025 summer Confratute for double occupancy within a dormitory is [REDACTED] per trainer. This estimate includes all meals during the week of Confratute for the trainers. The total cost for the 15 trainers to attend the 2025 Confratute is [REDACTED]

4. Equipment – N/A

5. Supplies

Supplies to be purchased for the project include resources for classroom activities, project support activities, and instructional materials (e.g., math manipulatives) for participating classroom teachers, and access to qualitative analysis software for team members. Supplies purchased with federal funds directly benefit the grant project and are necessary for achieving the goals of the project. Estimated supply costs for Year 3 total [REDACTED]. Specific details are provided below.

a. Project Supplies

The project requests [REDACTED] be allocated for project supplies for additional resources required by the project team to support the continued implementation of professional development activities including math manipulatives, resource books, and project specific supplies (e.g., envelopes, letterhead), paper, toner cartridges, and other supporting materials.

A total of [REDACTED] is requested to provide 6 team members with access to qualitative software to be used to code data. The cost per team member for a year access to the software is [REDACTED].

b. Instructional Materials for Teachers

Project EAGLE has allocated [REDACTED] per teacher trainer for instructional materials necessary to implement the problem-based learning activities and train other teachers during

professional learning workshops. These materials will include such items as manipulatives for mathematics activities and resource books. We estimate [REDACTED] for these materials to be purchased in Year 3 [REDACTED]/trainer for 15 trainers).

6. Contractual

Project EAGLE will hire consultants to create an Advisory Board for the project. The five-member advisory board of policymakers, scholars, and practitioners will meet one time each year and consult on all aspects of the project, including instrumentation development and testing, professional development for participants, data analysis and outreach activities.

All contractual hires will follow the procedures for procurement under 2 CFR 200.317-200.326. We will seek to establish a contract with each advisory board member to include a [REDACTED] honorarium to attend one virtual meeting in Year 3. Estimated contractual costs for Year 3 total [REDACTED]

7. Construction – N/A

8. Other

Other expenses will include printing and postage for project implementation.

a. Printing

Costs to print paperwork for the project are estimated at [REDACTED] in Year 3, to include printing of materials for the professional learning activities as well as other project materials (e.g., recruitment flyers, consent forms, copies of *Spark* checklist). Cost estimates are based on 10,000 pages at [REDACTED] per page to print, collate, and bind.

b. Postage

A total of [REDACTED] is allocated for postage in Year 3. Part of the cost estimate is based on 3 mailings per trainer (15 trainers) at [REDACTED] per 9 X 12 envelope for a total of [REDACTED]. A total of [REDACTED]

(\$25 per teacher for 15 teachers) has been allocated to mail participating teachers any additional instructional and educational materials necessary.

9. Total Direct Costs

The total direct costs for Year 3 are [REDACTED] (total of categories 1-8).

10. Indirect Costs

Indirect costs have been calculated at the University's off-campus Modified Total Direct Cost (MTDC) of 26%. MTDC is Direct Costs minus certain exclusions. The rates are based on the University's federally negotiated agreement with the Department of Health and Human Services. Per federal guidelines indirect costs will not be charged to participant support costs.

The total indirect costs for Year 3 are [REDACTED]

11. Training Stipends – N/A

12. Total Costs

The total costs for Year 3 are [REDACTED] (total of budget categories 9-10).

Project EAGLE
University of Connecticut
Budget Narrative
October 1, 2025-September 30, 2026 (Year 4)

1. Personnel

Note: University of Connecticut's Sponsored Programs Service assumes a 5% raise increase each year for all faculty, staff, and undergraduate student workers, a 3% increase for postdoctoral research associates, and a 2% raise increase for graduate assistants on all grant proposals.

The total of personnel costs for all University of Connecticut faculty, staff, graduate assistants, and undergraduate student workers is [REDACTED] for Year 4. The total of participant support costs for Year 4 is [REDACTED]. The total of personnel for Year 4 is [REDACTED].

Senior Personnel

Dr. Del Siegle, Principal Investigator. Dr. Del Siegle, Professor and Director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut, will be funded at 20% of his academic year salary (1.80 academic months effort) in Year 4 (annual salary of [REDACTED]). In addition, one month of summer support, 33.34% summer, is requested to be funded in Year 4 (3 months summer salary of [REDACTED]). Dr. Siegle will provide overall supervision of the project and be responsible for all communications with the granting agency. He will participate in the development and refinement of the dynamic measure materials, work with the professional development team on training materials for the study participants, and dissemination of project results and annual reports. Among his Year 4 duties is overseeing the fidelity of implementation of the trainers' workshops across the three states. Dr. Siegle's specific

expertise and his leadership and supervision on the project are important to ensuring the project is successful in achieving its goals and objectives.

Dr. D. Betsy McCoach, Co-Principal Investigator and Research Director. Dr. D. Betsy McCoach, Professor at University of Connecticut, will be funded at 5% of her academic year salary (academic months effort) in Year 4 (academic year salary of [REDACTED]). In addition, two weeks of summer support, 16.67% is requested to be funded in Year 4 (3 months summer salary of [REDACTED]). Dr. McCoach will lead the project's methodological team, overseeing all issues related to research design, data collection and management, measurement, and statistical analyses. She will oversee refinement of the measurement instruments and research design. Among her Year 4 duties is overseeing data collection for the trainer workshops in three states. Dr. McCoach will contribute to the project's success through her expertise in research methodology to ensure a focus on the project's goals and outcomes.

Dr. Susan Dulong Langley, Co-Principal Investigator and Project Director. Dr. Dulong Langley, Postdoctoral Research Associate, University of Connecticut will be funded at 100% (12 calendar months) in Year 4 (annual salary of [REDACTED]) as the project director. Her responsibilities will include the coordination of the checklists, lessons, and questions, designing professional learning, overseeing fidelity of implementation and observations, conducting observations and focus group interviews, and assistance with project dissemination including annual reports. Among her duties in Year 4 are moderating the online communication network for trainers and collecting observation, interview, and post survey data on the trainer workshops. Dr. Dulong Langley's experience directing projects will contribute to the project's success through organized implementation of the project's activities in meeting all goals and objectives.

Other Personnel

Research Scientist – Dr. Daniel Long. Dr. Long will be funded at 35% (4.2 calendar months) in Year 4 (annual salary of [REDACTED]) to coordinate with Dr. McCoach on data analyses and will assist with the preparation of annual reports and manuscripts for publication. Among his Year 4 duties is collecting survey data from the trainer workshops and follow-up survey data from the workshop participants. His extensive experience with data management and statistical analyses will contribute to the project's success by ensuring a focus on the project's goals and objectives.

Postdoctoral Research Associate – Dr. Sarah Newton. Dr. Newton will be funded at 10% (1.20 calendar months) in Year 4 (annual salary of [REDACTED]) to assist with the refinement of measurement instruments and the development and success of the implementation of the data management plan and system. Among her Year 4 duties is organizing survey data from the trainer workshops and follow-up survey data from the workshop participants. Her experience managing databases and data management for funded research projects will ensure the project's success.

