

**APPLICATION FOR FEDERAL ASSISTANCE  
SF 424 (R&R)**

<b>1. TYPE OF SUBMISSION</b>		<b>3. DATE RECEIVED BY STATE</b> <input type="text"/>	<b>State Application Identifier</b> <input type="text"/>
<input type="checkbox"/> Pre-application <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		<b>4. a. Federal Identifier</b> <input type="text"/>	
<b>2. DATE SUBMITTED</b>		<b>b. Agency Routing Identifier</b> NCER-PostsecAdult Initial Efficacy <b>c. Previous Grants.gov Tracking ID</b> <input type="text"/>	
<b>5. APPLICANT INFORMATION</b>		<b>Organizational DUNS:</b> <input type="text"/> 1526528220000	
Legal Name: <input type="text"/> The Research Foundation for SUNY, University at Albany			
Department: <input type="text"/> Sponsored Programs Admin.		Division: <input type="text"/> Division for Research	
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State: <input type="text"/> NY: New York		Province: <input type="text"/>	
Country: <input type="text"/> USA: UNITED STATES		ZIP / Postal Code: <input type="text"/> 12222-0100	
Person to be contacted on matters involving this application			
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<b>6. EMPLOYER IDENTIFICATION (EIN) or (TIN):</b> <input type="text"/> 14-1368361			
<b>7. TYPE OF APPLICANT:</b> <input type="text"/> M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)			
Other (Specify): <input type="text"/>			
<b>Small Business Organization Type</b> <input type="checkbox"/> Women Owned <input type="checkbox"/> Socially and Economically Disadvantaged			
<b>8. TYPE OF APPLICATION:</b>		If Revision, mark appropriate box(es).	
<input checked="" type="checkbox"/> New <input type="checkbox"/> Resubmission <input type="checkbox"/> Renewal <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		<input type="checkbox"/> A. Increase Award <input type="checkbox"/> B. Decrease Award <input type="checkbox"/> C. Increase Duration <input type="checkbox"/> D. Decrease Duration <input type="checkbox"/> E. Other (specify): <input type="text"/>	
Is this application being submitted to other agencies? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> What other Agencies? <input type="text"/>			
<b>9. NAME OF FEDERAL AGENCY:</b>		<b>10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:</b> <input type="text"/> 84.305 TITLE: <input type="text"/> Education Research, Development and Dissemination	
<b>11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:</b>			
Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills			
<b>12. PROPOSED PROJECT:</b>		<b>13. CONGRESSIONAL DISTRICT OF APPLICANT</b>	
Start Date <input type="text"/> 09/01/2020   Ending Date <input type="text"/> 08/31/2024		<input type="text"/> NY-020	

## 14. PROJECT DIRECTOR/PRINCIPAL INVESTIGATOR CONTACT INFORMATION

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## 15. ESTIMATED PROJECT FUNDING

a. Total Federal Funds Requested	3,299,059.00
b. Total Non-Federal Funds	0.00
c. Total Federal & Non-Federal Funds	3,299,059.00
d. Estimated Program Income	0.00

## 16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

- a. YES  THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:  
DATE: \_\_\_\_\_
- b. NO  PROGRAM IS NOT COVERED BY E.O. 12372; OR  
 PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. 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 18, 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.

## 18. SFLLL (Disclosure of Lobbying Activities) or other Explanatory Documentation

	Add Attachment	Delete Attachment	View Attachment
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## 19. Authorized Representative

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Signature of Authorized Representative

Stefan Brooks
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Date Signed

08/29/2019

## 20. Pre-application

	Add Attachment	Delete Attachment	View Attachment
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## 21. Cover Letter Attachment

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## Project Summary/Abstract

**Title:** Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)

**Topic and Project Type:** Postsecondary and Adult Education, Initial Efficacy and Follow-Up

**Purpose:** DAACS is a suite of free, open source, online diagnostic assessments of reading, writing, mathematics, and self-regulated learning (SRL) accompanied by a collection of open education resources to support college students' success. The purposes of the proposed project are to examine the efficacy of the DAACS in terms of college students' outcomes, and the generalizability of any effects across different types of postsecondary institutions.

**Setting:** This project will be conducted at three postsecondary institutions: University at Albany – SUNY (UA), Empire State College – SUNY (ESC), and California State University – East Bay Online (CSUEB). UA is a traditional brick-and-mortar institution; ESC is blended (online and in-person), and CSUEB is fully online.

**Sample:** All students will be newly enrolled undergraduates. We anticipate approximately 36,000 participants ( $n_{UA} \approx 15,000$ ,  $n_{ESC} \approx 15,000$ , and  $n_{CSUEB} \approx 6,000$ ) across data collection years.

**Intervention/Assessment:** Students in the treatment group will participate in the DAACS intervention during new student orientation. DAACS has five components: 1) Diagnostic assessments of students' readiness for college in terms of self-regulated learning, reading, writing, and mathematics; 2) feedback, strategies, and links to open educational resources that help students address deficiencies, with nudges to use them; 4) automated nudges to encourage students to utilize DAACS resources, 4) information and support that enables academic advisors to help students address deficiencies identified by the assessments, including a DAACS dashboard and professional development on DAACS and SRL, and 5) predictive models that identify students at risk, as well as the specific risk factors.

**Control Condition:** Students in the control condition will receive the business-as-usual student orientation, without DAACS.

**Research Design and Methods:** A randomized controlled trial will be used at the three institutions. Students at each institution will be randomly assigned to a treatment or control group. Academic progress, outcome, and DAACS use (treatment only) of all participating students will be tracked for the duration of the grant. Interviews will be conducted with advisors, students, and institutional leaders to gather information about their perceptions of DAACS.

**Key Measures:** Proximal outcomes include engagement, as measured by students' and advisors' use of DAACS (clicks on assessment results, feedback, resources, and advisor dashboards), and number of advisor-student meetings. Proximal academic outcomes include time to first credit completion and term-to-term retention. Long-term outcomes include one-year retention and GPA. Moderating variables include amount and type of DAACS use, student characteristics (baseline academic achievement, SES, demographics, student status), and type of institution (traditional, blended, online).

**Data Analytic Strategy:** Null hypothesis testing will be used to examine the effects of DAACS on student outcomes. Regression analyses will be used to test moderator effects. Predictive models will be used to examine the effects of DAACS results on the accuracy of predictions of students' academic success.

**Cost Analysis and Cost-Effectiveness Analysis:** For the cost analysis, Levin and McEwan's (2001) Ingredients Method will be used to identify and compute all costs. Incremental cost-effectiveness ratios will be used to determine the cost-effectiveness of implementing DAACS.

# **Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills**

## Postsecondary and Adult Education: Initial Efficacy and Follow-Up

### **Purpose and Significance**

Identifying and addressing the preparedness of newly enrolled college students is one of the most pressing issues in higher education today (Fay, Barnett, & Chavarin, 2017; Mokher, Barnett, Leeds, & Harris, 2019; National Center for Public Policy and Higher Education & Southern Regional Education Board, 2010). In recognition of this issue, the What Works Clearinghouse (Bailey et al., 2016) recommended six strategies for helping students in developmental education. With one exception (offering students monetary incentives), the **Diagnostic Assessment and Achievement of College Skills (DAACS)** intervention reflects each recommendation: 1) using *multiple measures to assess readiness*, 2), requiring *participation in enhanced advising activities*, 3) compressing developmental education by mobilizing *targeted supports for students' specific needs*, 4) teaching students how to become *self-regulated learners*, and 5) implementing *comprehensive, integrated, and long-lasting support programs*. The key objective of the current proposal is to rigorously evaluate the effects of DAACS on proximal behavioral measures (e.g., use of resources, help seeking), as well as distal measures of academic progress (credit acquisition, retention) and student achievement (GPA).

DAACS (<https://daacs.net/>) is a fully developed, online, free, open-source system with a research-based theoretical framework and promising results from randomized controlled trials of the beta version. As noted above, DAACS reflects the WWC strategies for helping students. It entails *multiple measures to assess academic readiness* via free, online diagnostic assessments of academic skills (i.e., reading, mathematics, and writing) and self-regulated learning (SRL) processes (i.e., metacognition, use of learning strategies, motivation). The assessments are automatically scored so students receive immediate feedback and access to website links with freely available, *targeted supports for students' specific needs*. The SRL and writing assessments provide feedback and guidance for students on how to become *self-regulated learners*. In order to support *participation in enhanced advising activities*, the project includes professional development for advisors and online features such as DAACS dashboards to enable easy access to concise summaries of students' individualized needs and to useful resources. By being *integrated into the organizational structure* of participating universities and available to students anytime, anywhere, DAACS is a *long-lasting support program* with field-tested features to ensure student participation.

Developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; 2016-2019; Grant #P116F150077), DAACS is designed to address the shortcomings of placement exams and remediation. Placement exams and related remediation or developmental programs have been criticized because they: (1) fail to provide students with individualized feedback or access to needed resources; (2) do not consider and formally assess key academic enablers, such as SRL and motivation; and (3) often introduce serious disadvantages for students, such as increased financial cost and time to degree completion, and high rates of attrition (Belfield & Crosta, 2012; see also Scott-Clayton, 2012).

DAACS is not a placement test: The D is for *diagnostic*. Unlike placement exams, DAACS provides immediate results and feedback about student skill profiles and encourages students to utilize online and social supports to help them address the challenges of college life. In a practical sense, DAACS offers a means for students to first assess their readiness and then to develop strategies, with the guidance of academic advisors and a rich array of resources, to

successfully complete their coursework and degree. In addition, DAACS can be used by college administrators to boost the accuracy of predictions regarding students who may be in the greatest need of supports and services (Bryer, Lui, Andrade, Franklin & Cleary, 2019).

The beta version of the DAACS system was rigorously evaluated using randomized controlled trials at two online institutions that serve predominantly non-traditional students ( $n = 21,381$ ). Although the results of the RCT revealed overall null effects on on-time progress and credit acquisition, it was observed that students who actually utilized DAACS feedback showed statistically significant gains in completing their first six months of coursework on-time and were more successful in earning credits than students who only completed the assessments (Bryer, et al., 2019). Further, we used the final year of our current FIPSE project to successfully evaluate new DAACS features, including participation nudges and an advisor dashboard, in terms of their influence on student engagement with DAACS feedback and resources and, ultimately, student success. **The purpose of the proposed project is to examine the efficacy and predictive power of the new, fully developed DAACS system across a variety of postsecondary institutions enrolling both traditional and non-traditional college student populations.**

### The Diagnostic Assessment and Achievement of College Skills Intervention

DAACS is a suite of open source, online assessments and supports (both technological and social) designed to optimize student learning (see <https://daacs.net/>). DAACS has five main components (Figure 1): (1) *diagnostic assessments* that permit valid and reliable inferences of students' readiness for college in terms of self-regulated learning, reading, writing, and mathematics; (2) performance *feedback* with recommended strategies and links to open educational resources, (3) *nudges* that prompt students to engage in self-directed preparation for college-level academic work; (4) *trained academic advisors* to help students build on strengths while addressing areas of weakness identified by the assessments; and (5) *predictive models* that identify students at risk, as well as the specific risk factors. Detailed descriptions of each component are provided after the following summary of initial research results.

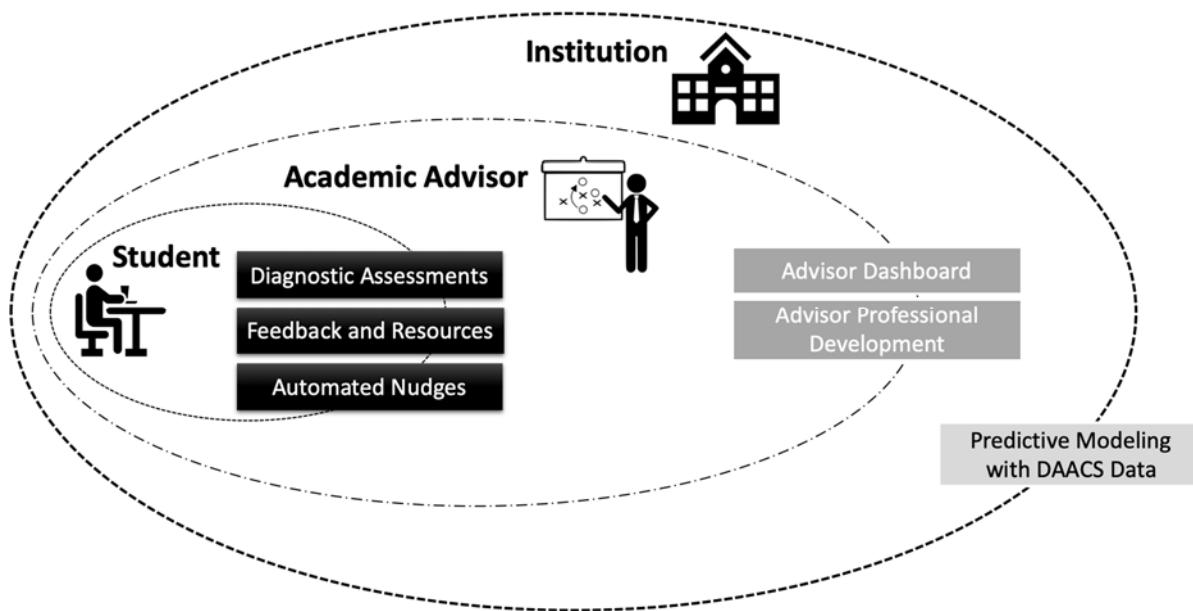


Figure 1. DAACS Framework and Components

## Initial Evaluation of beta-DAACS

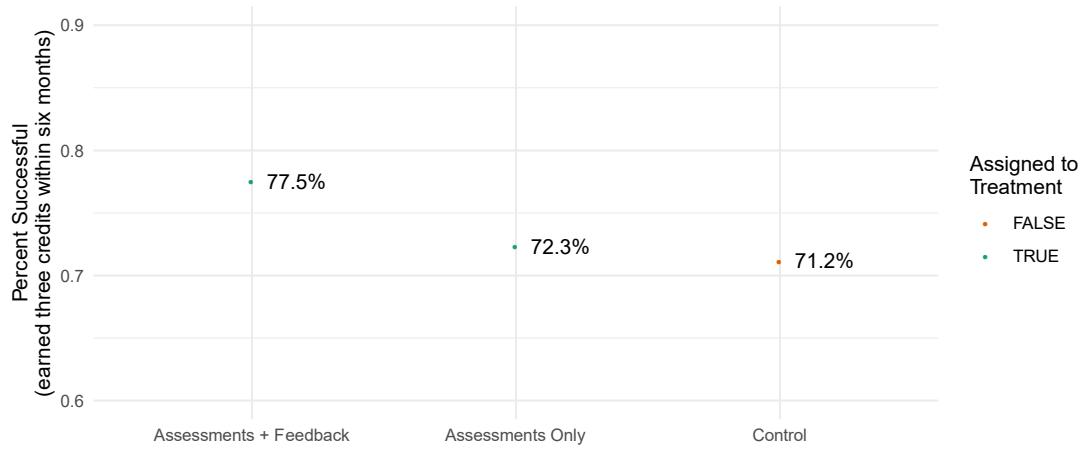
We examined the efficacy of the beta version of DAACS at two private, nonprofit, online institutions (Excelsior College [EC] and Western Governors University [WGU]), using randomized controlled trials (RCT) to examine the effects of DAACS on students' academic progress and achievement. Academic progress was operationalized as *on-time progress*: At EC, where most students are part-time, on-time was defined as completing at least three credits within six months, while at WGU, where all students are full-time, on-time was defined as earning at least 12 credits within six months. Academic achievement was operationalized as credit acquisition rate (ratio of credits earned to credits attempted).

Participants were incoming non-traditional (i.e. adult students, mostly transfer, in fully online programs) undergraduate students ( $n = 22,596$ ) enrolled at the two institutions. All incoming students were required to complete an institution-specific, online orientation to college before beginning coursework. Students were randomly assigned to one of two versions of the orientation course at each institution: Students in the treatment group ( $n = 11,076$ ) took all four DAACS assessments, received individualized feedback and suggestions based on their results, and were assigned a DAACS-trained advisor ( $n = 350$ ). Students in the control group ( $n = 11,265$ ) attended the same orientation as the treatment group but without DAACS: They did not take the DAACS assessments, did not receive DAACS feedback, and were assigned to advisors who had not been trained to use DAACS during advising.

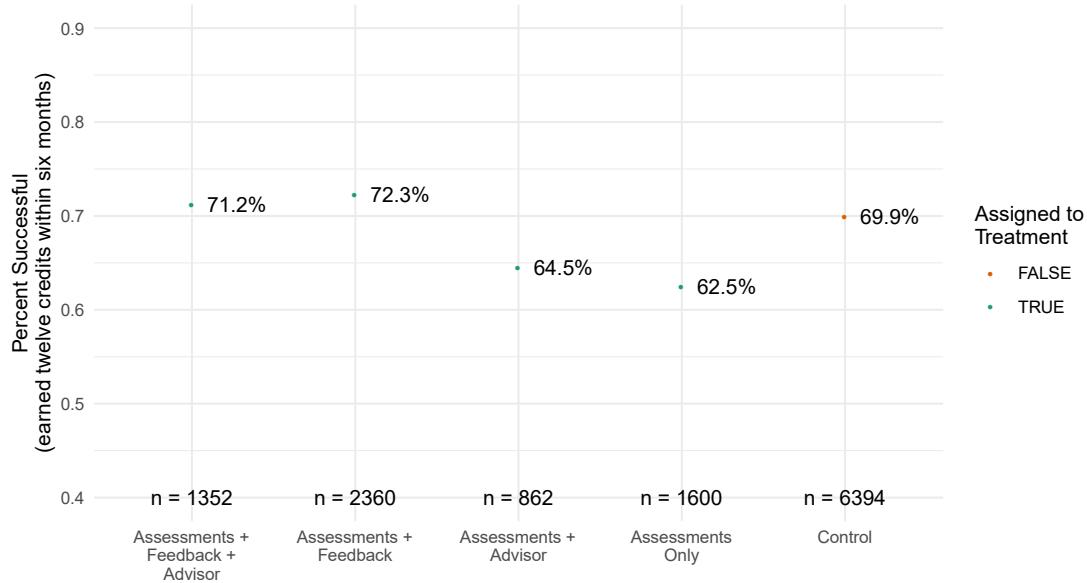
Although the results of the RCT revealed overall null effects of DAACS on on-time progress and credit acquisition, post-hoc correlational analyses of DAACS usage data for the treatment condition revealed an interesting pattern of statistically significant differences between subgroups. Figures 2 and 3 illustrate the associations between DAACS and on-time progress for subgroups in the treatment condition: Students who (1) took the assessments but did not view the feedback (assessments only), (2) took the assessments, viewed the feedback, and/or clicked at least one link to a recommended open educational resource (assessments + feedback), (3) were advised by an advisor who viewed the students' DAACS results (assessments + advisor), and (4) took the assessments, viewed the feedback, and were advised by an advisor who viewed the students' results (assessments + feedback + advisor). Conditions three and four were in place only at Western Governors University (Figure 3), due to institutional restructuring of advising services at Excelsior College at the time of the study.