Postdoctoral Research Associate. A Postdoctoral Research Associate will be hired and funded at 100% of his/her calendar year salary in Year 4 (12 calendar months, anticipated salary of [REDACTED]). This individual will have experience working with English Learners, be fluent in Spanish, and assist with the refining of the checklist and problem-based activities. In addition, the Postdoctoral Research Associate will be responsible for developing and providing the professional learning sessions, recruiting participants, and conducting interviews and observations. Among their duties in Year 4 are collecting observation, interview, and survey data from the trainings and follow-up survey data from the workshop participants. All these project activities are integral to the success of Project EAGLE in meeting the goals and objectives.

Graduate Assistant. In Year 4, one level two GA (academic year salary of [REDACTED] will provide academic year support (9 academic months, 20 hours/week) and will provide summer support to the project for 20 hours per week (3 months effort; summer salary of [REDACTED]. This GA will be part of a team preparing materials for participant professional learning and will assist senior personnel in all aspects of the project, including instrument refinement and classroom observations, focus groups, and interviews. Given the number of observations, focus groups, and interviews, the GA will contribute to the project's rigorous data collection, analysis, and interpretation of findings to contribute to ongoing effective professional learning.

Undergraduate Students. Funds are requested to support 204.29 hours of student workers in Year 4 at [REDACTED] per hour (estimated Connecticut minimum wage) for a total of [REDACTED]. These persons will assist in project-related tasks in the office, including preparation of materials, and data entry. Their support ensures that GAs and other personnel can address project tasks requiring more advanced expertise and thus support project objectives.

Executive Program Director. Lisa Muller, M.S., will serve as the Executive Program Director for 10% (1.2 calendar months effort) of her time in Year 4 (annual salary of [REDACTED]. Ms. Muller will be responsible for the coordination and planning of professional development efforts, coordination of the Advisory Board, budget management, and completion and submission of annual reports. Her efforts ensure the project meets its objectives in a timely manner and that the project also meets all budget and reporting requirements.

Program Specialist. Dr. Siamak Vahidi will serve as a Program Specialist for 20% (2.4 calendar months effort) in Year 4 (annual salary of [REDACTED]. Dr. Vahidi will assist with technology needs of the project, which include the graphic designing of the training materials. He will also co-develop and maintain the project website. His work on Project EAGLE will help

to ensure that the project meets the dissemination goals.

Participant Support Costs

Funds are requested to support project participants through stipends for their engagement in the project's professional learning activities in Year 4. The total amount allocated for participant support costs in Year 4 is [REDACTED]

The 15 teachers that were recruited from Arizona, Colorado, and Texas (5 per state) and were trained at Confratute during the summer of Year 3 will host professional development workshops within their states on *Spark* checklist and the problem-based activities. Each trainer will host 5 workshops within their state during Year 4. Project EAGLE estimates each workshop will be 6 hours long and each trainer will need 2 hours of prep time to prepare for each professional development training workshop they will be conducting. Each trainer will work a total of 40 hours at [REDACTED] per hour for a total per trainer of [REDACTED]. The total allocated for the trainers to implement the professional development workshops in Year 4 is [REDACTED]

2. Fringe Benefits

The fringe benefit rates used in the proposal budget are based on the rates approved by the Department of Health and Human Services. An estimated cost escalation has been included in the out years per University budgeting guidance. The following is a list of the fringe benefit rates by job title. Fringe benefits will only be charged on salaried employees at the University of Connecticut and do not apply to teacher stipends.

Senior Personnel:	Fringe Rate %
Principal Investigator-Based on Academic Year Salary	[REDACTED]
Principal Investigator-Based on 3 Month Summer Salary	[REDACTED]
Co-Principal Investigators-Based on Academic Year Salary	[REDACTED]

Co-Principal Investigators-Based on 3 Month Summer Salary			
Co-Principal Investigator-Based on Calendar Year Salary			
Other Personnel:			
Research Scientist-Based on Annual Salary			
Postdoctoral Research Associates-Based on Annual Salary			
Graduate Assistant-Based on Academic Year Salary			
Graduate Assistant-Based on 3 Month Salary			
Undergraduate Students-Based on Hourly Rate			
Executive Program Director-Based on Annual Salary			
Program Specialist-Based on Annual Salary			

3. Travel

Travel costs include trips to the participating states in the project for recruitment, and dissemination of project results at national conferences. Governmental mileage reimbursement and per diem rates and appropriate modes of transportation will be used. Travel funds are included for the participating trainers to attend their state gifted and talented conferences as part of their professional development activities. Estimated travel costs for Year 4 total [REDACTED]. Specific details are provided below.

a. Project Staff Travel

Project staff will need to travel in Year 4 to Arizona, Colorado, and Texas to present about the research project at the states' gifted and talented conferences to recruit teachers to participate in the Project EAGLE professional development workshops being implemented within those states. Travel funds at the rate of [REDACTED] per person are included for 2 team

members to travel to each the 3 states in Year 4. Flight estimates are [REDACTED] per person. Lodging will not exceed [REDACTED] per night including taxes for three nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each state conference site will not exceed [REDACTED] per trip for trips to and from the airport. The total amount of funds allocated for travel to state conferences in Year 4 is [REDACTED].

Project staff will need to travel in Year 4 for dissemination efforts. Estimates are based on travel for 2 team members to engage dissemination activities at national conferences for a total of [REDACTED]. Flight estimates are [REDACTED] per person. Lodging is estimated at [REDACTED] per night including tax for two nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each presentation will not exceed [REDACTED] per trip for trips to and from the airport. The total cost per person for national conference trips is estimated at [REDACTED].

b. Travel for Participants

Funds are also requested to support travel costs for the 15 trainers to attend their state gifted and talented conference as part of Project EAGLE professional development workshop activities. A total of [REDACTED] per trainer has been allocated for travel costs. Trainers will be reimbursed for mileage to and from their state conferences at the rate of [REDACTED] per mile. We have estimated a total of 120 miles (one way) for a total of [REDACTED] in mileage reimbursement per trainer. Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 travel days (total of [REDACTED]). Lodging is estimated at [REDACTED] per night including tax for three nights (total of [REDACTED]). The registration for the state conferences is estimated at [REDACTED] per individual. The total cost for the 15 trainers to travel to their state gifted and talented conferences in Year 4 is estimated at [REDACTED].

4. Equipment – N/A

5. Supplies

Supplies to be purchased for the project include resources for classroom activities, project support activities, and instructional materials (e.g., math manipulatives) for participating classroom teachers, and access to qualitative analysis software for team members. Supplies purchased with federal funds directly benefit the grant project and are necessary for achieving the goals of the project. Estimated supply costs for Year 4 total [REDACTED] Specific details are provided below.

a. Project Supplies

The project requests [REDACTED] be allocated for project supplies for additional resources required by the project team to support the continued implementation of professional development activities including math manipulatives, resource books, and project specific supplies (e.g., envelopes, letterhead), paper, toner cartridges, and other supporting materials.