Figures 2 and 3 reveal a clear trend: The more DAACS was used by students and advisors, the more likely students were to pass a course and earn the credits they attempted within six months (EC:  $\chi^2 = 3.9, p < 0.05$ ; WGU:  $\chi^2 = 51.9, p < 0.01$ ). The results were identical for credit acquisition (EC:  $t_{2590} = 8.4, p < 0.01$ ; WGU:  $t_{10378} = 20.6, p < 0.01$ ).

Because accurately identifying students at risk of academic failure is of great importance to administrators in higher education (Ekowo & Palmer, 2016), we also investigated the extent to which the DAACS assessment data (reading, mathematics, writing, and SRL scores) could improve the accuracy of prediction models of student success in college. Parametric and non-parametric methods were used, including logistic regression, classification trees, and random forests: The model with the highest accuracy was retained. The addition of DAACS assessment data to baseline student predictor variables (demographics, transfer credits, etc.) improved prediction accuracy of on-time progress by up to 6%. In debriefing conversations with administrators at the participating institutions, this increase was considered this to be a significant improvement in predictive power.



*Figure 2.* Percent of Excelsior College students making on-time progress at six months.



*Figure 3.* Percent of WGU students making on-time progress at six months.

### The Diagnostic Assessment and Achievement of College Skills Intervention

The associations between success in college and DAACS usage by students and advisors strongly suggest that DAACS served its intended purposes for the students who were motivated to use it, while other students needed encouragement from the system and advisors (Bryer et al., 2019). In response, we developed and tested several enhancements, including the *SRL Lab* (<https://srl.daacs.net>); a variety of *nudges* that prompt students to complete the assessments (Franklin, Bryer, Akhmedjanova, Lui & Andrade, 2019), use the resources, and communicate with their advisors; and enhanced *advisor training* (Slemp, Panish, Pawlo, & Cleary, 2019) with an *advising dashboard* that succinctly summarizes students' DAACS results and recommendations. The five DAACS components and associated features depicted in Figure 1 reflect WWC recommended strategies (Table 1) and have been designed to increase students and advisor usage. DAACS is ready for a rigorous test of its efficacy in promoting student success in

terms of credit completion, retention, and GPA, as well as its cost effectiveness. In the remainder of this section we present detailed descriptions of each component of the DAACS system, as well as evidence of validity, reliability, and efficacy, as appropriate.

**Table 1. WWC Strategies and DAACS**

WWC Strategy	Instantiation in DAACS
1 Use multiple measures to assess postsecondary readiness	Diagnostic assessments of students' SRL, reading, writing, and mathematics, followed by feedback, recommended strategies, and links to OERs
2 Require regular participation in enhanced advising activities	Access to DAACS dashboards and detailed student results by trained academic advisors, who discuss them with students
3 Compress developmental education	Access to feedback, recommended strategies, and links to OERs enables students to engage in self-directed learning to prepare for college-level work
4 Teach students how to become self-regulated learners	SRL and writing assessments assess SRL, support students in making concrete improvement plans, and link to the online SRL Lab ( <a href="https://srl.daacs.net">https://srl.daacs.net</a> )
5 Implement comprehensive, integrated, and long lasting support programs.	DAACS addresses not just academic skills but also key soft skills such as SRL; the DAACS system is integrated into new student orientation, advising, and credit-bearing courses for at-risk students; and is freely available to students

## Component 1: Diagnostic Assessments

Academic difficulties are not the only challenges that lead students to drop out of college. Public Agenda's 2011 study of young adults aged 22-30 identified logistical concerns, such as need to work and to balance work with school responsibilities, as the primary reasons they left college before completing a degree (Johnson, Rochkind, Ott, & DuPont, 2011). Successful students tend to be self-regulated learners – those who are goal-directed and who can successfully deploy strategies to manage competing demands on their time, to self-motivate, and to focus their attention (Zimmerman, Moylan, Hudseman, White, & Flugman, 2011; Zimmerman & Schunk, 2011). The State University of New York Task Force on Remediation (2012) includes among their recommendations providing strong academic supports that target students' non-cognitive skills and attitudes, which include SRL and motivation beliefs.

Therefore, DAACS includes diagnostic assessments of disciplinary content (reading, math, and writing) as well as SRL skills (metacognition, strategy use, motivation) that occur before students even begin taking classes. Unlike traditional placement exams, which provide only a pass/fail score and are used to place students into remedial courses, the diagnostic assessments provide students with information about their strengths and areas of weaknesses prior to beginning college so they can work on these areas while taking credit-bearing courses.

**SRL Survey.** The SRL survey consists of 62 Likert-type items adapted from established SRL measures (Cleary, 2006; Driscoll, 2007; Dugan & Andrade, 2011; Dweck, 2006; Schraw & Dennison, 1994). The 62 items cover three domains: metacognition, motivation, and learning strategies. The SRL assessment has excellent psychometric qualities, suggesting inferences drawn from the survey scores are valid and reliable (Table 2; Lui et al., 2018).

**Writing assessment.** The writing assessment asks students to summarize their SRL survey results, identify specific strategies for improving their SRL, and commit to using them. Thus, the

writing assessment not only assesses newly enrolled students' writing skills, but also engages them in reflecting on and planning to develop their skills in SRL.

An open source, automated essay scoring program was trained to reliably score the writing assessments in terms of nine criteria related to effective college-level writing (Yagelski, 2015) and provide students with feedback within one minute (Akhmedjanova, Lui, Andrade & Bryer, 2019; Andrade, Bryer & Yagelski, 2018).

**Mathematics and reading assessments.** The mathematics and reading assessments are computer-adaptive tests with 18 to 24 multiple choice items adapted from state-mandated high school English language arts and mathematics exams, which are useful for identifying college readiness (Han, 2003; Jirka & Hambleton, 2005; Massachusetts Department of Elementary and Secondary Education, 2017; New York State Education Department, 2014a, 2014b). The DAACS reading and mathematics assessments have acceptable psychometric properties, including Cronbach's alphas of 0.67 and 0.69, respectively.

Table 2. Four DAACS Assessment Domains and Sub-Domains

Domain	Sub-domains	Reliability
Self-regulated learning	Metacognition, motivation (anxiety, goal orientation, self-efficacy), learning strategies (help seeking, managing time, managing environment, strategies for understanding), mindset	$\alpha = .79 - .91$
Writing	Content, organization, paragraphs, sentences, conventions	Average LightSide-human IRR=66.3%
Mathematics	Word problems, geometry, variables and equations, numbers and calculations, lines and functions	$\alpha = .69$
Reading	Ideas, inference, language, purpose, structure	$\alpha = .67$

## Component 2: Feedback and Resources

Three components of DAACS are specifically designed to promote self-directed learning: (1) the immediate feedback students receive upon completing the diagnostic assessments, (2) links to Open Educational Resources (OERs) related to individual students' results, and (3) nudges, or periodic encouragement to take advantage of the feedback, resources, and academic advisors. Details and sample feedback are provided in Table 3 and Appendix D, respectively.

**Immediate feedback.** The feedback and resources provided to students by DAACS is an especially powerful and unique aspect of its design. Consistent with findings from research on formative feedback (e.g., Hattie & Timperley, 2007; Meer & Dawson, 2018; Shute, 2008; Wiliam & Thompson, 2007), DAACS feedback can increase student awareness of discrepancies between their current and desired skill levels, and provide suggestions about how to improve. As a result, students have a greater likelihood of enhancing performance and succeeding in school.

Furthermore, feedback that guides adaptation is a hallmark of SRL theories (Efklides, 2011; Winne & Hadwin, 1998; Zimmerman, 2000), most of which depict SRL as a goal-directed, cyclical process whereby individuals set goals, plan, enact learning strategies, deploy monitoring techniques, and then evaluate and adapt (Boekaerts, Pintrich & Zeidner, 2000). DAACS represents a structured assessment-to-feedback system designed to enhance regulatory skills.

**Open Educational Resources.** Two new OERs were created with the support of the FIPSE FITW grant: the SRL Lab ([srl.daacs.net](http://srl.daacs.net)) and the Reading Comprehension Lab ([owl.excelsior.edu/orc](http://owl.excelsior.edu/orc)). A library of pre-existing math-related OERs was also curated and

continues to be updated. Institution-specific resources, such as the Online Writing Lab, are also linked to relevant feedback.

**Table 3. Four DAACS Assessment Domains, Sample Feedback and Resources**

Domain	Sample Feedback	Sample Resources
Self-regulated learning	Motivation (Mindset): “The SRL assessment results suggest that you have a fixed mindset, meaning you tend to believe your intelligence cannot be changed over time. Although you might have a fixed mindset right now, you can change it to a growth mindset. That is, you can learn to think and act like your intelligence can be improved with effort.”	Self-Regulated Learning Lab: <a href="https://srl.daacs.net/">https://srl.daacs.net/</a>
Writing	Organization (Transitions): “Your writing was scored at the developing level for transitions between paragraphs, which were missing or ineffective. Paragraphs tended to abruptly shift from one idea to the next.”	Excelsior College’s Online Writing Lab: <a href="https://owl.excelsior.edu">https://owl.excelsior.edu</a>
Mathematics	Statistics: “Your results suggest that you have emerging skills for reasoning with data. To further develop your skills at summarizing data with statistics, graphs, and tables, these resources might be a good starting point: ....”	Math is Fun: <a href="https://www.mathsisfun.com/">https://www.mathsisfun.com/</a>
Reading	Inferences: “Your results suggest an area of improvement for you is reading closely to determine implied meaning. A skill you may want to improve is the ability to draw logical inferences from what texts explicitly say to determine the implied meaning. An inference is....”	Reading Comprehension Lab: <a href="https://owl.excelsior.edu/orc/">https://owl.excelsior.edu/orc/</a>

There is a modest but promising body of research on the effectiveness of OERs for improving student outcomes and reducing costs for higher education (Hilton, 2016; Hilton, Robinson, Wiley, & Ackerman, 2014). In a review of the research on OERs, Hilton (2016) found that students who use OERs generally have better or equal learning outcomes compared to students using traditional learning methods. These results have been demonstrated across a variety of subjects (i.e., math, reading, chemistry, biology, psychology) and on several different outcome variables (i.e., grades, test scores, credits attempted, course completion). The review also indicated that student and faculty perceptions of OERS are very positive, with most preferring OERs over traditional learning materials.

While there have been some promising results regarding the effectiveness of OERs, some studies have found null effects (Grimaldi, Mallick, Waters, & Baraniuk, 2019). While OERs are at least as effective as traditional, expensive learning materials such as textbooks, these resources can only have an effect if students actually access them. The nudges feature of DAACS is specifically designed to address this concern by enhance student engagement with OERs.

### **Component 3: Automated Nudges**

A major finding from our FIPSE study of beta-DAACS indicated that the intended effects of DAACS is only helpful to students who choose to not only take the assessments, but also access the feedback and resources (Figures 2 & 3). In response to these findings, we developed and tested *nudges* to encourage more students to take advantage of the wealth of information and

resources available to them via the DAACS. To nudge is “to alert, remind, or mildly warn another” (Thaler & Sunstein, 2008, p. 4). The nudges were informed by studies that demonstrated their effectiveness in influencing behavior. For example, the U.K. Nudge Unit sent letters to individuals who had not paid their taxes, the most effective of which simply read, “Nine out of ten people in the U.K. pay their taxes on time. You are currently in the very small minority of people who have not paid us yet.” Within 23 days, there was an increase of 15% in the number of people paying their taxes (Halpern, 2015). Similar nudges based on social norms have been shown to be effective in improving organ donor registrations in Illinois (Thaler & Sunstein, 2008), decreasing cigarette smoking on college campuses (Perkins, 2003), and increasing elementary school students’ use of deliberate practice (Eskreis-Winkler, Gross, & Duckworth, 2016).

Reminders are a type of nudge that prompts students to turn their attention to a particular problem or task, gives them easy access to information, and/or reminds them of the benefits of completing a task (Damgaard & Nielsen, 2018). These types of nudges have been found to have a positive effect on several educational outcomes, including college enrollment for low income and first generation students (Castleman & Page, 2017). Informational nudges aim to increase student outcomes by providing information about their behavior and ability, or by encouraging students to overcome behavioral barriers that might impede their academic success (Damgaard & Nielsen, 2018). Informational nudges aimed at improving students’ grit (Alan, Boneva, & Ertac, 2016), planning (De Paola & Scoppa, 2015; Yeomans & Reich, 2017), goal setting (Alan et al., 2016; De Paola & Scoppa, 2015), and time management (Bettinger & Baker, 2014; De Paola & Scoppa, 2015) have had positive effects on academic outcomes.

Two of our nudges reflect the content of those used in the social norms studies: They inform students of either the percentage of students from their school who have completed DAACS or the higher success rate of students who complete DAACS, and then inform the students that they are in the small minority who have not yet done so. We also developed three other reminder and informational nudges, including one that reminds students to re-read the essay they wrote for the writing assessment in order to recall the strategies they committed to using; one that has a link to feedback on a domain on which they scored particularly low or high; and a nudge encouraging students who have not yet completed the DAACS to do so. The nudges are sent via email and include convenient links to the DAACS. Results indicate that the nudges resulted in a significant increase in students’ use of the DAACS ( $\chi^2 = 7.7, p < 0.05$ ) and the feedback it provides ( $\chi^2 = 14.2, p < 0.01$ ) (Franklin et al., 2019).

#### **Component 4: Academic Advising**

Students in postsecondary education are typically assigned an academic advisor who assists in course planning and problem solving (Bailey et al., 2016; Grubb, 2001). DAACS was designed to be an advising tool that enables advisors to access information about students’ academic strengths and weaknesses, use the information to focus advising conversations, and help students set actionable goals that can lead to college success. One of the recommendations of the What Works Clearinghouse is for programs to encourage their students to participate in “enhanced advising activities” (Bailey et al., 2016, p. 20). A few studies that meet the WWC recommendations without reservations reported that college students who participated in enhanced advisement were likely to accumulate more credits than students in control groups (Bailey et al., 2016; Cousert, 1999; Scrivener & Weiss, 2013; Visher, Butcher, & Cerna, 2010). In order to support advising, DAACS has a new advisor dashboard and professional

development. Academic advisors will be provided with three to six hours of initial training with continual updated training, links to dashboards that succinctly summarize their students' DAACS results, and a guide to prioritizing students' needs and connecting them to useful resources.

**Advisor dashboard.** The online dashboard facilitates the use of DAACS results by academic advisors (Appendix D, pp. 9-10). The initial page presents a student's scores on each assessment, as well as top strengths and weaknesses. Through the dashboard, advisors can also easily access detailed information related to student outcomes, such as specific item responses, and can recommend strategies or links to appropriate resources, based on student results.

**Advisor professional development (PD).** In-person and online trainings enhance advisors' knowledge of DAACS and the ways in which it can be used to promote student success. An emphasis is placed on SRL, including the application of SRL strategies to specific academic contexts. The SRL workshop to be provided during the proposed study is based on the workshop administered as part of the FIPSE grant. Initial evaluations of 36 advisors receiving the three-hour SRL workshop revealed statistically significant increases in their knowledge of SRL and self-efficacy for helping students (Cleary, Austin, & Waire, 2019).

## **Component 5: Predictive Modeling**

As institutions serve more students with fewer resources, being able to identify academically at-risk students early in their programs and provide robust academic and motivational supports is critical. Beta-DAACS data increased the accuracy of models predicting student success in their first term by as much as 6% over baseline models. Predictive models were not part of the RCT study, since outcome measures were not observable during the study period. However, results indicate that the inclusion of DAACS results significantly increases the accuracy of predictions of student success and identified specific, measurable risk factors. This component is of tremendous added value to institutions interested in prioritizing outreach to students and/or monitoring student progress upon beginning coursework.

## **Theory of Change**

Our theory of change is based on bioecological systems theory. According to Bronfenbrenner (1979), "the ecological environment is conceived as a set of nested structures, each inside the next like a set of Russian dolls" (p. 3). Five interrelated layers surround a focal individual – microsystem, mesosystem, exosystem, macrosystem, and chronosystem – and are arranged from systems having the most direct (closest) to the least direct (farthest) impact on the individual's development. The influences lie in the setting, individuals, and social interactions within and between these systems (e.g., Neal & Neal, 2013). As shown in Figure 1, our focal individual is the student, including cognitive capacities, and socioemotional, and motivational tendencies. Academic advisors and institutions surround the students because they are who and what students interact with as a part of their educational setting, directly and indirectly. DAACS components are designed to affect each level in the system, to strengthen interactions between systems and the influences that these interactions have on students' educational experience.