A total of [REDACTED] is requested to provide 6 team members with access to qualitative software to be used to code data. The cost per team member for a year access to the software is [REDACTED]

b. Instructional Materials for Teachers

Project EAGLE has allocated [REDACTED] per teacher trainer for consumable instructional materials necessary to implement Project EAGLE professional development workshops 5 times within their states. These materials will include such items as manipulatives for mathematics activities and resource books. A total of [REDACTED] has been allocated for the trainers' supplies.

Project EAGLE will also provide each teacher trained during the state professional development workshops with project materials necessary to implement Project EAGLE within

their classrooms. Project EAGLE estimates only 20% of the 1,500 teachers trained will be able to fully implement Project EAGLE within their classrooms. A total of [REDACTED] for these supplies is estimated for the 20% of the 1,500 teachers to be trained in Year 4 ([REDACTED] per teacher/300 teachers) for a total of [REDACTED] during Year 4.

6. Contractual

Project EAGLE will hire consultants to create an Advisory Board for the project. The five-member advisory board of policymakers, scholars, and practitioners will meet one time each year and consult on all aspects of the project, including instrumentation development and testing, professional development for participants, data analysis, and outreach activities.

All contractual hires will follow the procedures for procurement under 2 CFR 200.317-200.326. We will seek to establish a contract with each advisory board member to include a [REDACTED] honorarium to attend one virtual meeting in Year 4. Estimated contractual costs for Year 4 total [REDACTED]

7. Construction – N/A

8. Other

Other expenses will include printing and postage for project implementation.

a. Printing

Costs to print paperwork for the project are estimated at [REDACTED] in Year 4, to include printing of materials for the professional learning activities as well as other project materials (e.g., recruitment flyers, consent forms, copies of *Spark* checklist). Cost estimates are based on 20,000 pages at [REDACTED] per page to print, collate, and bind.

b. Postage

A total of [REDACTED] is allocated for postage in Year 4. Part of the cost estimate is based on 3 mailings per trainer (15 trainers) at [REDACTED] per 9 X 12 envelope for a total of [REDACTED]. A total of [REDACTED] per trainer for 15 trainers and for 300 teachers) has been allocated to mail participating trainers' teachers any additional instructional and educational materials necessary.

9. Total Direct Costs

The total direct costs for Year 4 are [REDACTED] (total of categories 1-8).

10. Indirect Costs

Indirect costs have been calculated at the University's off-campus Modified Total Direct Cost (MTDC) of 26%. MTDC is Direct Costs minus certain exclusions. The rates are based on the University's federally negotiated agreement with the Department of Health and Human Services. Per federal guidelines indirect costs will not be charged to participant support costs. The total indirect costs for Year 4 are [REDACTED].

11. Training Stipends – N/A

12. Total Costs

The total costs for Year 4 are [REDACTED] (total of budget categories 9-10).

Project EAGLE
University of Connecticut
Budget Narrative
October 1, 2026-September 30, 2027 (Year 5)

1. Personnel

Note: University of Connecticut's Sponsored Programs Service assumes a 5% raise increase each year for all faculty, staff, and undergraduate student workers, a 3% increase for postdoctoral research associates, and a 2% raise increase for graduate assistants on all grant proposals.

The total of personnel costs for all University of Connecticut faculty, staff, graduate assistants, and undergraduate student workers is [REDACTED] for Year 5. There are no participant support costs for Year 5. The total of personnel for Year 5 is [REDACTED]

Senior Personnel

Dr. Del Siegle, Principal Investigator. Dr. Del Siegle, Professor and Director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut, will be funded at 20% of his academic year salary (1.80 academic months effort) in Year 5 (annual salary of [REDACTED]). In addition, one month of summer support, 33.34% summer, is requested to be funded in Year 5 (3 months summer salary of [REDACTED]). Dr. Siegle will provide overall supervision of the project and be responsible for all communications with the granting agency. He will participate in the development and refinement of the dynamic measure materials, work with the professional development team on training materials for the study participants, and dissemination of project results and annual reports. Among his Year 5 duties are preparing the final report, overseeing final data collection from participants, conducting workshops, and

conceptualizing and writing manuscripts. Dr. Siegle's specific expertise and his leadership and supervision on the project are important to ensuring the project is successful in achieving its goals and objectives.

Dr. D. Betsy McCoach, Co-Principal Investigator and Research Director. Dr. D. Betsy McCoach, Professor at University of Connecticut, will be funded at 5% of her academic year salary (■■■ academic months effort) in Year 5 (academic year salary of ■■■■■). In addition, two weeks of summer support, 16.67% is requested to be funded in Year 5 (3 months summer salary of ■■■■■). Dr. McCoach will lead the project's methodological team, overseeing all issues related to research design, data collection and management, measurement, and statistical analyses. She will oversee refinement of the measurement instruments and research design. Among her Year 5 duties are overseeing final data collection from participants and data analysis. Dr. McCoach will contribute to the project's success through her expertise in research methodology to ensure a focus on the project's goals and outcomes.

Dr. Susan Dulong Langley, Co-Principal Investigator and Project Director. Dr. Dulong Langley, Postdoctoral Research Associate, University of Connecticut will be funded at 100% (12 calendar months) in Year 5 (annual salary of ■■■■■ as the project director. Her responsibilities will include the coordination of the checklists, lessons, and questions, designing professional learning, overseeing fidelity of implementation and observations, conducting observations and focus group interviews, and assistance with project dissemination including annual reports. Among her Year 5 duties are assisting with the final report, analyzing qualitative data, conceptualizing manuscripts, and sharing information about the study through workshops and online. Dr. Dulong Langley's experience directing projects will contribute to the project's success through organized implementation of the project's activities in meeting all goals and

objectives.

Other Personnel

Research Scientist – Dr. Daniel Long. Dr. Long will be funded at 35% (4.2 calendar months) in Year 5 (annual salary of [REDACTED]) to coordinate with Dr. McCoach on data analyses and will assist with the preparation of annual reports and manuscripts for publication. Among his Year 5 duties is final data collection and analysis and authoring manuscripts. His extensive experience with data management and statistical analyses will contribute to the project's success by ensuring a focus on the project's goals and objectives.

Postdoctoral Research Associate – Dr. Sarah Newton. Dr. Newton will be funded at 10% (1.20 calendar months) in Year 5 (annual salary of [REDACTED]) to assist with the refinement of measurement instruments and the development and success of the implementation of the data management plan and system. Among her Year 5 duties is overseeing and sharing data with the research team and archiving data. Her experience managing databases and data management for funded research projects will ensure the project's success.

Postdoctoral Research Associate. A Postdoctoral Research Associate will be hired and funded at 100% of his/her calendar year salary in Year 5 (12 calendar months, anticipated salary of [REDACTED]). This individual will have experience working with English Learners, be fluent in Spanish, and assist with the refining of the checklist and problem-based activities. In addition, the Postdoctoral Research Associate will be responsible for developing and providing the professional learning sessions, recruiting participants, and conducting interviews and observations. Among their Year 5 duties are final qualitative data analysis and assistance with manuscripts. All these project activities are integral to the success of Project EAGLE in meeting the goals and objectives.

Graduate Assistant. In Year 5, one level two GA (academic year salary of [REDACTED]) will provide academic year support (9 academic months, 20 hours/week) and will provide summer support to the project for 20 hours per week (3 months effort; summer salary of [REDACTED]). This GA will be part of a team preparing materials for participant professional learning and will assist senior personnel in all aspects of the project, including instrument refinement and classroom observations, focus groups, and interviews. Given the number of observations, focus groups, and interviews, the GA will contribute to the project's rigorous data collection, analysis, and interpretation of findings to contribute to ongoing effective professional learning.

Undergraduate Students. Funds are requested to support 202.61 hours of student workers in Year 5 at [REDACTED] per hour (estimated Connecticut minimum wage) for a total of [REDACTED]. These persons will assist in project-related tasks in the office, including preparation of materials and data entry. Their support ensures that GAs and other personnel can address project tasks requiring more advanced expertise and thus support project objectives.

Executive Program Director. Lisa Muller, M.S., will serve as the Executive Program Director for 10% (1.2 calendar months effort) of her time in Year 5 (annual salary of [REDACTED]). Ms. Muller will be responsible for the coordination and planning of professional development efforts, coordination of the Advisory Board, budget management, and completion and submission of annual reports. Her efforts ensure the project meets its objectives in a timely manner and that the project also meets all budget and reporting requirements.

Program Specialist. Dr. Siamak Vahidi will serve as a Program Specialist for 20% (2.4 calendar months effort) in Year 5 (annual salary of [REDACTED]). Dr. Vahidi will assist with technology needs of the project, which include the graphic designing of the training materials. He will also co-develop and maintain the project website. His work on Project EAGLE will help

to ensure that the project meets the dissemination goals.

Participant Support Costs

There are no participant support costs for Year 5.

2. Fringe Benefits

The fringe benefit rates used in the proposal budget are based on the rates approved by the Department of Health and Human Services. An estimated cost escalation has been included in the out years per University budgeting guidance. The following is a list of the fringe benefit rates by job title. Fringe benefits will only be charged on salaried employees at the University of Connecticut and do not apply to teacher stipends.

Senior Personnel:	Fringe Rate %	
Principal Investigator-Based on Academic Year Salary		
Principal Investigator-Based on 3 Month Summer Salary		
Co-Principal Investigators-Based on Academic Year Salary		
Co-Principal Investigators-Based on 3 Month Summer Salary		
Co-Principal Investigator-Based on Calendar Year Salary		
Other Personnel:		
Research Scientist-Based on Annual Salary		
Postdoctoral Research Associates-Based on Annual Salary		
Graduate Assistant-Based on Academic Year Salary		
Graduate Assistant-Based on 3 Month Salary		
Undergraduate Students-Based on Hourly Rate		
Executive Program Director-Based on Annual Salary		
Program Specialist-Based on Annual Salary		

3. Travel

Travel costs include trips to the participating states in the project for recruitment, and dissemination of project results at national conferences. Governmental mileage reimbursement and per diem rates and appropriate modes of transportation will be used. Travel funds are included to support project participants attending their gifted and talented state conferences as part of their professional development activities. Estimated travel costs for Year 5 total [REDACTED]. Specific details are provided below.

a. Project Staff Travel

Project staff will need to travel in Year 5 to Arizona, Colorado, and Texas to present about the research project at the states' gifted and talented conferences to continue to encourage teachers to implement Project EAGLE within their schools and classrooms. Travel funds at the rate of [REDACTED] per person are included for 2 team members to travel to each the 3 states in Year 5. Flight estimates are [REDACTED] per person. Lodging will not exceed [REDACTED] per night including taxes for three nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each state conference site will not exceed [REDACTED] per trip for trips to and from the airport. The total amount of funds allocated for travel to state conferences in Year 5 is [REDACTED].

Project staff will need to travel in Year 5 for dissemination efforts. Estimates are based on travel for 2 team members to engage dissemination activities at national conferences for a total of [REDACTED]. Flight estimates are [REDACTED] per person. Lodging is estimated at [REDACTED] per night including tax for two nights (total of [REDACTED]). Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 days (total of [REDACTED]). Transportation at each presentation will not exceed [REDACTED].

per trip for trips to and from the airport. The total cost per national conference trips is estimated at [REDACTED]

b. Travel for Participants

Funds are also requested to support travel costs for the 15 trainers to attend their state gifted and talented conference as part of Project EAGLE professional outreach activities. A total of [REDACTED] per trainer has been allocated for travel costs. Trainers will be reimbursed for mileage to and from their state conferences at the rate of [REDACTED] per mile. We have estimated a total of 120 miles (one way) for a total of [REDACTED] in mileage reimbursement per trainer. Subsistence will be reimbursed at the federal per diem rate of [REDACTED] per day for 3 travel days (total of [REDACTED]). Lodging is estimated at [REDACTED] per night including tax for three nights (total of [REDACTED]). The registration for the state conferences is estimated at [REDACTED] per individual. The total cost for the 15 trainers to travel to their state gifted and talented conferences in Year 5 is estimated at [REDACTED]

4. Equipment – N/A

5. Supplies

Supplies to be purchased for the project include resources for classroom activities, project support activities, and instructional materials (e.g., math manipulatives) for participating classroom teachers, and access to qualitative analysis software for team members. Supplies purchased with federal funds directly benefit the grant project and are necessary for achieving the goals of the project. Estimated supply costs for Year 5 total [REDACTED]. Specific details are provided below.

a. Project Supplies

The project requests [REDACTED] be allocated for project supplies for additional resources required by the project team to support the continued implementation of outreach activities

including math manipulatives, resource books, and project specific supplies (e.g., envelopes, letterhead), paper, toner cartridges, and other supporting materials.

A total of [REDACTED] is requested to provide 6 team members with access to qualitative software to be used to code data. The cost per team member for a year access to the software is [REDACTED].

6. Contractual

Project EAGLE will hire consultants to create an Advisory Board for the project. The five-member advisory board of policymakers, scholars, and practitioners will meet one time each year and consult on all aspects of the project, including instrumentation development and testing, professional development for participants, data analysis and outreach activities.

All contractual hires will follow the procedures for procurement under 2 CFR 200.317-200.326. We will seek to establish a contract with each advisory board member to include a [REDACTED] honorarium to attend one virtual meeting in Year 5. Estimated contractual costs for Year 5 total [REDACTED].