As explained above, DAACS is a research-based intervention that integrates research on SRL, diagnostic assessments and feedback, social supports, open educational resources, nudges, and predictive modeling in the service of retention and success in higher education. Our logic model (Figure 4) summarizes the design of our proposed intervention and how it is expected to lead to the short-term and long-term outcomes, at the student level and systemically. We posit

Resources/Inputs	Strategies and Activities	Outputs	Outcomes	Impacts
<ul style="list-style-type: none"> <li>The DAACS system: <ul style="list-style-type: none"> <li>valid and reliable diagnostic assessments of reading, writing, mathematics and SRL</li> <li>individualized feedback on results</li> <li>OERs (e.g., SRL Lab, OWL)</li> <li>nudges to use the system</li> <li>advising dashboards</li> </ul> </li> <li>Experienced <b>research team</b> that developed and tested DAACS</li> <li>Partnership with <b>three diverse institutions</b></li> <li><b>Academic advisors</b> to provide the social support aspect of DAACS</li> <li><b>Institutional research staff</b> to compile and share data</li> <li><b>Information technology systems staff</b> and <b>Gavant</b> for technological integration of DAACS into institutional learning systems</li> </ul>	<ul style="list-style-type: none"> <li>Integrate DAACS into advising and orientation processes <ul style="list-style-type: none"> <li>Advisors receive professional development</li> <li>Students complete all four assessments</li> <li>Students access customized feedback and links to OERs</li> <li>Advisors use student information from the DAACS dashboards</li> </ul> </li> <li>Prompt use of DAACS resources <ul style="list-style-type: none"> <li>Students receive nudges to complete DAACS and/or review feedback and resources</li> <li>Advisors receive ongoing training</li> </ul> </li> <li>Collect and analyze evidence of validity and reliability of DAACS assessments for use at each institution</li> <li>Develop models for predictive analytics to identify students who are at risk of academic failure and provide individualized supports</li> </ul>	<ul style="list-style-type: none"> <li>Advisors understand how to use DAACS to inform advising</li> <li>Students complete the four assessments, access the feedback, and better understand their academic strengths and weaknesses</li> <li>Students use the OERs to address weaknesses</li> <li>Positive reactions by students and advisors to the use of DAACS</li> </ul>	<p><b>Short-term</b></p> <ul style="list-style-type: none"> <li>Advisors use DAACS dashboard during advisement</li> <li>Student engagement with DAACS</li> <li>Less time to first credit</li> <li>Increased short-term persistence (term-to-term retention)</li> </ul> <p><b>Long-term</b></p> <ul style="list-style-type: none"> <li>Increased GPA</li> <li>Increased long-term persistence (one year retention)</li> </ul>	<ul style="list-style-type: none"> <li>Spread of DAACS across higher education (HE)</li> <li>Better student preparation for HE</li> <li>Greater overall academic success in HE</li> <li>HE practices favor diagnostic assessments, feedback, and OERs</li> <li>Institutions use analytics that include DAACS information to individualize student support</li> </ul>

Figure 4. Logic model for DAAC

that students, as the focal individuals, benefit from information about their academic strengths and weaknesses (e.g., Hattie & Timperley, 2007; Shute, 2008; Wiliam & Thompson, 2007), feedback about how to address deficits with links to useful resources (Hilton, 2016; Hilton, et al., 2014), and guidance from advisors who understand how to use students' information and feedback during advising (Grubb, 2001). According to SRL theories (Efkides, 2011; Winne & Hadwin, 1998; Zimmerman, 2000), the information provided to students by DAACS will promote the development of self-regulated learning.

Features designed to leverage the feedback and resources made available by DAACS include nudges to students and advisors, and dashboards and training to guide DAACS-informed advisement. These features are intended to strengthen the interactions between academic advisors and students. As a result of DAACS, students will develop the academic skills and interactions necessary to foster the persistence and drive to stay in school, waste less time in remedial courses, earn more credits, and have higher GPAs. In addition, participating institutions will use DAACS data to more accurately identify students in need of extra support and to individualize the support they receive. As DAACS becomes more widely used, higher education practices will continue to shift away from traditional placement exams and remediation procedures to a more informative and supportive approach based on diagnostic assessment, feedback, and open educational resources.

## Research Questions

As noted previously, beta-DAACS was tested at two online institutions that serve non-traditional college students. In addition to providing evidence to support claims regarding the reliability and validity of DAACS assessments, the key findings from the RCT were that when students completed the DAACS assessments, read the feedback, accessed the resources, and had advisors who used their beta-DAACS results during advising sessions, they achieved greater success (Bryer, et al., 2019). In the proposed research project, we will examine the efficacy and predictive power of the new DAACS at three institutions—one traditional brick-and-mortar university, one blended, and one fully online. Combined, the three institutions serve both traditional (i.e. 18 to 22 year old) and non-traditional (i.e. adult) students. Our proposed project will again collect evidence to support the validity of the inferences based on the fully developed DAACS assessments, and address the following research questions:

1. Do students assigned to the DAACS intervention demonstrate greater early credit acquisition, retention, and academic achievement than those who were assigned to the control group?
2. Are any observed intervention effects moderated by:
  - a. amount and type of use by students?
  - b. amount and type of use by advisors?
  - c. student characteristics?
  - d. type of institution (blended, online, or traditional)?
3. To what extent does the inclusion of DAACS data (i.e., scores on the four assessments) in predictive analytics models increase the accuracy of predictions of early credit acquisition, retention, and academic achievement?
  - a. In what ways do the predictive models differ by type of institution?
4. What are the costs, including direct, in-kind, and opportunity, of implementing DAACS within an advisory process? To what extent do these costs vary across schools?

- Given the DAACS program cost and effectiveness data, to what extent is the program cost effective to implement as compared to business as usual (BAU)?

An implementation study will also be conducted to document how and under what conditions DAACS is implemented during the grant period. This work will take place throughout the project, with an emphasis on years 1 and 2. Three research questions guide the research:

- How do students utilize and react to DAACS?
- How do advisors utilize and react to DAACS, its training, and supports?
- How do institution leaders utilize the predictive modeling?

## Research Plan

### Efficacy Study

The central research activity will be a student-level randomized controlled trial to determine the effects of DAACS on the outcome variables, compared with students not assigned to the intervention. This research design meets What Works Clearinghouse (2017) Evidence Standards without reservations. The effectiveness study will address research questions one, two, and five above.

**Setting and sample.** In order to increase the external validity of the interpretations of results from this project, three structurally and geographically distinct postsecondary education institutions will participate: (1) the University at Albany, State University of New York (UA); (2) Empire State College, State University of New York (ESC); and (3) California State East Bay Online (CSUEB). Specifically, these institutions differ in geographic location (i.e., New York and California), delivery format (i.e., brick and mortar, blended online, fully online), and student population (i.e., traditional, developmental; see Table 4). UA is a traditional brick-and-mortar institution with a diverse undergraduate population comprised mostly of students aged 24 years and under. ESC is a blended institution (online and in-person) that serves predominately non-traditional adult learners. CSUEB offers both fully online and hybrid courses; this study will include only the fully online programs. All newly enrolled students at these three institutions will serve as the research sample.

The three participating institutions have been selected, in part, for the diversity in their student populations in regard to age, race and ethnicity, gender, part-time/full-time status, and degree of distance learning (Table 4). Two of the institutions have been publicly recognized for their commitment to diversity and inclusion. UA was one of 96 institutions that received the 2018 Higher Education Excellence in Diversity (HEED) Award, a national award for diversity and inclusion, and the Chronicle of Higher Education Almanac (2018) ranked CSUEB as the most diverse institution in California, with more than 70% of students identifying as minorities.

**Sampling.** The selection of students will be similar across all three institutions and will include *all* newly enrolled undergraduate students. Each institution already requires students to complete a new student orientation. A treatment version of orientation will be created that will include DAACS. Students will be randomized to one of the two versions of orientation resulting in all newly enrolled students being included in the efficacy study ( $n_{UA} \approx 5000$ ,  $n_{ESC} \approx 5000$ ,  $n_{CSUEB} \approx 2000$  per year). This is the same procedure used in the FIPSE FITW study.

**Data analysis procedures.** Evidence of the validity and reliability of the inferences based on the DAACS assessments was collected during the FIPSE FITW grant (Akhmedjanova et al., 2019; Andrade et al., 2018; Lui, et al., 2018). Validity is not static, however, so in order to

Table 4. Demographic Characteristics of the Three Target Research Sites

	UA	ESC	CSUEB
<b>Public/Private</b>	Public research	Public liberal arts	Public
<b>Type of Institution</b>	Traditional	Blended	Online*
<b>Admissions</b>	54% of applicants	Open admissions	72% of applicants
<b>Enrollment</b>	19% of admitted	---	13% of admitted
<b>Faculty</b>			
Full-time	685	169	371
Part-time	463	685	435
<b>UG enrollment in Fall '18</b>	13,598	9,307	12,836
<b>Distance Education</b>			
Fully	1%	47%	11%
Partially	12%	12%	48%
Fully in-person	88%	41%	41%
<b>Race/Ethnicity</b>			
American Indian or Alaska Native	0%	0%	0%
Asian	8%	3%	23%
Black or African American	19%	16%	10%
Hispanic/Latino	17%	14%	35%
Native Hawaiian or other Pacific Islander	0%	0%	1%
White	44%	58%	15%
Multiracial	3%	2%	5%
Race Unknown	3%	7%	5%
Non-resident alien	5%	0%	6%
<b>Student Age</b>			
24 and under	94%	19%	67%
25 and over	6%	81%	33%
<b>Attendance Status</b>			
Full-time	95%	39%	79%
Part-time	5%	61%	21%
<b>Gender</b>			
Male	49%	38%	39%
Female	51%	62%	61%

Source: Integrated Postsecondary Education Data System (IPEDS). \* Statistics are for Cal State East Bay; this study will include only fully online programs.

ensure the validity of the inferences based on the assessments at the new institutions, several sources of evidence will be collected. IRT analyses will be conducted to examine the internal structure of the mathematics and reading computer adaptive assessments; confirmatory factor analyses (CFA) will be used for the SRL survey. Multi-group analyses will be conducted to examine possible differential item functioning by institution and student type. Relations to other variables will be examined to investigate convergent, discriminant, and predictive validity. For example, correlations between the scales on the SRL survey (convergent validity) could be compared with correlations between these scales and the academic domains (discriminant validity).

In order to address the first research question, “*Do students assigned to the DAACS intervention demonstrate greater early credit acquisition, retention, and academic achievement than those who were assigned to the control group?*”, null hypothesis tests will be conducted for each outcome (Table 5) at each institution (student *t*-tests for quantitative outcomes, chi-squared

tests for qualitative outcomes). Students assigned to the treatment will be compared to students assigned to the control. Random assignment minimizes the baseline statistical differences between students that receive access to DAACS and those that do not, increasing the likelihood that differences in outcomes can be attributed to the intervention.

To address the second question, “*Are any observed intervention effects moderated by amount and type of use by students and/or advisors; by student characteristics; and by type of institution?*”, regression analyses will be used, including the moderating variables along with treatment assignment.

To address the third research question, “*To what extent does the inclusion of DAACS data in predictive analytics models increase the accuracy of predictions of early credit acquisition, retention, and academic achievement?*”, prediction models (e.g., logistic regression, Bayesian additive regression trees, random forests) with and without the students’ DAACS results, using all available student information at the time orientation is completed (demographics, ACT or SAT scores, high school GPA, socioeconomic status, etc.), will be compared.

**Table 5. Variables for Efficacy Study**

Outcome Variable	Description of Measure	Source (Metric)
<b>Proximal Outcomes</b>		
<i>Student engagement</i>	Number of times student accesses the DAACS system &/or related resources (e.g., SRL website, OWL) <sup>1</sup>	DAACS (Frequency)
	Number of times student initiates contact with advisor (help seeking)	University (Frequency)
	Number of times advisor initiates contact with student	University (Frequency)
<i>Advisor engagement</i>	Number of views of DAACS dashboard <sup>1</sup>	DAACS (Frequency)
<i>Time to first credit completion</i>	The time from when students first enrolled at the college to the time they successfully complete their first credit-bearing course.	University (months)
<i>Short-term persistence</i> (term-term retention)	Continuous student enrollment from the fall to spring semesters in a given year.	University (Y/N)
<b>Distal Outcomes</b>		
<i>Long-term persistence</i> (one year retention)	Continuous student enrollment from the fall of one year to the subsequent fall.	University (Y/N)
<i>College achievement</i> (GPA)	Ratio calculated by dividing the total number of grade points received by the total number of credits attempted.	University (4-point scale)

<sup>1</sup> Measure available for treatment students only.

**Covariates for baseline equivalence.** To assess baseline equivalence between the treatment and control groups, demographic information suggested by the What Works Clearinghouse (2017) will be collected. The variables are listed in Table 6. In addition, as an important follow-up to randomization, propensity score methods (Rosenbaum & Rubin, 1983) will be used at the student level to test for any observable bias between the two groups, in accordance with the What Works Clearinghouse guidelines. We will also post-stratify as needed to ensure adequate representation of subpopulations (Miratrix, Sekhon, & Yu, 2012).

**Attrition.** All students who enroll at the three institutions will be part of the efficacy study and will remain in the study unless they rescind their consent to participate (Appendix C, p. 1).

Attrition from the institution will not necessarily equate to attrition from the study because attrition will be tracked as an outcome measure.

*Table 6. Baseline characteristics to be collected*

	Institution		
	University at Albany	Empire State College	CSUEB Online
Baseline academic achievement	<ul style="list-style-type: none"> <li>• High school GPA</li> <li>• SAT/ACT scores</li> </ul>	<ul style="list-style-type: none"> <li>• Previous GPA</li> <li>• Transfer credits</li> </ul>	<ul style="list-style-type: none"> <li>• High school GPA</li> <li>• SAT/ACT scores</li> </ul>
Baseline socioeconomic status	<ul style="list-style-type: none"> <li>• FAFSA expected family contribution</li> <li>• Family income</li> <li>• Parent education</li> <li>• Pell grant eligibility</li> </ul>	<ul style="list-style-type: none"> <li>• Family income</li> <li>• Parent education levels</li> </ul>	<ul style="list-style-type: none"> <li>• FAFSA expected family contribution</li> <li>• Family income</li> <li>• Parent education</li> <li>• Pell grant eligibility</li> </ul>
Demographics	<ul style="list-style-type: none"> <li>• Gender</li> <li>• Race/Ethnicity</li> <li>• Age</li> <li>• Employment</li> <li>• Part- or full-time status</li> <li>• Program of study</li> </ul>	<ul style="list-style-type: none"> <li>• Gender</li> <li>• Race/Ethnicity</li> <li>• Age</li> <li>• Employment</li> <li>• PT/FT status</li> <li>• Program of study</li> </ul>	<ul style="list-style-type: none"> <li>• Gender</li> <li>• Race/Ethnicity</li> <li>• Age</li> <li>• Employment</li> <li>• PT/FT status</li> <li>• Program of study</li> </ul>

**Reduction of potential contamination.** Given the open source nature of DAACS, as well as the fact that all advisors at the three institutions will receive DAACS training, two important potential sources of contamination will be addressed. First, students naturally discuss academic resources with their peers, especially resources that they find useful. To minimize this source of contamination, the research team will monitor the DAACS database for use of DAACS by students assigned to the control group. Although results from the FIPSE study revealed that contamination was minimal (i.e., fewer than 0.1% of control students had exposure to DAACS), we will monitor this issue and, as appropriate, use post hoc analyses can adjust for any contamination (i.e. either remove students if contamination is small, or covariate adjustment).

Another source of potential contamination is the extent to which advisors share DAACS-related material with students in the control condition. All advisors at each institution will receive professional development on the use of DAACS to inform early advising and course planning. Advisors will also have knowledge about which of their assigned students belong to the treatment and control conditions. The advisor dashboard will be available only for students in the treatment condition. Therefore, even if students in the control group take DAACS, there will be no DAACS advisor dashboard to cue discussion of DAACS results during advisement.

**Power analysis.** With full institutional support for this project, we expect large sample sizes at each institution. As new students enroll, their outcomes will be tracked for the duration of the project using the data sources described in Table 5. With large samples, we will be able to achieve the necessary power to confidently detect the magnitude of any statistically significant differences between DAACS treatment and control groups in six to 12 months. Using Cohen's  $d$  as a guide, our sample should allow us to detect even small effects indicated by a .25 standard deviation difference in mean outcome values between groups. This means we can also expect to be able to quantify medium (.5 standard deviation difference) and large (.8 standard deviation difference) effects of DAACS on outcomes.

## Implementation Study

**Research design and methods.** A phenomenological research approach will be used to investigate our implementation-related research questions, which are:

1. How do students utilize and react to DAACS?
2. How do advisors utilize and react to DAACS, its training, and supports?
3. How do institution leaders utilize the predictive modeling?

Interviews will be conducted with students and advisors who have used DAACS in order to delve into their perceptions, experiences, feelings, and judgments of it. Quantitative data will also be collected to document the fidelity of implementation and ensure that DAACS is being used as intended (i.e., DAACS trace data, perceptions and satisfaction survey data).

**Sampling.** All treatment students and advisors at the three participating institutions will be invited to participate in surveys, interviews, and focus groups about the feasibility and utilization of DAACS (Appendix C, pp.1-2). The DAACS system presents students with an informed consent upon first login. Students who provide consent will be included in the implementation study, however consent is not required to utilize DAACS. Purposive sampling of students and advisors will be used to identify robust and less robust DAACS users to be interviewed.

**Variables, indicators, and measures.** The treatment implementation variables and sources of measurement are summarized in Table 7 and discussed below.