7. Construction – N/A

8. Other

Other expenses will include printing and postage for project implementation.

a. Printing

Costs to print paperwork for the project are estimated at [REDACTED] in Year 5, to include printing of materials for the outreach activities as well as other project materials (e.g., recruitment flyers, consent forms, copies of *Spark* checklist). Cost estimates are based on 5,000 pages at .10 per page to print, collate, and bind.

b. Postage

A total of [REDACTED] is allocated for postage in Year 5. Part of the cost estimate is based on 2 mailings per trainer (15 trainers) at [REDACTED] per 9 X 12 envelope for a total of [REDACTED]

9. Total Direct Costs

The total direct costs for Year 5 are [REDACTED] (total of categories 1-8).

10. Indirect Costs

Indirect costs have been calculated at the University's off-campus Modified Total Direct Cost (MTDC) of 26%. MTDC is Direct Costs minus certain exclusions. The rates are based on the University's federally negotiated agreement with the Department of Health and Human Services. The total indirect costs for Year 5 are [REDACTED]

11. Training Stipends – N/A

12. Total Costs

The total costs for Year 5 are [REDACTED] (total of budget categories 9-10). The total costs for Years 1-5 for Project EAGLE (total of budget categories 9-10 across all 5 years) are

[REDACTED]



U.S. Department of Education
Grant Application Form for Project Objectives and Performance Measures Information
See Instructions.

OMB Number: 1894-0017
Expiration Date: 07/31/2023

Applicant Information

Legal Name:

University of Connecticut

1. Project Objective:

Years 1-3. Validate the Sparks of Math Talent Classroom Observation Checklist with problem-based activities for Grades 3 and 4.

1.a. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 3, we will finalize a set of 8-12 observable Sparks of Math Talent Observation Checklist gifted behaviors that 80% of Advisory Board members and other gifted specialists and math specialists agree are relevant.	PROJECT	8		/	
1.b. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 3, we will finalize a set of 5-6 problem-based math activities that 80% of Advisory Board members and other gifted specialists and math specialists agree are relevant by domain.	PROJECT	5		/	
1.c. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 3, we will align each of 5-6 problem-based math activities with at least 3 of 8-12 observable Sparks of Math Talent Observation Checklist gifted behaviors when used by teachers observing students.	PROJECT	8		/	
1.d. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 3, we will align each of 8-12 observable Sparks of Math Talent Observation Checklist gifted behaviors with at least 2 of 5-6 problem-based math activities when used by teachers observing students.	PROJECT	8		/	

2. Project Objective:

PR/Award # S206A220040

Page e157

U.S. Department of Education
Grant Application Form for Project Objectives and Performance Measures Information

Years 1-2. Develop a bank of critical and creative thinking questions to probe ELs' sparks of math talent and elicit evidence of gifted behaviors.

2.a. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 1, we will develop a bank of 5-7 probing questions for each of 8-12 observable gifted thinking behaviors that 80% of Advisory Board members and other gifted specialists and math specialists agree align.	PROJECT	8		/	

2.b. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 2, 75% of teachers who implement Project EAGLE dynamic approach lessons will report using at least 2 probing questions during each of the 5-6 problem-based math activities they execute.	PROJECT		6	/	8
					75.00

3. Project Objective:

Year 3. Synthesize the resources and processes into Project EAGLE lessons to elicit gifted EL behaviors in math instruction through a dynamic approach.

3.a. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 3, 50% of 30 trained teachers will implement at least 2 Project EAGLE dynamic approach lessons.	GPRA		15	/	30
					50.00

3.b. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 3, at least 80% of 30 trained teachers who implement Project EAGLE dynamic approach lessons will recognize math talent in at least 2 EL students.	GPRA		24	/	30
					80.00

4. Project Objective:

Year 3. Train trainers to conduct workshops for teachers to implement Project EAGLE lessons to identify gifted EL populations using a dynamic approach.

U.S. Department of Education
Grant Application Form for Project Objectives and Performance Measures Information

4.a. Performance Measure	Measure Type	Quantitative Data				
		Target				
		Raw Number	Ratio		%	
By the end of Year 3, 15 trainers will receive one week of training to conduct Project EAGLE lessons.	GPRA	15		/		

4.b. Performance Measure	Measure Type	Quantitative Data				
		Target				
		Raw Number	Ratio		%	
By the end of Year 3, 80% of trainers will report greater comfort presenting Project EAGLE material after attending a weeklong professional learning event.	PROJECT		12	/	15	80.00

4.c. Performance Measure	Measure Type	Quantitative Data				
		Target				
		Raw Number	Ratio		%	
By the end of Year 3, over 90% of trainers will demonstrate mastery of Project EAGLE material (at least 80% on the post assessment) after attending a weeklong professional learning event.	PROJECT		14	/	15	93.33

5. Project Objective:

Year 4. Conduct workshops for teachers to implement Project EAGLE lessons regarding EL populations (e.g., cultural and instructional considerations, math talent, gifted behaviors) using a dynamic approach.

5.a. Performance Measure	Measure Type	Quantitative Data				
		Target				
		Raw Number	Ratio		%	
By the end of Year 4, five trainers in each of three states will conduct at least five workshops each (5 x 3 x 5 = 75 workshops) for teachers within their state to implement the Project EAGLE dynamic approach.	PROJECT	75		/		

5.b. Performance Measure	Measure Type	Quantitative Data				
		Target				
		Raw Number	Ratio		%	
By the end of Year 4, at least 1,500 unique teachers (75 x 20 = 1,500) participate in project-specific professional learning on the Project EAGLE dynamic process, with at least 30% participation by teachers from traditionally underrepresented populations and/or teachers who are from schools with over 50% underserved student populations.	GPRA	1,500		/		

U.S. Department of Education
Grant Application Form for Project Objectives and Performance Measures Information

5.c. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 4, at least 70% of teachers attending professional learning sessions demonstrate an understanding of the dynamic approach (80% on post assessment) and report an improvement in their attitude about spotting gifted behaviors and identifying gifted ELs.	PROJECT		1,050 /	1,500	70.00

5.d. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 4, at least 20% of teachers attending professional learning sessions return to their schools, fully implement the dynamic approach, and report an improvement in their attitude about spotting gifted behaviors and identifying gifted ELs.	PROJECT		300 /	1,500	20.00

6. Project Objective:

Year 4. Conduct online communication networks for trainers and teachers that will continue professional learning and support fidelity of implementation throughout the school year.

6.a. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 4, at least 30% of teachers who attend professional learning sessions participate more than 4 times in the online communication network.	PROJECT		450 /	1,500	30.00

6.b. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 4, at least 80% of trainers participate in the online communication network at least once bi-weekly during Year 4 of the project.	PROJECT		12 /	15	80.00

7. Project Objective:

Years 1-5. To disseminate all Project EAGLE resources and processes as developed during the study and after the study concludes.

U.S. Department of Education
Grant Application Form for Project Objectives and Performance Measures Information

7.a. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
In Years 2-5, a Project EAGLE website will host measures, and processes as they are developed and ready for dissemination, to be maintained for access after the study concludes and viewed by at least 500 educators in the first 3 years.	GPRA	500		/	

7.b. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
In Years 2-5, Project EAGLE materials, measures, and processes will be presented at four state conferences and two national conferences attended by 120 educators.	GPRA	120		/	

8. Project Objective:

Year 4: Scale up the use of Project EAGLE's dynamic approach for teachers to recognize and support gifted behaviors in ELs through math instruction.

8.a. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 4, at least 6,000 students will be in classrooms where teachers are trained to implement Project EAGLE, and about 10% of these students will be EL.	PROJECT		600	/	6,000 10.00

8.b. Performance Measure	Measure Type	Quantitative Data			
		Target			
		Raw Number	Ratio		%
By the end of Year 4, at least 200 EL students will be nominated for gifted services in schools that implemented the project.	GPRA	200		/	

INSTRUCTIONS GRANT APPLICATION FORM FOR PROJECT OBJECTIVES AND PERFORMANCE MEASURES INFORMATION

PURPOSE

Applicants must submit a **GRANT APPLICATION FORM FOR PROJECT OBJECTIVES AND PERFORMANCE MEASURES INFORMATION** via Grants.gov or in G5 when instructed to submit applications in G5. This form collects project objectives and quantitative and/or qualitative performance measures at the time of application submission for the purpose of automatically prepopulating this information into the U.S. Department of Education's (ED) automated Grant Performance Report form (ED 524B), which is completed by ED grantees prior to the awarding of continuation grants. Additionally, this information will prepopulate into ED's automated ED 524B that may be required by program offices of grant recipients that are awarded front loaded grants for their entire multi-year project up-front in a single grant award, and will also be prepopulated into ED's automated ED 524B for those grant recipients that are required to use the ED 524B to submit their final performance reports.

GENERAL INSTRUCTIONS

Applicant Information

- **Legal Name:** The legal name of the applicant that will undertake the assistance activity will prepopulate from the Application Form for Federal Assistance (SF 424 Form). This is the organization that has registered with the System for Award Management (SAM). Information on registering with SAM may be obtained by visiting www.Grants.gov.

Project Objectives Information and Related Performance Measures Data

Your grant application establishes project objectives stating what you hope to achieve with your funded grant project. Generally, one or more performance measures are also established for each project objective that will serve to demonstrate whether you have met or are making progress towards meeting each project objective.

- **Project Objective:** Enter each project objective that is included in your grant application. When completing this form in Grants.gov, a maximum of 26 project objectives may be entered. Only one project objective should be entered per row. Project objectives should be numbered sequentially, i.e., 1., 2., 3., etc. If applicable, project objectives may be entered for each project year; however, the year to which the project objective applies must be clearly identified as is presented in the following examples:
 1. **Year 1.** Provide two hour training to teachers in the Boston school district that focuses on improving test scores.
 2. **Year 2.** Provide two hour training to teachers in the Washington D.C. school district that focuses on improving test scores.
- **Performance Measure:** For each project objective, enter each associated quantitative and/or qualitative performance measure. When completing this form in Grants.gov, a maximum of 26 quantitative and/or qualitative performance measures may be entered. There may be multiple quantitative and/or qualitative performance measures associated with each project objective. Enter only one quantitative or qualitative performance measure per row. Each quantitative or qualitative performance measure that is associated with a particular project objective should be labeled using an alpha indicator. Example: The first quantitative or qualitative performance measure associated with project objective "1" should be labeled "1.a.," the second quantitative or qualitative performance measure for project objective "1" should be labeled "1.b.," etc. If applicable, quantitative and/or qualitative performance measures may be entered for each project year; however, the year to which the quantitative and/or qualitative performance measures apply must be clearly identified as is presented in the following examples:

- 1.a. **Year 1.** By the end of year one, 125 teachers in the Boston school district will receive a two hour training program that focuses on improving test scores.
- 2.a. **Year 2.** By the end of year two, 125 teachers in the Washington D.C. school district will receive a two hour training program that focuses on improving test scores.

- **Measure Type:** For each performance measure, select the appropriate type of performance measure from the drop down menu. There are two types of measures that **ED** may have established for the grant program:

1. **GPRA:** Measures established for reporting to Congress under the Government Performance and Results Act; and

2. **PROGRAM:** Measures established by the program office for the particular grant competition.

In addition, you will be required to report on any project-specific performance measures (**PROJECT**) that you established in your grant application to meet your project objectives.

In the **Measure Type** field, select one (1) of the following measure types: **GPRA; PROGRAM; or PROJECT.**

- **Quantitative Target Data:** For quantitative performance measures with established quantitative targets, provide the target you established for meeting each performance measure. Only quantitative (numeric) data should be entered in the Target boxes. If the collection of quantitative data is not appropriate for a particular performance measure (i.e., for **qualitative** performance measures), please leave the target data boxes blank.

The Target Data boxes are divided into three columns: **Raw Number; Ratio, and Percentage (%)**.

For performance measures that are stated in terms of a single number (e.g., the number of workshops that will be conducted or the number of students that will be served), the target data should be entered as a single number in the **Raw Number column** (e.g., **10** workshops or **80** students). Please leave the **Ratio and Percentage (%) columns** blank.

For performance measures that are stated in terms of a percentage (e.g., percentage of students that attain proficiency), complete the **Ratio column**, and leave the **Raw Number and Percentage (%) columns** blank. The **Percentage (%)** will automatically calculate based on the entered ratio. In the **Ratio column** (e.g., **80/100**), the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency), and the denominator represents the universe (e.g., all students served).



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

OMB Number: 1894-0008
Expiration Date: 09/30/2023

Name of Institution/Organization

University of Connecticut

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)	Project Year 6 (f)	Project Year 7 (g)	Total (h)
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)								

***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: 07/01/2020 To: 06/23/2023 (mm/dd/yyyy)
Approving Federal agency: ☐ ED ☒ Other (please specify): Department of Health and Human Services
The Indirect Cost Rate is %.
- (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 %.
- (6) For Training Rate Programs (check one) -- Are you using a rate that:
☐ Is based on the training rate of 8 percent of MTDC (See EDGAR § 75.562(c)(4))? Or, ☐ Is included in your approved Indirect Cost Rate Agreement, because it is lower than the training rate of 8 percent of MTDC (See EDGAR § 75.562(c)(4))?

PR/Award # S206A220040

Page e164

Name of Institution/Organization University of Connecticut	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.	
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**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)	Project Year 6 (f)	Project Year 7 (g)	Total (h)
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

Name of Institution/Organization University of Connecticut	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.
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IF APPLICABLE: SECTION D - LIMITATION ON ADMINISTRATIVE EXPENSES

- (1) List administrative cost cap (x%):
- (2) What does your administrative cost cap apply to? ☐ (a) indirect and direct costs or, ☐ (b) only direct costs

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Project Year 6 (f)	Project Year 7 (g)	Total (h)
1. Personnel Administrative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2. Fringe Benefits Administrative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3. Travel Administrative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4. Contractual Administrative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5. Construction Administrative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6. Other Administrative	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7. Total Direct Administrative Costs (lines 1-6)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8. Indirect Costs	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9. Total Administrative Costs	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
10. Total Percentage of Administrative Costs	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ED 524



U.S. Department of Education
Evidence Form

OMB Number: 1894-0001
Expiration Date: 05/31/2022

1. Level of Evidence

Select the level of evidence of effectiveness for which you are applying. See the Notice Inviting Applications for the relevant definitions and requirements.