Table 7. Variables for Implementation Study

Type of outcome	Description of Measure	Source (Metric)
<b>Implementation (fidelity)</b>		
Completion of DAACS	Student completion of all required DAACS assessments (i.e., reading, math, writing, SRL)	DAACS trace data (Y/N)
Review of DAACS feedback	Student review of individualized assessment results on DAACS website	DAACS trace data (Y/N)
Advisor training	<ul style="list-style-type: none"><li>• Advisors receive training</li><li>• Post-training survey</li></ul>	Researcher (Y/N)
<b>Perceptions of and Reactions to DAACS</b>		
Perceived accuracy of DAACS results	Two-item student poll on accuracy and likelihood of DAACS use	Online poll
Student perceptions of and reaction to DAACS	<ul style="list-style-type: none"><li>• Student interviews (protocol in Appendix C, p.3)</li><li>• Survey of students (Slemp et al., 2019, adapted)</li></ul>	Interviews and surveys
Advisor perceptions of and reaction to DAACS	<ul style="list-style-type: none"><li>• Advisor interviews (protocol in Appendix C, p.4)</li><li>• Survey of advisor (Slemp et al., 2019)</li></ul>	Interviews and surveys
Institution leaders' utilization of DAACS	Interviews with institution leaders on how predictive modeling with DAACS is used	Interviews

**Completion of DAACS assessments and review of feedback.** One quantitative indicator of fidelity of implementation is the DAACS usage data, collected automatically by tracking the clicks that users make within the DAACS platform. This trace data measures if and how often students completed the DAACS assessments, viewed the results pages, and visited the recommended resources. Trace data will also indicate how often advisors view students' results.

**Advisor participation at DAACS professional development trainings.** Academic advisors will be provided between three and six hours of initial professional development on DAACS and its use in advising. Supplemental workshops on topics related to self-regulated learning (i.e., metacognition, learning strategies, motivation) will also be provided throughout the course of the

grant. Advisor attendance will be documented. Post-training surveys will be administered. The surveys will include items to assess the advisors' opinions of the quality of the training itself, as well as their intentions to apply their learning in practice.

**Perceived accuracy of DAACS results.** To gather information on students' perceived accuracy of DAACS results, a brief poll will be embedded into the DAACS for students to complete after taking each of the four assessments. The poll will ask participants two questions for each of the four DAACS domains (SRL, writing, reading, mathematics), both of which offer responses on a Likert-type scale (1=*completely inaccurate*, 2=*mostly inaccurate*, 3=*mostly accurate*, and 4 = *completely accurate*):

1. How accurately do your DAACS [SRL/writing/reading/mathematics] results reflect your true abilities?
2. How likely are you to discuss your DAACS [RL/writing/reading/math] results and feedback with your advisor?

Selected participants will be interviewed to elaborate on their responses (e.g., Why do you think the DAACS accurately or inaccurately reflect your true abilities? Have you discussed your DAACS results and feedback with your advisor yet? Why or why not?)

**Perceptions and utilization of DAACS.** Interviews will be conducted with students, advisors, and institution leaders to gather information on their perceptions of and reactions to DAACS. Of particular interest are the perceived feasibility and usability of DAACS, and their satisfaction with DAACS' functionality. Interview protocols are in Appendix C (pp. 3 - 4).

Student and advisor perceptions and reactions to DAACS will also be examined using the Implementer Perceptions of Intervention Survey, a 16-item Likert-type measure developed for DAACS during the FIPSE development grant. Initial validity evidence regarding internal structure and reliability of the survey are promising (Slemp, et al., 2019). Exploratory factor analysis revealed two factors: perceived importance ( $\alpha = .94$ ), which measures advisors' perceived usefulness, value, or relevance of the intervention; and perceived usability ( $\alpha = .75$ ), which measures the perceptions of capability to use or implement the intervention. While the survey was originally designed for advisors, it can be adapted to be given to students.

## Cost Analysis and Cost Effectiveness Analysis

Two research questions guide our cost analysis and cost effectiveness analysis: "*What are the costs, including direct, in-kind, and opportunity, of implementing DAACS within an advisory process, and do these costs vary across schools?*" and, "*To what extent is the program cost effective to implement as compared to business as usual (BAU)?*"

The cost analysis will enumerate the costs for an institution to implement DAACS within an advisory process. As noted earlier, DAACS is a fully developed, free tool that is available online to students. Some resources, including computers, phones, and tablets, are crucial to student access to DAACS; however, students are granted free access to these resources through their participating research institutions. For this reason, analyses will be conducted from the perspective of the institution, rather than that of the student. Development costs—which are sunk costs—will not be included in the analyses.

We will use the Ingredients Method to identify and compute all costs at the institution level (Levin, McEwan, Belfield, Bowden, & Shand, 2017). The first step in this method is to determine all of the "ingredients" included in implementation, such as personnel, facilities, and equipment/materials, among others. The cost analysis will ensure that all costs, including in-kind contributions and opportunity costs, are identified and clearly defined. Determining the cost for

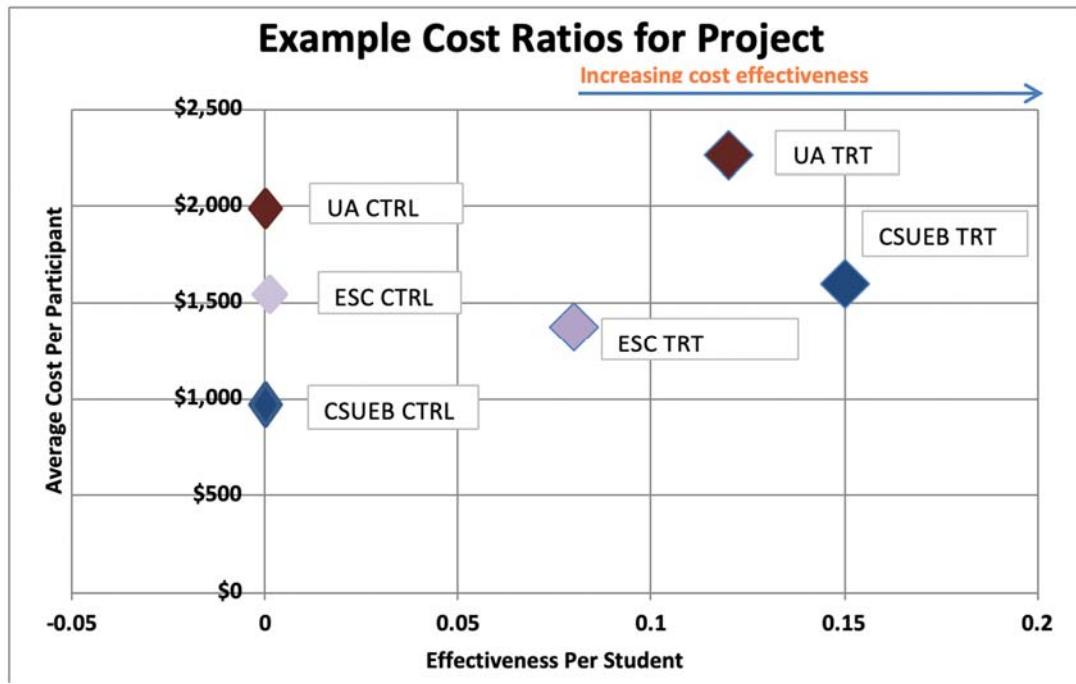
each educational institution will be informative with regard to understanding variations across geographical locations, public/private status, and traditional bricks-and-mortar vs. online.

CostOut, a free online tool developed by Dr. Levin and the CBCSE, will be used for both the cost and the cost effectiveness analyses. This tool includes a multi-source database with national market prices and can disaggregate costs across ingredients and constituencies. As CostOut automatically provides adjustments for inflation and geographic location, the cost analysis will be the best current estimate. For this analysis, cost will be determined on an annual basis, as most costs are re-occurring; mainly training of advisors and costs to keep the DAACS online platform available. Costs will be estimated at the institution level by ingredient and component (training, DAACS platform, etc.). A total cost for program implementation will be calculated by school, and an average cost per program participant will be determined. We will also provide a breakdown between start-up costs (e.g., IT, DAACS integration, training of advisors) and maintenance costs (e.g., training of new advisors, IT maintenance) as many of the training components, while needed to address attrition of trained advisors, for example, could be subsumed within the schools' roles for advisor managers

The purpose of the cost effectiveness analysis will be to determine the extent to which the DAACS program is cost effective as compared to the control, or business as usual (BAU) condition. Results of the cost effectiveness study can also be used in future studies to examine the effectiveness of DAACS as compared to other programs. Using cost and impact data from the proposed study, a set of ratios will be calculated that will summarize the cost effectiveness of DAACS implementation. Separate ratios will be calculated for each participating institution. The ratios will show the difference between the cost of the intervention and BAU, divided by the difference in the effect. Separate ratios will be determined for each of the three institutions given the variations in cost and effectiveness that will likely exist between institutions.

To conduct the cost effectiveness analysis, first an incremental cost will be determined. The incremental cost will be calculated by using the per-student cost data for program implementation, as described above, and contrasting it with the per-student cost for the control group (BAU). Next, cost effectiveness ratios will be calculated using the CostOut program. These ratios indicate the incremental cost per student (above and beyond BAU) needed to achieve a 1-unit increase in effectiveness, defined as students' one-year retention in college. The RCT study will provide data regarding the impact of the DAACS on this outcome as compared to the control condition in the form of effect sizes. Data will be tabled and charted as shown in Figure 5, which shows hypothetical data.

Given that the calculation of both the cost and the effectiveness data will be based on the same implementation of the program, the cost data will provide as accurate a representation as possible of what it takes to obtain the given effects. Inevitably, however, some costs will be estimates, particularly as pertains to in-kind contributions and opportunity costs. Therefore, as recommended by Levin and Belfield (2015), attention will be devoted to varying assumptions for these costs and examining the results. Deriving better measures of distribution of results to provide confidence intervals under different assumptions will allow us to examine whether the differences make substantive difference in the cost effectiveness ratios and rankings.



*Figure 5.* Impact of DAACS on one-year retention in college compared to the control condition in the form of effect size, using hypothetical data.

### The DAACS Project Timeline

We propose to implement DAACS into the orientation process at three institutions, and conduct four studies to examine its efficacy, implementation, cost, and cost-effectiveness. The timeline on which project activities will be executed is in Table 8. With the support of information technology services at the three institutions, we will begin with preparation, which will require DAACS installation and configuration into student systems. Simultaneously, we will work with the implementation coordinators at each institution to set up the system that will randomly assign students to the treatment and control groups. We will also work with institutional research offices to implement our data management plan.

Implementation of DAACS will begin at the three institutions in Year 2 and continue through the end of the grant. Data collection will begin when DAACS is implemented and continue until the end of the grant. The fourth year will include predictive modeling.

Table 8. *Timeline*

	2020-21	2021-22	2022-23	2023-24
<b>Preparation</b>				
Install and configure DAACS	×			
Set up system for random assignment	×			
Set up data management plan	×			
Train advisors	×			
<b>Monitoring and Maintenance</b>				
Monitor DAACS functionality	×	×	×	
Execute data management plan	×	×	×	
<b>Implementation*</b>				
DAACS assessments and feedback	×	×		
Continued advisor training	×	×		
DAACS nudges	×	×		
Predictive modeling				×
<b>Data Collection and Analyses**</b>				
Fidelity of implementation variables	×	×	×	
Perceptions of DAACS	×	×	×	
Demographic variables	×	×	×	
Proximal Outcome variables	×	×	×	
Distal Outcome variables	×	×	×	
Cost analysis	×	×	×	
Cost-effectiveness analysis	×	×	×	
<b>Dissemination</b>	✓	✓	✓	

\*Treatment Group Only; \*\*Treatment and Control Groups

## Personnel

Project personnel were selected based on the relevance of their expertise to the components of DAACS. Jason Bryer, Heidi Andrade, Timothy Cleary, Philip Winne, Abbe Herzig, Robert Yagelski, Angela Lui, and Diana Akhmedjanova are all closely involved with the FIPSE FITW grant. The relevance of their expertise and their commitment to the project are well-established. Gavant Software, the software company that designed the DAACS interface, has agreed to continue to provide the technological support for hosting and integrating DAACS. Gavant has demonstrated capacity to maintain DAACS in order for the research to be conducted.

Other key individuals will meet the need for expertise in domains assessed by DAACS, and in other areas. For example, Cheryl Dozier, Elijah Mayfield, Marco Varisco, and Brian Yates are selected for their expertise in reading, automated scoring of writing, mathematics, and cost-effectiveness analysis, respectively. Details on key personnel are in Table 9, and letters of agreement are provided in Appendix E.

Table 9. *Project personnel*

Expertise and Experience	Project Role and Time Commitment
<b>Principal Investigator and Co-Investigators</b>	
<b>Jason M. Bryer, Ph.D.</b> , Research Associate, Department of Educational and Counseling Psychology, University at Albany 	<u>Principal Investigator</u> (100% FTE) <ul style="list-style-type: none"> <li>• PI on the DAACS 2015-2019 FIPSE FITW grant</li> <li>• PI on Gates Foundation grant; lead evaluator on New York Higher Education Services Corporation grant</li> <li>• Expert in statistics with over 10 years of software engineering experience</li> <li>• Author of over a dozen R packages; developed new methods for multilevel data, three group analysis, and bootstrapping</li> <li>• Leading data scientist for reproducible research and predictive analytics</li> <li>• Teaches graduate courses on the data science at the University at Albany and CUNY</li> </ul>
<b>Heidi L. Andrade, Ed.D.</b> , Professor, Department of Educational and Counseling Psychology, University at Albany	<u>Co-Investigator</u> (17% academic year; 1 month in summers) <ul style="list-style-type: none"> <li>• Co-I on the 2015-2019 FIPSE FITW grant</li> <li>• Research focuses on assessment, learning, and self-regulation</li> <li>• Served as PI or co-PI on two other externally funded projects;</li> <li>• Author of dozens of empirical and theoretical articles and chapters on formative self-assessment and achievement;</li> <li>• Extensive experience in administrative roles</li> </ul>
<b>Timothy J. Cleary, Ph.D.</b> , Associate Professor & Department Chair, Department of School Psychology, Rutgers College – SUNJ	<u>Co-Investigator</u> (12.5% academic year; 1 month in summers) <ul style="list-style-type: none"> <li>• Co-I on the 2015-2019 FIPSE FITW grant</li> <li>• Leading researcher on the development of SRL assessment tools and intervention programs</li> <li>• Published approximately 35 peer-reviewed journal articles and book chapters related to SRL</li> <li>• Editor or editorial board member for premier journals</li> <li>• Served as PI on several externally-funded grants</li> </ul>
<b>Research Project Manager</b>	
<b>Angela M. Lui, M.A.</b> , Doctoral Candidate, Department of Educational and Counseling Psychology, University at Albany	<u>Research Project Manager</u> (100% FTE) <ul style="list-style-type: none"> <li>• DAACS Project Coordinator and Data Analyst on the 2015-2019 FIPSE FITW grant for DAACS</li> <li>• First author of a manuscript on the validity and reliability of the DAACS SRL survey</li> <li>• Research focuses on assessment, feedback, and responses to feedback</li> </ul>

Expertise and Experience	Project Role and Time Commitment
Project Advisors	
<p><b>Diana Akhmedjanova, M.Ed.</b>, Doctoral Candidate, Department of Educational and Counseling Psychology, University at Albany</p> <ul style="list-style-type: none"> <li>• Research assistant on 2015-2019 FIPSE FITW grant</li> <li>• First author of the paper on the validity and reliability of the DAACS writing assessment</li> <li>• Research focuses on self-regulated learning, foreign language writing, and formative assessment</li> </ul>	<p><u>Project Advisor</u></p> <ul style="list-style-type: none"> <li>• Provide guidance on the implementation of DAACS</li> <li>• Co-author conference presentations and publications</li> <li>• Attend advisory meetings</li> </ul>
<p><b>Cheryl Dozier, Ph.D.</b>, Associate Professor &amp; Associate Dean, Department of Literacy Teaching and Learning, University at Albany</p> <ul style="list-style-type: none"> <li>• Research focuses on supporting teachers to become responsive literacy educators</li> <li>• Collaborates with school districts to redesign reading and writing/literacy instruction</li> <li>• Serves as literacy coach</li> <li>• Received the NYS Exemplary Reading Award through the New York State Reading Association</li> </ul>	<p><u>Subject Matter Expert and Project Advisor</u></p> <ul style="list-style-type: none"> <li>• Provide guidance on evaluating the reading assessment, feedback, and OERs</li> <li>• Attend advisory meetings</li> </ul>
<p><b>Abbe Herzig, Ph.D.</b>, Director of Education, American Mathematical Society</p> <ul style="list-style-type: none"> <li>• Member of DAACS advisory board, 2015-2019 FIPSE FITW grant</li> <li>• Expert on mathematics instruction</li> <li>• Selected/adapted items for DAACS mathematics assessment, wrote the feedback, and compiled the OERs</li> </ul>	<p><u>Subject Matter Expert and Project Advisor</u></p> <ul style="list-style-type: none"> <li>• Provide guidance on evaluating the mathematics assessment, feedback, and OERs</li> <li>• Update the mathematics assessment and feedback</li> <li>• Attend advisory meetings</li> </ul>
<p><b>Elijah Mayfield, M.S., Ph.D.</b> Candidate, Entrepreneur in Residence, School of Computer Science, Carnegie Mellon University</p> <ul style="list-style-type: none"> <li>• Founder and CEO of LightSide Labs</li> <li>• 10 years experience in machine learning with applications in education and language processing</li> <li>• Serves on multiple advisory boards of projects related to automated scoring and feedback on writing and literacy education</li> </ul>	<p><u>Subject Matter Expert and Project Advisor</u></p>
<p><b>Suzanne Orrell, Ph.D.</b>, Director of Academic Support, SUNY Empire State College</p> <ul style="list-style-type: none"> <li>• Dedicated and committed to working with and providing services to students and to the college</li> <li>• Won the Empire State Foundation Award for Excellence in Professional Services at All College 2018</li> <li>• Works in college governance, serving on Committee on Undergraduate Studies and Policies (CUSP) and Undergraduate Committee for Academic Policy</li> </ul>	<p><u>Implementation Coordinator and Project Advisor</u></p> <ul style="list-style-type: none"> <li>• Oversee implementation at ESC, including integration into the student information system and orientation, and training of advisors</li> <li>• Work with Joseph King, Director of Institutional Effectiveness on data collection and management</li> <li>• Make decisions on and implement plan for treatment/control assignment at ESC</li> <li>• Establish and implement procedures for data collection</li> <li>• Review findings in collaboration with the PIs</li> </ul>
<p><b>Marco Varisco, Ph.D.</b>, Associate Professor, Department of Mathematics &amp; Statistics, University at Albany</p> <ul style="list-style-type: none"> <li>• Experienced undergraduate mathematics instructor</li> </ul>	<p><u>Subject Matter Expert and Project Advisor</u></p>