☐ Demonstrates a Rationale ☐ Promising Evidence ☐ Moderate Evidence ☒ Strong Evidence

2. Citation and Relevance

Fill in the chart below with the appropriate information about the studies that support your application.

A. Research/Citation	B. Relevant Outcome(s)/Relevant Finding(s)	C. Project Component(s)/Overlap of Populations and/or Settings
<p>Schoen, R. C., LaVenita, M., & Tazaz, A. M. (2018). Effects of the first year of a three-year CGI teacher professional development program on grades 3-5 student achievement: A multisite cluster-randomized trial (Research Report No. 2018-25). Learning Systems Institute, Florida State University. http://doi.org/10.33009/fsu.1562595733</p> <p>Meets WWC standards with reservations; at least one statistically significant positive finding; and Tier 2 Moderate evidence under Teacher Training, Evaluation, and Compensation Review Protocol 3.2 and Review Standards 3.0 (https://ies.ed.gov/ncee/wwc/Study/86089)</p>	<p>(p. 2) The intervention was professional learning for grades 3-5 teachers on implementing Cognitively Guided Instruction (CGI). CGI includes two frameworks: (a) Problem Types Frameworks of how problem structures influence students' mathematical thinking; and (b) Solution Strategy Frameworks of students' developmental progressions in mathematical thinking.</p> <p>(p. 2) The study's purpose was to estimate the impact of the first year of a three-year teacher professional learning program for grades 3-5 math teachers to determine the effect of the CGI 3-5 program on student achievement.</p> <p>(p. 11) Figure 1. CGI 3-5 Theory of Change: Focusing teachers' attention on students' cognitive processes in solving math problems and encouraging them to use what they learn about students to drive instructional decisions is thought to (a) directly increase teachers' mathematical teaching knowledge, their beliefs about mathematics teaching, and implementation of CGI in the classroom; and (b) indirectly increase student achievement and problem-solving in elementary mathematics.</p> <p>(p. 7) The relevant outcome was successful teacher professional learning led to classroom implementation of CGI in which students were supported in developing intuitive strategies to solve math problems by developing their own approach.</p> <p>(p. 6) The CGI 3-5 PD program was found to significantly impact student mathematics</p>	<p>"The reviewed study included one hundred forty-nine grades 3-5 teachers-representing 32 schools, nine public school districts, and the geographic, socioeconomic, and cultural diversity of the central and northern regions of the state of Florida-participated in the study. Students in the analytic sample represented grades 3, 4, and 5" (p. 3).</p> <p>Our project involves providing professional learning for elementary teachers of Grades 3 and 4 on using a dynamic measure to allow English learners' sparks of math talent to be observed in math problem-solving activities. Thus, both our project and the Schoen et al. study use the CGI process to understand students' mathematic thinking.</p> <p>The reviewed study's focus on professional learning for implementing CGI aligns with the proposed study's professional learning on using questions to further elicit gifted thinking behaviors as CGI is "a formative assessment process wherein teachers observe students solving problems and explaining their thinking processes. Teachers use these observations to draw inferences about students' mathematical understanding. Students in CGI classrooms learn mathematics by engaging in problem solving, explaining their problem-solving strategies to the teacher and to their peers, and listening to various ways of solving problems" (p. 3).</p>

PR/Award # S206A220040

Page 167

	achievement (p =.007) in the first year of the 3-year program.	
Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2018). Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055; Revised 2018). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/ . Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70-71).	(p. 10) Recommendation 1 ("Prepare problems and use them in whole-class instruction") is characterized as backed by "minimal evidence." (p. 54) The panel noted that although evidence is minimal due to limited studies, part of the practice (i.e., choose non-routine problems) holds promise for improving students' mathematical problem solving.	One aspect of Recommendation 1 is promising for the proposed project. "When the primary goal of instruction is to develop students' ability to think strategically, teachers should choose non-routine problems that force students to apply what they have learned in a new way" (p. 29). Our study's problem-based activities do this.
Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U. S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/ . Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70-71).	(p. 17) Recommendation 2 ("Assist students in monitoring and reflecting on the problem-solving process") is characterized as backed by "strong evidence." (p. 18) Five studies found that student performance improved when teachers modeled a self-questioning process and then asked students to practice it.	This recommendation includes (a) providing students with a list of prompts to help them monitor and reflect during the problem-solving process; (b) modeling how to monitor and reflect on the problem-solving process; and (c) using student thinking about a problem to develop students' ability to monitor and reflect (pp. 17-22). These three suggestions will support the proposed project's dynamic measure intervention of teachers providing instruction designed to elicit advanced mathematical thinking behaviors. We are developing prompts based on this concept.
Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U. S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/ . Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70-71).	(p. 23) Recommendation 3 ("Teach students how to use visual representations") is characterized as being backed by "strong evidence." (p. 23) Studies found "Both general education students and students with learning disabilities performed better when taught to use visual representations" (p. 26). Some students were taught to differentiate between types of math problems and others were taught an alternative problem-solving approach integrated with visual representations. Both resulted in higher achievement.	The 3 visual strategies of this recommendation will be helpful for teachers providing dynamic measure interventions to English learners: 1. Select visual representations that are appropriate for students and the problems they are solving. 2. Use think-alouds and discussions to teach students how to represent problems visually. 3. Show students how to convert the visually represented information into mathematical notation. (pp. 23-31)
Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U. S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/ . Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70-71).	(p. 32) Recommendation 4 ("Expose students to multiple problem-solving strategies") is characterized as being backed by "moderate evidence." (p. 31) Studies found when "students were instructed in using multiple strategies to solve the same problem, procedural knowledge improved; however, all of these studies included additional instructional components (checklists and visual aids) that produced the	Recommendation 4 is helpful to a dynamic approach through its three instructional strategies to 1. Provide instruction in multiple strategies. 2. Provide opportunities for students to compare multiple strategies in worked examples. 3. Ask students to generate and share multiple strategies for solving a problem (pp. 32-38). The proposed study also includes the use of checklists and visual aids that may contribute to positive results.

applied WWC Version 2.0 standards (pp. 70-71).	positive results."	
Woodward, J., Beckmann, S., Driscoll, M., Franke, M., Herzig, P., Jitendra, A., Koedinger, K. R., & Ogbuehi, P. (2012). Improving Mathematical Problem Solving in Grades 4 Through 8: A practice guide (NCEE 2012-4055). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U. S. Department of Education. http://ies.ed.gov/ncee/wwc/publications_reviews.aspx#pubsearch/ . Reviews of studies for this practice guide applied WWC Version 2.0 standards (pp. 70-71).	(p. 39) Recommendation 5 ("Help students recognize and articulate mathematical concepts and notation") is characterized as being backed by "strong evidence." A study found "student achievement improved when teachers discussed math problems conceptually (without numbers) and then represented them visually" (p. 39).	Recommendation 4 supports a dynamic approach through two of its instructional strategies for teachers: 1. Describe relevant mathematical concepts and notation and relate them to the problem-solving activity. 2. Ask students to explain each step used to solve a problem in a worked example (pp. 39-44). Project EAGLE's problem-based activities are designed to elicit sparks of math talent in English learners through conceptual math challenges. Allowing students to initially show what they know in response to conceptual challenges will reduce potential computational/prior experience barriers.