Expertise and Experience	Project Role and Time Commitment
<ul style="list-style-type: none"> <li>Oversaw the implementation of ALEKS at UAlbany as a diagnostic and preparation tool for students taking calculus courses</li> </ul>	<ul style="list-style-type: none"> <li>Provide guidance on mathematics content, with a focus on calculus</li> <li>Attend advisory meetings</li> </ul>
<b>Roger Wen, Ph.D.</b> , Senior Director of the Online Campus & MS in Education, Cal State University East Bay	<u>Implementation Coordinator and Project Advisor</u>
<ul style="list-style-type: none"> <li>Has more than 15 years of leadership in higher education</li> <li>Has more than 20 years of IT related technical/professional experience (e.g., faculty and staff development, strategic planning, learning systems design, faculty and student IT support)</li> <li>Committed to student learning and dedicated to higher education</li> </ul>	<ul style="list-style-type: none"> <li>Oversee implementation at CSUEB, including the integration into the student information system and orientation, and training of advisors</li> <li>Make decisions on and implement plan for treatment/control assignment</li> <li>Establish and implement procedures for data collection</li> <li>Review findings in collaboration with the PIs</li> </ul>
<b>Philip Winne, Ph.D.</b> , Associate Dean & Professor, Faculty of Education, Simon Fraser University	<u>Project Advisor</u>
<ul style="list-style-type: none"> <li>Member of the advisory board on the 2015-2019 FIPSE FITW grant for DAACS;</li> <li>Leading expert in the field of self-regulation;</li> <li>Author of many peer-reviewed journal articles and books on SRL;</li> <li>Current research focuses on the use of technology to track SRL actions by students within online courses</li> </ul>	<ul style="list-style-type: none"> <li>Provide guidance on the use of SRL strategies, assessments, and feedback</li> <li>Attend advisory meetings</li> </ul>
<b>Robert Yagelski, Ph.D.</b> , Associate Vice Provost and Director of the Program in Writing & Critical Inquiry, Professor, Department of Educational Theory and Practice, University at Albany	<u>Subject Matter Expert and Project Advisor</u>
<ul style="list-style-type: none"> <li>Member of the DAACS advisory board, 2015-2019 FIPSE FITW grant</li> <li>Research focuses on writing and improving writing instruction at all levels of education</li> <li>Examined literacy as a social activity and writing as a technology</li> <li>Wrote or co-edited three scholarly monographs on writing and writing instruction, and numerous scholarly articles on writing theory, writing instruction and curriculum, and the preparation of teachers of writing</li> <li>Directed a site of the National Writing Project</li> </ul>	<ul style="list-style-type: none"> <li>Provide guidance on evaluating the writing assessment, feedback, and OERs</li> <li>Work with Dr. Andrade to implement trainings for essay raters and scoring the writing assessment</li> <li>Serve as an expert rater during scoring of writing assessment</li> <li>Attend advisory meetings</li> </ul>
<b>Brian Yates, Ph.D.</b> , Professor, Department of Psychology, American University	<u>Subject Matter Expert and Project Advisor</u>
<ul style="list-style-type: none"> <li>Founded and chaired the Cost-Effectiveness, Benefits, and Economics (CEBE) TIG of AEA</li> <li>Has over 97 publications, including peer-reviewed articles, invited book chapters, and 5 books, most of which apply cost-effectiveness or cost-benefit analysis to formative evaluation of health and human services</li> </ul>	<ul style="list-style-type: none"> <li>Provide guidance on activities related to cost analysis and cost-effectiveness analysis</li> <li>Attend advisory meetings</li> </ul>
Other Key Personnel	
<b>Susanne Harnett, Ph.D.</b> , Managing Senior Associate, Research and Evaluation, Metis Associates	<u>External Evaluator</u>
<ul style="list-style-type: none"> <li>More than 15 years of experience managing, designing, and conducting large-scale program evaluations</li> <li>Serves on Metis' six-member Leadership Team</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with Dr. Yates to design and implement a cost-analysis and cost-effectiveness analysis</li> </ul>
<b>Gavant Software</b> , Software Development Company, Troy, NY	

Expertise and Experience	Project Role and Time Commitment
<ul style="list-style-type: none"> <li>• A company that strives to develop “software that enables our clients to innovate”</li> <li>• Designed the DAACS software interface and has the knowledge and skill needed to maintain it</li> </ul>	<u>Software Integration and Maintenance Service Provider</u> <ul style="list-style-type: none"> <li>• Provide technological support for hosting and integrating DAACS at three institutions</li> <li>• Provide customer service for software interface</li> <li>• Provide support for enhancements to the software</li> </ul>

## Outcomes of IES Grants Related Research

Several key personnel have previously received one or more IES grants. The projects and their corresponding outcomes, products, and dissemination are summarized in Table 10.

Table 10. Previous IES Grants and Key Outcomes

2014-2017. Grant amount: \$1,413,916. Sheehy, M. (PI), Scanlon, D., Deane, G., & **Andrade, H.** (co-Investigators). *Development of a Supplemental Instructional Course in Reading and Writing Arguments for Ninth Graders at Risk of Leaving School before Graduating*. IES Development and Innovation Grant. Supported the development and pilot testing of Argue Like a Lawyer (ALL), a semester-long supplemental English Language Arts or social studies course for ninth graders (<https://ies.ed.gov/ncer/projects/grant.asp?ProgID=18&grantid=1476>)

Outcomes/Products/Dissemination: A fully-developed Argue Like a Lawyer intervention was developed, which includes an argument writing curriculum and a validated argument writing assessment. This assessment includes two prompts and one scoring rubric. Findings were shared at a national conference and will be published in a peer-reviewed journal:

- Akhmedjanova, D., Lui, A. M., Andrade, H., & Sheehy, M. (2018). *Argue Like a Lawyer: Reliability and validity evidence for an argumentative essay rubric*. Roundtable presentation at the Division H Graduate Student Research Roundtable Forum at the annual meeting of the American Educational Research Association, New York, NY.
- Manuscript in preparation for publication in a peer-reviewed journal: “Argue Like a Lawyer: Reliability and Validity Evidence for an Argument Essay Rubric”

2016. Grant amount: \$150,000. **Mayfield, E.** (PI). *Automated, personalized formative feedback for student writing with the LightSide Revision Assistant*. IES Small Business Innovation Research Grant. Supported the pilot testing of LightSide Revision Assistant, a web-based writing program for 6-8 grade students, as well as the move from early-stage research and development into commercially viable for-profit businesses. (<https://ies.ed.gov/funding/grantsearch/details.asp?ID=1554>)

Outcomes/Products/Dissemination

- Received an additional \$200,000 from the Bill & Melinda Gates Foundation to fulfill same goals
- Gained 10 full-time employees, and conducted a pilot study of ≈2,000 students in 10 schools
- Turnitin acquired LightSide for \$30,000,000, producing eight times the returns for investors
- After acquisition, the team formerly comprising LightSide Labs became the Pittsburgh office of Turnitin and grew to 35 employees with an annual budget over \$4,000,000
- *Revision Assistant*, the project originally funded by IES, was released to the public in January 2016 and now has several hundred thousand paid users in more than 30 states

## Section 4: Resources

In the logic model in Figure 4, we identified resources that will enable us to execute the project and disseminate our findings. In addition to the DAACS system, described in the Significance section, and the experienced research team described in the Personnel section, we also have access to institutional resources at the University at Albany, including its facilities, academic advisors, institutional research staff, and the information technology systems staff.

Furthermore, we have cultivated partnerships with two institutions where DAACs will be used and data will be collected.

### **Facilities and Resources at the University at Albany, SUNY**

The University at Albany is one of four university centers in the State University of New York system, the largest university system in the United States. The University provides all of the resources typical of a Research I institution, including technology, space, graduate assistant support, and administrative support. The University library was ranked among the nation's top 100 research libraries. The University's Office of Sponsored Programs administers grants and oversees fiscal management and award establishment. In addition, this office assumes responsibility for complying with the required reporting to the funding entity and ensures compliance with all human subject requirements.

We also have support from key faculty and staff at UAlbany. With the support of Dr. JoAnne Malatesta, Interim Vice President and Dean of Undergraduate Studies, we will be able to seamlessly integrate DAACS into the orientation and advisement processes. Dr. Kristen Swaney, Interim Director of the Academic Support Center, has agreed to assist in the implementation of the advisor components of DAACS (i.e., advisor training, dashboard). Dr. Jack Mahoney, Assistant Vice President for Academic and Resource Planning of the Department of Institutional Research, Planning, and Effectiveness has agreed to compile and share data for analyses, and eventually the predictive modeling process. Jayme Wood, Interim Director of Admissions and Director of Enrollment Management Technology, has agreed to assist in the integration of DAACS into the single sign-on system. This will allow easy access to DAACS for students, and implementation of an efficient data collection process.

### **Partnerships with Participating Institutions**

Empire State College and Cal State East Bay Online have agreed to collaborate as research sites for the four years of this project. Their letters of agreement are in Appendix E. These two institutions, along with the University at Albany-SUNY form a diverse representation of institutions in terms of geographic location, delivery format, and student population. This will allow for the examination of the efficacy of DAACS in a traditional brick-and-mortar institution (UA), a blended institution (ESC) and fully online programs at CSUEB. The dedication to student success that individuals representing these institutions hold, and their excitement about DAACS lend promise regarding the fidelity of implementation of DAACS.

### **Evaluators with Cost Analysis and Cost Effectiveness Analysis Experience**

Metis Associates, a national research and consulting firm in NYC with over 40 years of experience in evaluation, information management, and grant development, will take the lead on the cost-analysis and cost-effectiveness analysis research. Dr. Brian Yates, whose expertise includes the application of cost-effectiveness analysis, has agreed to join our advisory board to share insights on this and other research and dissemination efforts.

## Appendix A: Dissemination Plans

**Purposes:** We developed our dissemination plan with four main goals in mind:

1. Promote awareness of and interest in the DAACS intervention
2. Sustain the use of DAACS in participating institutions after the end of this grant
3. Expand the implementation and use of DAACS beyond the participating institutions
4. Share new discoveries and innovations in research and methodology

**Audience:** Our target audience will include leaders, practitioners and researchers at our partnering institutions (University at Albany and Empire State College); educational and institutional leaders (e.g., provosts, deans, directors of student success programs) at other postsecondary education institutions, and educational researchers.

**Venues:** We intend to reach audiences who identify as policymakers, practitioners, and researchers at institutional, regional, and national levels through presentations and publications. At the local level, we intend to give presentations about DAACS and our research findings at annual events and invited talks at each of our partnering institutions as well as other online and traditional post-secondary institutions. At the regional and national levels, we will begin with presentations at conferences and follow-up with individuals who express interest in implementing DAACS at their agencies or institutions.

We will also continue to publish articles about DAACS in peer-reviewed journals intended for practitioners and researchers (e.g., *Assessment and Evaluation in Higher Education*, *Educational Measurement: Issues and Practice*, *Journal of Educational Research*, *Future Review*, *Practical Assessment, Research and Evaluation*, etc.). We will also target outlets such as *The Chronicles of Higher Education*, and newsletters of specialized groups in educational organizations, such as the American Educational Research Association SSRL SIG.

**Content:** Much of the information we disseminate will be based on our research findings. The following is a list of potential presentation or publication foci:

- What is DAACS? Components of DAACS and its theory of change
- Initial efficacy of DAACs: A large-scale randomized controlled-trial study
- Predictive power of DAACS: Identifying students at risk and their risk factors
- Cost-effectiveness analysis of DAACS: Implications for institutions
- Perceptions about DAACS from the perspectives of advisors and students
- Automated scoring of writing assessment
- The efficacy of nudges
- Students' responses to DAACS feedback: Emotions, judgments, meaning making, attributions, and decision making
- Validity and reliability evidence for DAACS assessment instruments

- Lessons learned from DAACS: Theoretical, practical, and methodological implications
- Innovations in College Transition: Moving from Placement and Remediation to Feedback and Support
- Relationships between academic (i.e., math, reading, writing) and non-academic skills (self-regulated learning)

**Dissemination Timeline:** Our dissemination activities will begin in Year 2 and increase during the last two years of the grant, after we have collected and analyzed data. Nonetheless, dissemination of information is important from the start in order to solicit feedback, trigger awareness, and spark interest in DAACS. Since the proposed project is a continuation of another grant, we will have substantive information to present to our audiences about what DAACS can do, with empirical evidence to support our claims.

During the last year of our grant, we will compile our research results and discussions we would have had with researchers, policymakers, and practitioners to create and pilot a business model that we can use to bring DAACS to the market upon and beyond the completion of the grant. Our cost analysis and cost-effectiveness analysis will be crucial in this process. Ultimately, the business model will be intended to promote dissemination and use of DAACS across all types of institutions – traditional, blended, and online institutions, so we can maintain the presence and spread of DAACS in the field of higher education.

## Appendix C

### Supplemental Charts, Tables, and Figures

#### **Supplemental Material 1. Consent form to be completed by students electronically prior to starting the DAACS**

Dear Student:

As an incoming student of the University at Albany, you will use a tool called DAACS ([www.daacs.net](http://www.daacs.net)) that the University has newly implemented to optimize learning and promote student success. The Diagnostic Assessment of Achievement and College Skills (DAACS) is a collection of assessments of college readiness, with instant individualized feedback and links to online educational resources.

In order to ensure the quality of the DAACS, my team and I will collect data related to students' responses and usage, as well as demographic and academic information. We need your consent to collect your data, of course. Students who provide consent will be included in our database. Some will also be invited to participate in an interview about the DAACS system.

To protect your privacy, your responses and information will be de-identified and kept confidential. Findings will be reported only in aggregate without the possibility of identification. There are no consequences for choosing not to participate in the study; you will still be able to take advantage of the supports provided by DAACS.

Thank you for considering letting us include you in this important research on college success. If you have any questions about DAACS or this study, please feel free to email me directly at [jbryer@albany.edu](mailto:jbryer@albany.edu).

Sincerely,

Jason Bryer, Ph.D.  
Research Associate  
Educational Psychology and Methodology  
1400 Washington Ave.  
Albany, NY, 12222

[Click here to indicate your preference](#)

I CONSENT I give the DAACS team permission to use my information, and understand my responses will remain confidential, reported only in aggregate.

I DO NOT CONSENT I do not give the DAACS team permission to use my information.

## **Supplemental Material 2. Consent form to be completed by advisors (paper form)**

Dear Advisor:

As the advisor of incoming students of the University at Albany, you and your students will use a tool called DAACS ([www.daacs.net](http://www.daacs.net)) that the University has newly implemented to optimize learning and promote student success. The Diagnostic Assessment of Achievement and College Skills (DAACS) is a collection of assessments of college readiness, with instant individualized feedback and links to online educational resources. As an advisor, you have access to information about your students' strengths and weaknesses, and related resources that you might find useful during advising.

In order to improve the usefulness of DAACS for your work as an advisor, my team and I will, with your consent, collect data related to your usage of your students' DAACS results. Advisors who provide consent will be included in our database. Some will also be invited to participate in an interview about the DAACS system.

To protect your privacy, your responses and information will be de-identified and kept confidential. Findings will be reported only in aggregate without the possibility of identification. There are no consequences for choosing not to participate in this study; you and your students will still be able to take advantage of the supports provided by DAACS.

Thank you for considering letting us include you in this important research on supports for college success. If you have any questions about DAACS or this study, please feel free to email me directly at [jbryer@albany.edu](mailto:jbryer@albany.edu).

Sincerely,

Jason Bryer, Ph.D.  
Research Associate  
Educational Psychology and Methodology  
1400 Washington Ave.  
Albany, NY, 12222

Please indicate your preference by checking the box and signing your name below:

- I CONSENT I give the DAACS team permission to use my information, and understand my responses will remain confidential, reported only in aggregate.
- I DO NOT CONSENT I do not give the DAACS team permission to use my information.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### **Supplemental Material 3. Interview Protocol for Students**

*Interview set-up: Have a computer available, with albany.daacs.net open and ready for the interviewee to log on to.*

“Thank you for agreeing to participate in this interview. The purpose of this interview is for me to understand your experiences related to completing the DAACS. I expect this interview to last 15-30 minutes. I will be tape recording our interview so I can focus on our conversation instead of on taking notes. Only I and other trained researchers transcribing the interview will have access to the audio recording. Once this interview is transcribed, the recording will be deleted. To maintain confidentiality, we will not use your name or other identifying information during the interview.

We will label this interview by your unique identifier. You are not required to answer any of my questions; if there is a question that you are uncomfortable answering, just let me know and we will skip it and move on to the next question. Are there any questions before I begin?”

Is it okay if we voice record? *[If yes, turn on voice recorder]*

Today is *[DATE]*. We are interviewing participant *[Unique ID]* about his/her perceptions and satisfaction with DAACS. You have agreed to be voice recorded, is this right? *[allow participant to confirm]*.