Instructions for Evidence Form

- 1. Level of Evidence.** Check the box next to the level of evidence for which you are applying. See the Notice Inviting Applications for the evidence definitions.
- 2. Citation and Relevance.** Fill in the chart for each of the studies you are submitting to meet the evidence standards. If allowable under the program you are applying for, you may add additional rows to include more than four citations. (See below for an example citation.)
 - a. Research/Citation.** For Demonstrates a Rationale, provide the citation or link for the research or evaluation findings. For Promising, Moderate, and Strong Evidence, provide the full citation for each study or WWC publication you are using as evidence. If the study has been reviewed by the WWC, please include the rating it received, the WWC review standards version, and the URL link to the description of that finding in the WWC reviewed studies database. Include a copy of the study or a URL link to the study, if available. Note that, to provide promising, moderate, or strong evidence, you must cite either a specific recommendation from a WWC practice guide, a WWC intervention report, or a publicly available, original study of the effectiveness of a component of your proposed project on a student outcome or other relevant outcome.
 - b. Relevant Outcome(s)/Relevant Finding(s).** For Demonstrates a Rationale, describe how the research or evaluation findings suggest that the project component included in the logic model is likely to improve relevant outcomes. For Promising, Moderate and Strong Evidence, describe: 1) the project component included in the study (or WWC practice guide or intervention report) that is also a component of your proposed project, 2) the student outcome(s) or other relevant outcome(s) that are included in both the study (or WWC practice guide or intervention report) and in the logic model (theory of action) for your proposed project, and 3) the study (or WWC intervention report) finding(s) or WWC practice guide recommendations supporting a favorable relationship between a project component and a relevant outcome. Cite page and table numbers from the study (or WWC practice guide or intervention report), where applicable.
 - c. Project Component(s)/Overlap of Population and/or Settings.** For Demonstrates a Rationale, explain how the project component(s) is informed by the research or evaluation findings. For Promising, Moderate, and Strong Evidence, explain how the population and/or setting in your proposed project are similar to the populations and settings included in the relevant finding(s). Cite page numbers from the study or WWC publication, where applicable.

EXAMPLES: For Demonstration Purposes Only (the three examples are not assumed to be cited by the same applicant)

A. Research/Citation	B. Relevant Outcome(s)/Relevant Finding(s)	C. Project Component(s)/Overlap of Populations and/or Settings
Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., Kim, J., Lyskawa, J., Olson, C. B., & Smither Wulsin, C. (2016). <i>Teaching secondary students to write effectively</i> (NCEE 2017-4002). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from the NCEE website: https://ies.ed.gov/ncee/wwc/PracticeGuide/22 . This report was prepared under Version 3.0 of the WWC Handbook (p. 72).	<p>(Table 1, p. 4) Recommendation 1 ("Explicitly teach appropriate strategies using a Model – Practice – Reflect instructional cycle") is characterized as backed by "strong evidence."</p> <p>(Appendix D, Table D.2, pp. 70-72) Studies contributing to the "strong evidence" supporting the effectiveness of Recommendation 1 reported statistically significant and positive impacts of this practice on genre elements, organization, writing output, and overall writing quality.</p>	(Appendix D, Table D.2, pp. 70-72) Studies contributing to the "strong evidence" supporting the effectiveness of Recommendation 1 were conducted on students in grades 6 through 12 in urban and suburban school districts in California and in the Mid-Atlantic region of the U.S. These study samples overlap with both the populations and settings proposed for the project.

A. Research/Citation	B. Relevant Outcome(s)/Relevant Finding(s)	C. Project Component(s)/Overlap of Populations and/or Settings
<p>U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2017, February). Transition to College intervention report: Dual Enrollment Programs. Retrieved from https://ies.ed.gov/ncee/wwc/Intervention/1043. This report was prepared under Version 3.0 of the WWC Handbook (p. 1).</p>	<p>(Table 1, p. 2) Dual enrollment programs were found to have positive effects on students' high school completion, general academic achievement in high school, college access and enrollment, credit accumulation in college, and degree attainment in college, and these findings were characterized by a "medium to large" extent of evidence.</p>	<p>(pp. 1, 19, 22) Studies contributing to the effectiveness rating of dual enrollment programs in the high school completion, general academic achievement in high school, college access and enrollment, credit accumulation in college, and degree attainment in college domains were conducted in high schools with minority students representing between 32 and 54 percent of the student population and first generation college students representing between 31 and 41 percent of the student population. These study samples overlap with both the populations and settings proposed for the project.</p>
<p>Bettinger, E.P., & Baker, R. (2011). <i>The effects of student coaching in college: An evaluation of a randomized experiment in student mentoring</i>. Stanford, CA: Stanford University School of Education. Available at https://ed.stanford.edu/sites/default/files/bettinger_baker_030711.pdf</p> <p>Meets WWC Group Design Standards without Reservations under review standards 2.1 (http://ies.ed.gov/ncee/wwc/Study/72030).</p>	<p>The intervention in the study is a form of college mentoring called student coaching. Coaches helped with a number of issues, including prioritizing student activities and identifying barriers and ways to overcome them. Coaches were encouraged to contact their assignees by either phone, email, text messaging, or social networking sites (pp. 8-10). The proposed project for Alpha Beta Community College students will train professional staff and faculty coaches on the most effective way(s) to communicate with their mentees, suggest topics for mentors to talk to their mentees, and be aware of signals to prevent withdrawal or academic failure.</p> <p>The relevant outcomes in the study are student persistence and degree completion (Table 3, p. 27), which are also included in the logic model for the proposed project.</p> <p>This study found that students assigned to receive coaching and mentoring were significantly more likely than students in the comparison group to remain enrolled at their institutions (pp. 15-16, and Table 3, p. 27).</p>	<p>The full study sample consisted of "13,555 students across eight different higher education institutions, including two- and four-year schools and public, private not-for-profit, and proprietary colleges." (p. 10) The number of students examined for purposes of retention varied by outcome (Table 3, p. 27). The study sample overlaps with Alpha Beta Community College in terms of both postsecondary students and postsecondary settings.</p>

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