- 1) To start, please think back to when you took the DAACS assessment. To the best of your recollection, please explain what DAACS is.
- 2) I have DAACS opened right here. Would you show me how you used DAACS?
  - a. *As necessary, guide students through DAACS so you go through all 4 assessments and into at least 2 levels of the feedback for at least one of the subject areas.*
- 3) Now that you have a reminder of what DAACS is, do you think DAACS provided an accurate reflection of your strengths and weaknesses as a college student? Why or why not?
  - a. *Allow students to click around DAACS*
- 4) Which parts of the DAACS did you find most useful? Why?
- 5) Which parts of the DAACS did you find least useful? Why?
- 6) Do you think that DAACS can help students be successful in college? On a scale from 0 to 10, 0 = “absolutely not likely”, and 10 = “definitely likely,” how likely do you think it is that DAACS can help students be successful in college? Please explain your answer.
  - a. *Be sure that students address both sides of this question – benefits and barriers.*
- 7) Based on your experiences with DAACS, what do you think we could do to improve DAACS to make it more useful to you and other students?
- 8) These are all the questions from me. Do you have any questions for me about the interview or about DAACS?

**Thank you again. I appreciate you sharing your responses.**

#### **Supplemental Material 4. Focus Group Protocol for Advisors**

*Focus group set-up: Have computers available, with albany.daacs.net and daacs.dashboard.net open and ready for the interviewee to log on to, or for reference as needed.*

“Thank you for agreeing to participate in this interview. The purpose of this interview is for me to understand your experiences related to completing the DAACS. I expect this interview to last about 45 minutes. I will be tape recording our interview so I can focus on our conversation instead of on taking notes. Only I and other trained researchers transcribing the interview will have access to the audio recording. Once this interview is transcribed, the recording will be deleted. To maintain confidentiality, we will not use your name or other identifying information during the interview.

We will refer to this interview by your unique identifier. You are not required to answer any of my questions; if there is a question that you are uncomfortable answering, just let me know and we will skip it and move on to the next question. Are there any questions before I begin?”

Is it okay if we voice record? *[If yes, turn on voice recorder]*

Today is *[DATE]*. We are interviewing participants *[Unique IDs]* about their perceptions and satisfaction with DAACS. You have agreed to be voice recorded, is this right? *[allow participants to confirm]*.

- 1) Imagine there is a new advisor who is just coming in to join your team. How would you describe DAACS to your new colleague?
- 2) How do you typically use DAACS in your advisement work to help your students?
  - a. What information do you typically look at?
  - b. How do you typically use the information?
  - c. What responses do you get from students when you reference DAACS results?
  - d. What are common roadblocks you encounter with using DAACS?
- 3) Which parts of the DAACS do you find most useful? Why?
- 4) Which parts of the DAACS do you find least useful? Why?
- 5) Do you think that DAACS can help students be successful in college? On a scale from 0 to 10, 0 = “absolutely not likely”, and 10 = “definitely likely,” how likely do you think it is that DAACS can help students be successful in college? Please explain your answer.
  - a. *Be sure they address both sides of this question – benefits and barriers.*
- 6) Based on your experiences with DAACS, what do you think we could do to improve DAACS to make it more useful to you and your students?
- 7) These are all the questions from me. Do you have any questions for me about the focus group or about DAACS?

**Thank you again. I appreciate you sharing your responses.**

## Appendix D: Examples of Intervention and Assessment Materials

Below are examples of four of the five components of the DAACS (demo.daacs.net): (1) four diagnostic assessments, (2) feedback and open educational resources, (3) automated nudges, and (4) the dashboard for academic advisors,

### Component 1: DAACS Assessments

#### *Overview Page*

The screenshot shows the DAACS platform's main menu. At the top right are links for HOME, ABOUT, MYDAACS, and LOG OUT. Below the menu, there are four large icons representing different skills: a building for SELF-REGULATED LEARNING, a pencil for WRITING, books for READING, and mathematical symbols for MATHEMATICS. Each skill icon has a corresponding 'CONTINUE' button below it. The 'SELF-REGULATED LEARNING' section includes a progress bar indicating 20% completion and a link to 'View previous results'. The 'WRITING' section includes a link to 'View previous results'. The 'READING' section includes a progress bar indicating 0% completion and a link to 'View previous results'. The 'MATHEMATICS' section includes a progress bar indicating 8% completion.

Welcome to the Self-Regulated Learning (SRL) assessment! The purposes of this assessment are to:

- generate a profile of your SRL skills - motivation beliefs, strategic behaviors, and metacognitive skills
- give you feedback about your SRL skills and suggestions for improving them, as needed;
- direct you to online resources and strategies to further enhance your ability to manage the demands of college life.

You will be asked to respond to a series of statements about your SRL skills. For some items, you will indicate your level of agreement, whereas for others you will rate how frequently you display certain behaviors. After this SRL assessment, you will have the opportunity to review your SRL skills and the recommended strategies for improving them, as needed.



## ***Self-Regulated Learning Survey Sample Page***

o o o o o Assessment: **Self-Regulated Learning** Angela Lui ▾

20%

	Almost Never	Not Very Often	Somewhat Often	Pretty Often	Almost Always
When I study for my exams, I worry that I will not remember the material on the exam.	<input type="radio"/>				
I stop and go back over new information that is not clear.	<input type="radio"/>				
I ask myself if I learned as much as I could have once I finish a task.	<input type="radio"/>				
I ask myself if what I'm reading is related to what I already know.	<input type="radio"/>				
I find myself analyzing the usefulness of strategies while I study.	<input type="radio"/>				
I pace myself while learning in order to have enough time.	<input type="radio"/>				
I use a calendar to organize my time to complete my schoolwork	<input type="radio"/>				
I think about the best ways to complete assignments before I begin them	<input type="radio"/>				
I let people interrupt me when I am studying.	<input type="radio"/>				
I draw pictures or diagrams to help me understand information.	<input type="radio"/>				

HELP CONTINUE LATER NEXT

## ***Writing Assessment Prompt Page***

o o o o o Assessment: **Writing** Angela Lui ▾

You received information about your learning skills after you took the self-regulated learning (SRL) survey, as well as suggestions for becoming a more effective and efficient learner. Now, in order to reflect on your learning skills and receive feedback on your writing, please use the results from your SRL survey to do your best writing in a brief essay that answers the questions below.

You will need to refer to your SRL survey results and feedback in your essay. We recommend reviewing them, taking notes, and then returning here to write.

Essays must be at least 350 words in order to be meaningfully scored. Please aim to write a complete, well-developed essay in order to get accurate feedback about how ready you are for academic writing, and what you can do to strengthen your writing skills.

- What do your self-regulated learning survey results and the feedback tell you about your learning skills? Use results from the survey and the feedback to support your analysis.
- Which suggested strategies from the feedback are you committed to using this term? Explain why you are committed to using those strategies.

[Click here](#) to open your SRL results in a new window. Click on Help, then Rubric to review the criteria.

(Minimum 350 words)

Type your response here

HELP CONTINUE LATER NEXT

## Reading Assessment Sample Page

Assessment: Reading      Angela Lui ▾

4%

like a downhill skier. We can feel winter in the wind.

(10) We first see a grizzly and her two cubs on a far ridge eating blueberries. The driver stops, and we crowd toward the right side of the shuttle bus. The bear slowly makes her way in our direction, the cubs following dutifully. Then one pauses to sniff something. The other takes the opportunity to pounce, and the two roll and wrestle like playful kittens. The clicking cameras sound like approaching thunder.

(15) The bears disappear in a woody depression. We wait. Suddenly, they reappear a few yards in front of the bus and cross the road. The 400-pound mother methodically raises a blueberry limb with her powerful claw and delicately nibbles off the ripe fruit while the whimsical cubs entertain us with their antics.

"I never dreamed we'd see anything this exciting," one woman whispers. "I expected

(20) incredible scenery and wildlife, but only at a distance. This is like living with the bears." ...  
The bears continue feeding and playing, aware but unconcerned about our presence as long as we stay on the bus. Paradoxically, "staying on the bus" is the best, and perhaps the only, relationship humans can have that preserves the wild. We feel a part of nature the most when our presence affects it the least. ...

(25) By the time we reach Eielson Visitors Center, Denali is socked in. As one of life's ironies, something as ephemeral<sup>1</sup> as water vapor can completely obscure the most majestic peak in North America. The next 30 miles to Kantishna Roadhouse, our overnight lodge, offer unobstructed views of Denali, if only the clouds will lift. They tease us with glimpses, but refuse to unmask the face of the mastiff. ...

(30) We arrive just as streams of the September sun break through low clouds and

**The simile in lines 8 and 9 is used to emphasize the**

- season's beautiful colors
- vast blue sky
- variety of trees
- sudden climate changes

**HELP**      **CONTINUE LATER**      **NEXT**

## Mathematics Assessment Sample Page

Assessment: Mathematics      Angela Lui ▾

8%

What are the solutions of the equation below?  $(x - 2)(x + 9) = 0$

---

- $x=-2; x=-9$
- $x=-2; x=9$
- $x=2; x=-9$
- $x=2; x=9$

**HELP**      **CONTINUE LATER**      **NEXT**

## Component 2: Feedback and OER Resources

Feedback is provided on students' results on the self-regulated learning, writing, reading, and mathematics assessments. The sample below is feedback on the results of the SRL assessment.

### Overview of Self-Regulated Learning

The screenshot shows the results of the SRL component of the Diagnostic Assessment and Achievement of College Skills (DAACS). The top navigation bar includes links for "SELF-REGULATED LEARNING", "myDAACS", "Self-Regulated Learning Overview", and "Logout". A message box at the top right says "Congratulations, you have completed the assessment!"

**RETAKE ASSESSMENT**

**Motivation** (3 circles)  
**Metacognition** (3 circles)  
**Strategies** (3 circles)

**Congratulations, you have completed the assessment!**

**myDAACS > Self-Regulated Learning Overview**

Thank you for completing the Self-Regulated Learning (SRL) component of the Diagnostic Assessment and Achievement of College Skills (DAACS). The results presented here are meant to be informative and instructional; **there is no passing or failing**. Because your results can change due to life circumstances or courses you take, you are encouraged to take the SRL assessment again, especially when beginning new courses.

**DAACS - SRL from DAACS**

**DAACS™**  
Diagnostic Assessment & Achievement of College Skills

Your responses to the SRL items suggest several strategies to focus on in order to become a successful learner and college student. We recommend visiting each of the domains listed on the left to learn about becoming a more self-regulated learner and access resources to enhance your skills.

**Self-Regulated Learning - Introduction**

**SELF-REGULATED LEARNING - TAKE CHARGE OF YOUR LEARNING -**

**Motivation**

**Motivation** is the desire or will to do something. When people are motivated, they invest a lot of effort in their work, persist when challenged, and try do the best possible job they can. The SRL assessment addressed four sources of motivation: **self-efficacy, goal orientation, mindset, and test anxiety**.

Your results suggest that your level of motivation was in the **middle range**. To learn more about how you can improve your motivation, please click on the **More Info** button.

**Self Efficacy** (3 circles)  
**Anxiety** (3 circles)  
**Mindset** (3 circles)  
**Mastery Orientation** (3 circles)

**Metacognition**

Metacognition is thinking about your thinking. It involves being aware of your thoughts and controlling how you approach learning. The SRL assessment examined three key aspects of metacognition: 1) the extent to which you **plan** before you learn, 2) how frequently you **monitor** or keep track of your learning, and 3) the extent to which you **reflect on and evaluate** your learning.

Your score for metacognition was in the **middle range**, which suggests there is room for improving your planning, monitoring, and/or evaluation skills. Please click on the **More Info** buttons to learn how to improve these skills.

**Evaluation** (3 circles)  
**Monitoring** (3 circles)  
**Planning** (3 circles)

**Strategies**

Strategies are the procedures people use to enhance their learning. The SRL assessment examined the frequency with which you reported using four of the most effective types of strategies: (1) help-seeking, (2) managing your time, (3) managing your environment, and (4) understanding new material.

Your overall score indicates that you **frequently** use learning strategies. To learn more about strategies, click on the **More Info** button.

**Managing Environment** (3 circles)  
**Help Seeking** (3 circles)  
**Managing Time** (3 circles)  
**Understanding** (3 circles)

## Feedback on Metacognition

Students see this page when they click on “More Info” for metacognition on the Overview page.

Show Results From  
August 6, 2018 3:08 PM

**RETAKE ASSESSMENT**

Motivation	●●○
Self Efficacy	●●○
Anxiety	●●○
Mindset	●●○
Mastery Orientation	●●○
<b>Metacognition</b>	●●○
Evaluation	●●○
Monitoring	●●○
Planning	●●○
Strategies	●●○
Managing Environment	●●○
Help Seeking	●●○
Managing Time	●●○
Understanding	●●○

← Assessment overview

myDAACS » Self-Regulated Learning » Metacognition

### Metacognition

Students who are successful in college often use metacognitive skills including planning, monitoring, and evaluation. Metacognitive skills are important because they help students stay aware of and take control over how they approach and react to learning tasks.

Your metacognition score was in the **medium range**, which suggests that you have some of the metacognitive skills needed to learn and complete college-level work. The more you are able to take control of your thinking, the better you will be able to understand things more deeply, remember them longer, and do better in school. Improving these skills will also help you find that you can **reflect** on the appropriateness of learning strategies and **adjust** as needed.

Click on the **Planning**, **Monitoring**, and **Evaluation** buttons to learn more.

**Self-Regulated Learning - Metacognition** from DAACS

\* MAKE A LIST  
\* DEFINE YOUR MEMORIZING METHODS  
\* PRACTICE ALOUD  
\* SUMMARIZE WHAT YOU JUST LEARNED

01:26

vimeo

### Evaluation

**MORE INFO**

Your score indicates that you **sometimes** reflect on and evaluate the ways in which you learn, study, and complete your schoolwork. Thus, after you complete an assignment, you might not always think about how well you performed or how you can improve your learning.

To increase the frequency with which you self-evaluate, consider using the following strategies:

1. As you work on an assignment, ask yourself "Am I learning what I am supposed to?"
2. After you complete an assignment, ask yourself, "What was the most important thing I learned?" and "What can I do better next time?"
3. Keep a list of learning strategies that seem to work best for you.

### Monitoring

**MORE INFO**

Your responses to the SRL assessment suggest that you **sometimes** monitor the thinking and learning you do for school. Because self-monitoring is known to deepen and speed up learning and to keep you aware of important things to focus on during learning, you could benefit from learning more about the monitoring process.

To increase the frequency of your self-monitoring:

1. Ask yourself these questions while you listen to lectures, read texts, and watch videos: "Am I learning the material? Is anything getting in the way of my learning?"
2. Make two lists: One list of tasks that you do well, and another of tasks with which you struggle. Click on **More Info** for recommendations for dealing with the tasks on the second list.

### Planning

**MORE INFO**

Your responses to the SRL assessment suggest that you **frequently** plan how to approach your schoolwork. Thus, before you begin completing an assignment, you are likely to think about the most important parts or the best approaches needed to perform well on that assignment. Planning is a very important skill to continue to develop in college.

To continue being a **frequent planner**, consider using the following strategies:

1. Ask yourself questions before you begin a learning activity: "What am I expected to do? What approach to this work can help me do well?"
2. Brainstorm multiple ways to approach an activity and then choose the best option.

## Open Educational Resources

The Self-Regulated Learning Lab (<http://srl.leuridanlabs.com/>)

The screenshot shows the homepage of the Self-Regulated Learning Lab. At the top, there's a navigation bar with 'SELF-REGULATED LEARNING LAB' and 'THINK ABOUT THINKING' on the left, and 'DAACS' and 'RESOURCES' on the right. The main content area features a large graphic titled 'WELCOME TO THE SELF-REGULATED LEARNING LAB'. It includes a diagram of a triangle divided into three sections: 'METACOGNITION' (top), 'SELF-REGULATED LEARNING' (bottom), and 'LEARNING STRATEGIES' (right). To the right of the triangle, there's a cartoon illustration of a boy and a girl standing together. A callout box says 'What is Self-Regulated Learning?' and 'WATCH VIDEO'. Another box titled 'WHY IS IT IMPORTANT?' explains that self-regulated learners adjust their study methods to meet goals, leading to better academic performance and a positive school experience. At the bottom of the page, there are footer sections for 'DAACS' (Diagnostic Assessment & Achievement of College Skills), 'Creative Commons' licensing information, and copyright notices.

The Online Reading Comprehension Lab (<https://owl.excelsior.edu/orc/introduction/>)

The screenshot shows the homepage of the Excelsior Online Reading Comprehension Lab (ORC). The top navigation bar includes links for 'Excelsior College Home', 'Writing Lab', 'Reading Lab', 'Educators', 'Our Blog', 'About', 'Register', and 'Login'. The main header features the 'Excelsior Online Reading Lab' logo and a search bar. The central content area is titled 'WELCOME TO THE EXCELSIOR ONLINE READING COMPREHENSION LAB'. It contains a 'Reading Lab Navigation' sidebar with links for 'Introduction', 'What to Do Before Reading', 'What to Do While Reading', and 'What to Do After Reading'. Below this is a note about the grant funding. The main content area lists ten reading strategies with icons: 'Introduction', 'Previewing', 'Questioning', 'Annotating', 'Inferring', 'Vocabulary Strategies', 'Paraphrasing', 'Summarizing', 'Analyzing', and 'Synthesizing'. Each strategy has a brief description. There are also sections for 'Online Writing Lab' and 'Educator Resources'. On the right side, there's a 'Hey There!' section with a video player showing a welcome message, and a sidebar with the 'owl.excelsior.edu' logo and a 'What's New' link. The footer includes acknowledgments for funding from the New York State Education Department, Higher Education Services Corporation, and the Kresge Foundation, along with logos for Gooru and egranary.

*The Online Writing Lab* (<https://owl.excelsior.edu/research/drafting-and-integrating/drafting-and-integrating-summarizing/>)

The screenshot shows the Excelsior Online Writing Lab homepage with a purple header bar containing links for "Excelsior College Home", "Writing Lab", "Reading Lab", "Educators", "Our Blog", "About", "Register", and "Login". A search icon is also present. Below the header, there's a logo of an owl wearing a graduation cap and the text "Excelsior Online Writing Lab". A purple navigation bar at the top of the main content area includes "WRITING | READING | EDUCATORS" and a Facebook icon. The main content area has a breadcrumb trail: "Research > Drafting & Integrating > Summarizing". On the left, a sidebar titled "Writing Lab Navigation" lists various writing process steps under "The Writing Process" and "Research". The main content area features a section titled "Summarizing" with a text box containing a quote from Henry David Thoreau about the nature of work. It also includes a note about the main idea of the passage and a callout box with a quote from Thoreau. At the bottom, there's a note about the summary's goals and a list of two items.

*The Math is Fun Website* (<https://www.mathsisfun.com/data/central-measures.html>)

The screenshot shows the Math is Fun website with a blue header bar featuring the "MATH IS FUN" logo, social media icons (Twitter, YouTube, Facebook), and language selection. Below the header is a navigation menu with links for "Home", "Algebra", "Data", "Geometry", "Measure", "Numbers", "Dictionary", "Games", "Puzzles", and "Worksheets". There are also "Adopted Mind" and "G+ buttons". The main content area has a title "Finding a Central Value". A text box explains that finding a central value is nice when you have two or more numbers. It provides an example: "Example: what is the central value for 3 and 7? Answer: Half-way between, which is 5." It includes a diagram of a number line with points at 3 and 7, and a double-headed arrow between them, with the number 5 written above the arrow. Below the diagram, it says "You can calculate it by adding 3 and 7 and then dividing the result by 2:" followed by the equation  $\rightarrow (3+7) / 2 = 10/2 = 5$ .

## Component 3: Automated Nudges

### Description and Examples of DAACS Nudges

Nudge Type	Description	Example
<b>Social Comparison Nudges for Students to Complete the DAACS Assessments</b>		
Social Norms Nudge	Uses social norms to encourage students to complete the DAACS assessments.	Over 80% of college students at participating universities have completed the DAACS. You are currently in the small minority of people who have not yet completed it. Please consider completing the DAACS, after which you will be given results and helpful feedback on how to become an efficient, successful learner.
Performance Nudge	Uses the likelihood of improved performance to encourage students to complete the DAACS assessments.	College students who use the DAACS are 1.5 times more successful than those who have not. You are currently in the small minority of people who have not yet completed it. Complete the DAACS now to learn about your strengths and weaknesses and discover ways to become a better learner.
<b>Review Feedback Nudges for Students Who Already Completed DAACS</b>		
Writing Nudge	Asks students about how well they are following through on what they committed to regarding improving their SRL in their essays for the DAACS writing assessment. Includes a link to their essay so they can remind themselves of what they said they would do.	You recently completed the DAACS writing assessment, in which you committed to improving your self-regulated learning. If you have followed through on the strategies you committed to using in your essay, bravo! If you have not, click here to reread your essay to remind yourself of the strategies you committed to using. Click here to review strategies related to becoming a self-regulated learner.
Strength Nudge	Encourages students to keep up the good work on a sub-domain they scored high on, and directs them toward strategies to continue to improve or in case they find themselves slipping in regards to that sub-domain.	You recently completed the DAACS self-regulated learning survey, and were given results and feedback on your individual strengths and weaknesses. Your results indicated that you scored high on [a scale, e.g., motivation, strategies, metacognition]. Congratulations—this is an important asset that will help you as you continue your studies. If you'd like to read more about [the scale], or if your skills in this area have slipped since you first took the survey, click here.
Weakness Nudge	Encourages students to review feedback on a subscale on which they scored poorly, and directs them toward strategies to continue to improve in regards to that scale.	You recently completed the DAACS self-regulated learning survey and were given feedback about areas in which you could improve. Your results for planning indicate that you will perform better in college if you try new strategies. Click here to learn about strategies for [a subscale].

## Component 4: Dashboard for Academic Advisors

### Overview Page

DAACS Dashboard

Student: Angela Lui  
View results in DAACS

Overview

SRL

Mathematics

Reading

Writing

Challenge	Strategies	Resources
Infrequent Metacognition (Evaluation)	* Identify your area of weakness with regard to planning, monitoring, and evaluation	* Watch the video at: <a href="http://srl.daacs.net/metacognition.html">http://srl.daacs.net/metacognition.html</a>
Performance Orientation	* Don't worry about how others perform * Focus on your improvement and progress rather than a single grade. * View mistakes and errors as opportunities to improve.	<a href="http://srl.daacs.net/mastery_orientation.html">http://srl.daacs.net/mastery_orientation.html</a>

Strength	Strategies	Resources
High Self-Efficacy	* Use positive self-talk * Remind yourself of all of the things that you do well in school.	* Watch the video at: <a href="http://srl.daacs.net/self-efficacy.html">http://srl.daacs.net/self-efficacy.html</a>
Frequent Metacognition (Planning)	* Identify your area of weakness with regard to planning, monitoring, and evaluation	* Watch the video at: <a href="http://srl.daacs.net/metacognition.html">http://srl.daacs.net/metacognition.html</a>

### Advisor Dashboard – Writing Assessment, Complexity Domain

DAACS Dashboard

Student: Angela Lui  
View results in DAACS

Overview

SRL

Mathematics

Reading

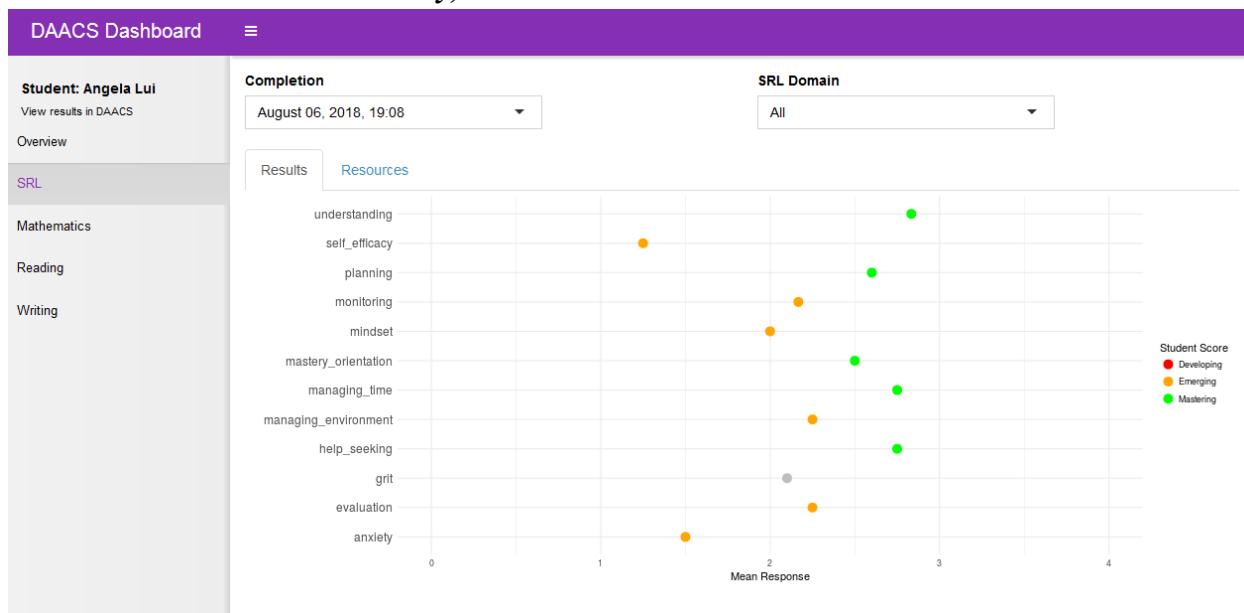
Writing

Completion		Writing Domain
October 02, 2017, 00:01		complexity

Rubric    Essay    Resources

Mastering		Emerging	Developing
complexity	Consistent and appropriate use of a variety of sentence structures, including some sophisticated, complex sentence structures and syntactic forms.	Complex syntactic structures are present but not consistently used; sentence structure is varied but not often sophisticated.	The sentences lack syntactic complexity and vary little, if at all, in structure. The sentences are generally simple in structure (subject-verb-object).

## Advisor Dashboard – SRL Survey, All Domains



# RUTGERS

Graduate School of Applied  
and Professional Psychology

Graduate School of Applied and  
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August 22, 2019

US Department of Education – Institute of Education Sciences  
550 12<sup>th</sup> Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

Over the past four years I have served as an integral member (as co-PI) of the leadership team for the Diagnostic Assessment and Achievement of College Skills (DAACS) project funded by a FIPSE First in the World grant. Through my collaboration with Drs. Bryer and Andrade and their respective research teams, we have developed a suite of free, open source, online assessments and resources to support college students' success (e.g., DAACS dashboard, SRL website). We have also developed a psychometrically-strong set of measures targeting academic and self-regulatory skills and have generated an extensive amount of data concerning the feasibility, usability, and potential efficacy of DAACS for improving student success.

Given that we have already implemented and evaluated DAACS within an online college environment and have strategically used the past year to make enhancements to its feasibility and usability, we are primed and ready to evaluate the efficacy of DAACS in varied learning contexts (i.e., brick and mortar; hybrid; online) and student populations. Although this host institution of this grant is the University at Albany, I am within close proximity (i.e., Rutgers University, New Jersey) and thus will be able to frequently travel to Albany to participate in all essential implementation activities as well as PI and advisory group meetings. In fact, as part of our current FIPSE First in the World Grant, I have traveled several times each year to Albany to lead professional development activities, participate in advisory group meetings, and to engage in PI-only retreats and self-assessment activities. I am fully engaged and committed as co-PI to the proposed project, *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills*. Due to my extensive expertise in motivation and SRL assessment and intervention practices I feel that I will be an invaluable asset to the project.

Sincerely,



Timothy J. Cleary, Ph.D.  
Associate Professor, Chair  
Department of School Psychology  
Graduate School of Applied and Professional Psychology



# CALIFORNIA STATE UNIVERSITY

---

## E A S T   B A Y

Office of the Online Campus

California State University, East Bay  
25800 Carlos Bee Boulevard, Hayward, CA 94542  
Phone: (510) 885-7678 <http://www.csueastbay.edu/online>

August 14, 2019

US Department of Education – Institute of Education Sciences  
550 12<sup>th</sup> Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

I write to lend my enthusiastic support to the project entitled, *Examining the Efficacy the Diagnostic Assessment and Achievement of College Skills (DAACS)* proposed by Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary. The project will examine the efficacy and predictive power of the DAACS, a diagnostic assessment and feedback system that was developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077). DAACS is comprised of free, online assessments of reading, mathematics, and writing, as well as important regulatory processes including motivation, metacognition, and strategy use. DAACS provides students with instant results and feedback, as well as support for students, particularly those who are academically at-risk, in managing the challenges of college life.

Cal State East Bay Office of the Online Campus provides support and services to all online and hybrid students. This diagnostic assessment and feedback system will further enhance the support to students as well as contribute to the success of students' learning.

As a member of the Advisory Committee on Bryer's et al. team, I will:

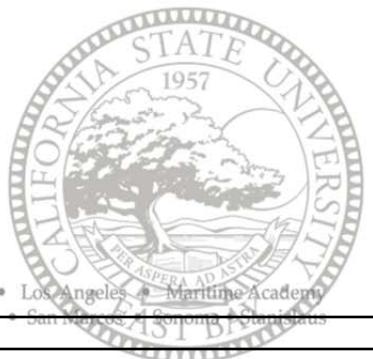
- Participate in quarterly meetings of the Advisory Committee for the duration of the project,
- Be available for consultation throughout the project period as an expert on Online learning and transfer student success.
- Consider co-authoring presentations at scholarly conferences and papers for publication
- Assist and coordinate the tasks that involves Cal State East Bay Online Campus, specifically the integration of DAACs w LMS and the online orientation course(s).

Please contact me if you would like further information about my participation in this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Y. WEN".

Roger Wen, PhD.  
Senior Director  
Office of the Online Campus  
Academic Affairs  
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THE CALIFORNIA STATE UNIVERSITY

Bakersfield • Channel Island • Chico • Dominguez Hills • East Bay • Fresno • Fullerton • Humboldt • Long Beach • Los Angeles • Maritime Academy  
Monterey Bay • Northridge • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San Jose • San Luis Obispo • San Marcos • Sonoma • Stanislaus

Application: R305A200318



*Letter of Agreement*

August 15, 2019

US Department of Education—Institute of Education Sciences  
550 12<sup>th</sup> Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

As the Provost and Executive Vice President for Academic Affairs at the SUNY Empire State College, I am writing to confirm the college's commitment to fully supporting Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary's project entitled *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)*.

SUNY Empire State College serves primarily working adults pursuing associate, bachelors and master's degrees at 35 locations in New York State, and at seven locations abroad. In addition, SUNY Empire has a robust online program that serves students everywhere. As a non-traditional, geographically distributed institution and leader in online education, we are well positioned to conduct research on the efficacy of DAACS on student progress and success, as well as to test the predictive power of DAACS with our diverse student population. We annually admit approximately 5,000 new undergraduate students and have an undergraduate population of about 16,000 students.

SUNY Empire State College is committed to providing the following expertise and resources to the proposed project. Under the supervision and coordination of Dr. Lisa D'Adamo-Weinstein, Dean of Student Affairs, DAACS-integrated orientations, (onsite and online) will be provided to new students. Our Academic Support team works with the Student Success and Development team to support students from orientation to graduation. For this project, they will collaborate as part of our new student orientation to implement the DAACS diagnostic assessments and review the students' results. The Academic Support team, Student Success and Development team, and academic mentors will be trained to use DAACS in their work with students. The teams will collaborate with students' primary mentors (who incorporate academic advising and teaching) to help focus student/mentor conversations on course selections based on the diagnostic information provided on students' strengths and challenges -- prior to the start of coursework.

The core of the Academic Support team consists of five directors located across the state of New York. They supervise eight part-time specialists and approximately 24 learning coaches. All of the directors and specialists have a minimum of a Master's degree. The Student Success and Development team is made up of seven coordinators and nine assistants also located across New York. All of the coordinators have master's degrees.

Office of Academic Affairs • 1 Union Avenue • Saratoga Springs, NY 12866  
Phone 518-587-2100 • fax 518 587-5592 • [www.esc.edu](http://www.esc.edu)



The teams are well-suited to support students with the administration and review of results from the DAACS assessment.

In terms of retention supports for students, the DAACS tool will be implemented at a very opportune time. As an institution, we have been exploring diagnostic tools that will allow us to gauge the likelihood of student success. Since SUNY Empire State College focuses on degree completion, we do not ask for SAT/ACT scores, and we accept the vast majority of academically acceptable transfer credits. We have implemented a new ERP/CRM in which student success scores are part of the program. Our Office of Decision Support plays a key role in the development of these scores. We are currently using mostly demographic data (time since last college experience number of credits transferred, etc.) to calculate some of these scores, but a diagnostic tool such as DAACS will help us better provide results and individualized feedback and resources to students in order for them to succeed in credit-bearing courses. Decision Support will also work with the DAACS team to incorporate DAACS results into our predictive models and student success scores. We will use all of these measures as well as our Early Alert System for our undergraduate students in order to identify students who are at risk of failing so that we can embed necessary course supports to prevent failures and retain students.

Academic research supports the premise that self-regulated learning skills positively impact academic achievement and leads us to pledge the resources of SUNY Empire State College to the DAACS project.

Sincerely,

A handwritten signature in black ink that reads "Meg Benke". The signature is fluid and cursive, with "Meg" on top and "Benke" below it, both starting with a capital letter.

Meg Benke, Ph.D.  
Provost and Executive Vice President for Academic Affairs



August 15, 2019

US Department of Education – Institute of Education Sciences  
550 12<sup>th</sup> Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

I write to lend my continued enthusiastic support to the project entitled, *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)* proposed by Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary. The project will examine the efficacy and predictive power of the DAACS, a diagnostic assessment and feedback system that was developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077). DAACS is comprised of free, online assessments of reading, mathematics, and writing, as well as important regulatory processes including motivation, metacognition, and strategy use. DAACS provides students with instant results and feedback, as well as support for students, particularly those who are academically at-risk, in managing the challenges of college life.

We at Gavant Software are pleased to continue our work and involvement with the Diagnostic Assessment and Achievement of College Skills project. We were delighted to have been selected to develop DAACS as part of the FIPSE First in the World grant where we were able to leverage our expertise in software development to build an alternative assessment and feedback framework for higher education. The DAACS project provided us our first opportunity to make a significant open source software contribution (see <https://github.com/DAACS>). With this proposed project we are excited to continue our support of Dr. Jason Bryer, Dr. Heidi Andrade, and Dr. Timothy Cleary as they test the efficacy of DAACS at three new institutions: University at Albany, Empire State College, and California State University - East Bay Online. We will provide the technical support to integrate DAACS into the student information systems. What we learn from this process will allow us to increase the usability and robustness of DAACS for other institutions to leverage DAACS beyond the grant period. This is such an important project for higher education, and we look forward to our continued contribution.

Please contact me if you would like further information about my participation in this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon K".

Jon Kloptosky  
President

August 6, 2019

US Department of Education – Institute of Education Sciences  
550 12<sup>th</sup> Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

Metis Associates is excited to support the research project proposed by Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary, *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)*. This project proposes to examine the efficacy and predictive power of the DAACS, which was developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077). This important research will address one of the most pressing issues in higher education today: ensuring that newly enrolled college students are fully prepared for college-level work. The project's theory of change posits that students will benefit from the information that the DAACS's assessments provide to them and their advisors, resulting in increased student persistence, higher academic achievement, and stronger long-term college retention.

If awarded, Metis will conduct a cost effectiveness study for this project. This study will include working with the project team to:

- Operationally define the effectiveness measures,
- Calculate the intervention costs (including costs of each project component and the average total cost per student),
- Use evaluation data to determine the effectiveness of the intervention,
- Analyze the cost effectiveness of the intervention in comparison to the alternative (control) condition,
- Summarize the findings both informally and in formal written reports, and
- Partner on presentations and publications of the findings in scholarly formats.

Please do not hesitate to reach out to me if you would like further information about Metis's participation in this project.

Sincerely,



Susanne Harnett, Ph.D.  
Managing Senior Associate

July 16, 2019

US Department of Education – Institute of Education Sciences  
550 12<sup>th</sup> Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

I fully support the project entitled, *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)* proposed by Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary. The project will examine the efficacy and predictive power of the DAACS, a diagnostic assessment and feedback system. DAACS offers online assessments of reading, mathematics, and writing, as well as important regulatory processes including motivation, metacognition, and strategy use. DAACS provides students with instant results and feedback, and support for students, particularly those who are academically at-risk.

For the past 3 years, I have served as a member of the Advisory Committee and Mathematics Subject Matter Expert (SME) for DAACS, funded by support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077). In my role as Mathematics SME, I developed a bank of mathematics test items, along with structured feedback and solution strategies for each item. This project built on my years of experience as a mathematics educator. As a member of the Advisory Committee, I participated in regular meetings of the Committee, providing input about the mathematics portion of the assessment.

As a member of the Advisory Committee on Bryer et al.'s project, I will:

- Participate in quarterly meetings of the Advisory Committee for the four years of the project,
- Be available for consultation throughout the project period as an expert in Mathematics
- Consider co-authoring presentations at scholarly conferences and papers for publication

Please free to contact me if further information about my participation in this project is needed.

Sincerely,



Abbe Herzig, PhD

August 19, 2019

US Department of Education – Institute of Education Sciences  
550 12<sup>th</sup> Street, SW Room 4149  
Washington, DC 20004

To Whom It May Concern,

I write to lend my enthusiastic support to the project entitled, *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)*, proposed by Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary. The project will continue to improve the DAACS diagnostic assessment and feedback system, developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077). DAACS is comprised of free, online assessments of writing (and other subjects), as well as important regulatory processes including motivation, metacognition, and strategy use. DAACS provides students with instant results and feedback, as well as support for students, particularly those who are academically at risk.

With my colleagues at Carnegie Mellon University, I developed the LightSIDE Researcher's Workbench, a machine learning package for automated text analysis that underpins the writing feedback in DAACS. With that same technology I founded a startup, LightSide Labs, that was later acquired by Turnitin. We released Revision Assistant, an automated writing feedback product now used by hundreds of thousands of students, including work with the College Board to offer free SAT writing practice on Khan Academy. The AI research team I led at Turnitin now supports all of their products, for 40 million students globally.

In summer 2018 I returned to academia, in part, to support projects like DAACS as they continue to develop the state of the art and expand the reach of research in real-world, authentic educational settings. As a member of the Advisory Committee on Bryer et al.'s project, I will:

- Participate in quarterly meetings of the Advisory Committee for the five years of the project,
- Be available for consultation throughout the project period as an expert on writing pedagogy, automated essay scoring and feedback, and the use of machine learning and AI in education.
- Coauthor presentations at scholarly conferences and papers for publication.

Please contact me if you would like further information about my participation in this project.  
Sincerely,



Elijah Mayfield  
Entrepreneur-in-Residence, Carnegie Mellon University  
Newell Simon Hall 2620B

**Carnegie Mellon University**

5000 Forbes Ave, Pittsburgh PA 15213

2019 August 01

US Department of Education – Institute of Education Sciences  
550 12th Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

I write to lend my enthusiastic support to the research proposed by Drs. Jason Bryer, Heidi Andrade and Timothy Cleary. Their project will develop, research and validate an automated system that provides personalized formative feedback to support students' self-regulated learning and improve achievement in post-secondary education.

My research program investigates self-regulated learning using learning technologies with support provided by a chatbot and learning analytics. I focus particularly on how achievement can be enhanced by these tools and how learning analytics about studying activities can promote self-regulated learning. Theoretical grounds for my research arise from work on metacognition and motivation as variables shaping studying activities. An important facet of my research concerns issues related to measuring and validly interpreting event data that trace cognitive activities that operationalize self-regulated learning.

I'm keen to be involved in Drs. Bryer, Andrade and Cleary's project because my first-hand experience in their previous DAACS project complemented key topics to my research program. Our partnership will benefit large numbers of students in the U.S. and Canada by developing, researching and validating technologies that support students' online learning and advance learning science.

As a member of the Advisory Committee on Bryer et al., project I will:

- Participate in meetings of the Advisory Committee for the five years of the project.
- Be available for consultation throughout the funding period.
- Co-author papers for publication and presentations at scholarly conferences.
- As my resources allow, replicate and extend strands of empirical work in the DAACS project.

Sincerely,



Philip H. Winne, PhD  
Professor



## AMERICAN UNIVERSITY

W A S H I N G T O N , D C

DEPARTMENT OF PSYCHOLOGY

2019 August 1

US Department of Education – Institute of Education Sciences  
550 12th Street, SW  
Room 4149  
Washington, DC 20004

To Whom It May Concern:

I write today to lend my enthusiastic support to the project entitled, *Examining the Efficacy and Predictive Power of the Diagnostic Assessment and Achievement of College Skills (DAACS)* proposed by Drs. Jason Bryer, Heidi Andrade, and Timothy Cleary. The project will examine the efficacy and predictive power of the DAACS, a diagnostic assessment and feedback system that was developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077).

DAACS is comprised of free, online assessments of reading, mathematics, and writing, as well as important regulatory processes including motivation, metacognition, and strategy use. DAACS provides students with instant results and feedback, as well as support for students, particularly those who are academically at-risk, in managing the challenges of college life.

I have experience collaborating multidisciplinary research and evaluation teams in this area. I also have experience conducting my own research, and publications, several areas of research closely related to the DAACS project:

- cost-effectiveness analysis in a variety of health and human services
- developing and enhancing self-regulation and self-management training using theory and research evidence,
- creating online resources and adapting learning management systems to teach college and university students self-regulation and self-management, and
- measuring and evaluating the cost-effectiveness and cost-benefit of computer-based cognitive-behavioral therapy, versus traditionally delivered therapy, for alcohol and other substance abuse.

I have over 40 years of experience in higher education and research in which I routinely worked in, advised on, and often published findings of my and colleagues' work in above areas. My 97 publications include peer-reviewed research on the theory and practice of self-management training. The first of these was a 4-study article on which the late Dr. Walter Mischel was my coauthor. I later wrote 2 full-length texts on self-management, published by Wadsworth. In the past decade I updated and continue to use these texts in e-book format in a well-enrolled 3-unit undergraduate *Self-Management* course (PSYC-315). I regularly teach that course entirely online as part of my full-time faculty responsibilities in the Department of Psychology at American University.

In addition, I have published two other books, one federally-funded manual, and many articles and chapters on improvement-oriented measurement of costs, and statistical and graphic analyses of cost-

effectiveness, in a variety of community, mental health, and substance abuse program. In addition, each year I offer one or more half-day workshops on cost-inclusive evaluation at professional association meetings, most often the American Evaluation Association ([eval.org](http://eval.org)), the largest association of program evaluators in the world.

Currently I supervise thesis and dissertation research of several Clinical Ph.D. students in my Program Evaluation Research Lab ([brianyates.net/PERL/](http://brianyates.net/PERL/)) at American U. The programs with which we work have ranged from consumer-operated mental health services to randomized clinical trials for seasonal affective disorders. Currently we are planning or conducting cost-effectiveness analyses of two suicide prevention programs for Army soldiers, and a cost-effectiveness analysis of treatment offered community members at a university-based clinic. I also advise a private health plan on research designed to help understand and reduce medical errors in inpatient settings. I also consult on cost-inclusive evaluation of a State Department-funded humanitarian program.

As a member of the Advisory Committee on Dr. Bryer et al.'s project, I look forward to:

- participating in quarterly meetings of the Advisory Committee for the five years of the project,
- being available for consultation throughout the project period as an expert on cost-effectiveness analyses of computer-based training in self-regulation in higher education,
- considering co-authoring presentations at scholarly conferences as well as papers for publication
- collaborating with Dr. Bryer and colleagues in cost-effectiveness analysis of this important project.

Please contact me if you would like further information about my participation in this project.

Sincerely,



Brian T. Yates, Ph.D.  
Professor

301-775-1892  
[brian.yates@mac.com](mailto:brian.yates@mac.com)  
website: [brianyates.net/info/](http://brianyates.net/info/)

## Appendix F: Data Management Plan

**Education Repository:** We will pre-register our study at the Scholars Archive of the University at Albany – SUNY (UAlbany). Scholars Archive is an open access public institutional repository that “provides free, unrestricted global access to the metadata and files included in it” (<https://library.albany.edu/scholarsarchive/copyright>). It is hosted on a digital platform, Digital Commons, a comprehensive hosted solution for storing, managing, and sharing data that allows for easy upload, supports a multitude of media and file types, and customizable controls for public access. Once deposited to this repository, the data can be available and accessible indefinitely at no cost to the project.

**Data Type:** Three categories of quantitative data will be collected and deposited to Scholars Archive:

1. *General DAACS data*, which include scaled scores of DAACS assessments, demographic information, and outcome data.
2. *Item-level data* of all four DAACS assessments, separated by assessments
3. *Usage data*, which are trace data of students’ and advisors’ use of the DAACS and DAACS resources.

**Data Management and Maintenance of Confidentiality of PII:** All data will be password protected, and only the PIs and the research associate will be provided with the password information. In order for data to be matched between datasets while maintaining confidentiality and security of identifiable information, unique identifiers will replace student names for all participants once data have been collected; only the PIs and the research associate will have access to the document that matches the unique identifier with the student names, school IDs, and other identifiable information.

To adhere to the Scholars Archives requirements, which are aligned with Institutional Review Board’s ethical guidelines, all information that personally identifies or has the potential to be combined to personally identify individuals will be removed prior to depositing to the Archive. In addition, all sensitive information that should not be publicly available will be removed from the datasets that will be deposited. The Scholars Archive administrator at UAlbany has agreed to meet with us at the beginning of the grant project to ensure that we implement and maintain the proper procedures for our data to be ready for deposit.

**Roles and Responsibilities:** The principal investigator, Jason Bryer, and a co-investigator, Heidi Andrade, will take primary responsibility for the management and retention of research data. In the very unlikely event that they both leave the project and the institution, responsibility for oversight of the data will pass to the other co-investigator, Tim Cleary, or to the Office of the Dean of the School of Education at UAlbany, as appropriate.

**Schedule for Data Access:** The data will be made available at the end of each of the four years of the project. The data will be available indefinitely. The timeframe of data accessibility will be reviewed at the annual progress reviews and revised as necessary.

**Format of the Final Dataset:** We will make the dataset accessible in several formats, including .Rdata for R users, .sav for SPSS users, and .csv as the most basic form that can be imported and read by various software. Both datasets and syntax or codes will be shared.

**Dataset Documentation:** Documentation that provides all the information necessary for other researchers to use the data will be prepared. Three dataset documentation types will be provided: a data methodological summary, data dictionary, and the scripts used to perform the analyses conducted by the original research team.

The data methodological summary will include a summary of the purpose of the data collection, methodology and procedures that will have been used to collect the data, as well as the timing of the data collection. A general description of the sample population demographics will also be provided.

A data dictionary will be created and modified as data are updated. The data dictionary will also include specific information about the data and data structure, including:

- Variable name with definitions
- Data type (e.g., categorical, numeric, date)
- Data descriptives, including frequencies for categorical variables, central tendencies for numeric variables, and information on missing data. Bar charts, histograms, and density plots will also be provided for each variable to illustrate the distribution of the variables.

Scripts that are provided will include descriptions of the analyses each script is intended to run, the research questions they address, and their assumptions. Since different versions of statistical software might alter the functionality and compatibility of different analyses, the versions with which the scripts were used and functional will be documented.

**Method of Data Access:** The data will be made publicly available on UAlbany's Scholars Archive. Keywords that could be used to find DAACS data include: DAACS, Diagnostic Assessment and Achievement of College Skills, postsecondary education, remediation (alternative to), student success.

**Requirements for Data Users:** UAlbany does not have a policy that requires data users to sign a document related to the use of data, so no such requirement will be in place. Be default, access to data on Scholars Archive is unrestricted.

**Limitations to Data Accessibility:** None.

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## RESEARCH & RELATED Senior/Key Person Profile (Expanded)

PROFILE - Project Director/Principal Investigator			
Prefix: Dr.	* First Name: Jason	Middle Name:	
* Last Name: Bryer	Suffix:		
Position/Title: Research Associate	Department: Dept. of Ed & Counseling Psych		
Organization Name: University at Albany	Division:		
* Street1: 1400 Washington Avenue	Street2:		
* City: Albany	County/ Parish: Albany	Province:	
* State: NY: New York	* Zip / Postal Code: 12222-0100		
* Country: USA: UNITED STATES	* Phone Number: 518-464-8594	Fax Number:	
* E-Mail: jbryer@albany.edu	Credential, e.g., agency login:		
* Project Role: PD/PI	Other Project Role Category:		
Degree Type: Ph.D. in Educational Psychology & Methodology	Degree Year: 2014		
<b>*Attach Biographical Sketch</b> 1239-biosketch - Bryer.pdf		Add Attachment	Delete Attachment
<b>Attach Current &amp; Pending Support</b>		Add Attachment	Delete Attachment
			View Attachment

PROFILE - Senior/Key Person 1			
Prefix: Dr.	* First Name: Heidi	Middle Name:	
* Last Name: Andrade	Suffix:		
Position/Title: Professor	Department: Dept. of Ed & Counseling Psych		
Organization Name: University at Albany	Division:		
* Street1: 1400 Washington Avenue	Street2:		
* City: Albany	County/ Parish: New York	Province:	
* State: NY: New York	* Zip / Postal Code: 12222-0100		
* Country: USA: UNITED STATES	* Phone Number: 518-437-4422	Fax Number:	
* E-Mail: handrade@albany.edu	Credential, e.g., agency login:		
* Project Role: Co-Investigator	Other Project Role Category:		
Degree Type: Ed.D. in Human Development and Psychology	Degree Year: 1996		
<b>*Attach Biographical Sketch</b> 1240-biosketch - Andrade.pdf		Add Attachment	Delete Attachment
<b>Attach Current &amp; Pending Support</b>		Add Attachment	Delete Attachment
			View Attachment

# RESEARCH & RELATED Senior/Key Person Profile (Expanded)

## PROFILE - Senior/Key Person 2

Prefix:	<input type="text" value="Dr."/>	* First Name:	<input type="text" value="Cheryl"/>	Middle Name:	<input type="text"/>
* Last Name:	<input type="text" value="Dozier"/>		Suffix:	<input type="text"/>	
Position/Title:	<input type="text" value="Associate Professor"/>		Department:	<input type="text" value="Literacy Teaching and Learning"/>	
Organization Name:	<input type="text" value="University at Albany"/>			Division:	<input type="text"/>
* Street1:	<input type="text" value="1400 Washington Avenue"/>				
Street2:	<input type="text" value="CK 353"/>				
* City:	<input type="text" value="Albany"/>	County/ Parish:	<input type="text" value="New York"/>		
* State:	<input type="text" value="NY: New York"/>		Province:	<input type="text"/>	
* Country:	<input type="text" value="USA: UNITED STATES"/>		* Zip / Postal Code:	<input type="text" value="12222-0100"/>	
* Phone Number:	<input type="text" value="518-442-5101"/>	Fax Number:	<input type="text"/>		
* E-Mail:	<input type="text" value="cdozier@albany.edu"/>				
Credential, e.g., agency login: <input type="text"/>					
* Project Role:	<input type="text" value="Other (Specify)"/>	Other Project Role Category:	<input type="text" value="Project Advisor"/>		
Degree Type:	<input type="text" value="Ph.D. in Educational Psychology"/>				
Degree Year:	<input type="text" value="2001"/>				
Attach Biographical Sketch		<input type="text" value="1241-biosketch - Cleary_v2.pdf"/>	Add Attachment	Delete Attachment	<a href="#">View Attachment</a>
Attach Current & Pending Support		<input type="text"/>	Add Attachment	Delete Attachment	<a href="#">View Attachment</a>

## PROFILE - Senior/Key Person 3

Prefix:	<input type="text" value="Dr."/>	* First Name:	<input type="text" value="Marco"/>	Middle Name:	<input type="text"/>
* Last Name:	<input type="text" value="Varisco"/>		Suffix:	<input type="text"/>	
Position/Title:	<input type="text" value="Associate Professor"/>		Department:	<input type="text" value="Mathematics and Statistics"/>	
Organization Name:	<input type="text" value="University at Albany"/>			Division:	<input type="text"/>
* Street1:	<input type="text" value="1400 Washington Avenue"/>				
Street2:	<input type="text" value="ES 120 B"/>				
* City:	<input type="text" value="Albany"/>	County/ Parish:	<input type="text" value="New York"/>		
* State:	<input type="text" value="NY: New York"/>		Province:	<input type="text"/>	
* Country:	<input type="text" value="USA: UNITED STATES"/>		* Zip / Postal Code:	<input type="text" value="12222-0100"/>	
* Phone Number:	<input type="text" value="518-442-4712"/>	Fax Number:	<input type="text"/>		
* E-Mail:	<input type="text" value="mvarisco@albany.edu"/>				
Credential, e.g., agency login: <input type="text"/>					
* Project Role:	<input type="text" value="Other (Specify)"/>	Other Project Role Category:	<input type="text" value="Project Advisor"/>		
Degree Type:	<input type="text" value="Ph.D. in Mathematics"/>				
Degree Year:	<input type="text" value="2006"/>				
Attach Biographical Sketch		<input type="text" value="1242-biosketch - Varisco.pdf"/>	Add Attachment	Delete Attachment	<a href="#">View Attachment</a>
Attach Current & Pending Support		<input type="text"/>	Add Attachment	Delete Attachment	<a href="#">View Attachment</a>

# RESEARCH & RELATED Senior/Key Person Profile (Expanded)

## PROFILE - Senior/Key Person 4

Prefix:	Dr.	* First Name:	Robert	Middle Name:	
* Last Name:	Yagelski			Suffix:	
Position/Title:	Professor	Department:	Educational Theory & Practice		
Organization Name:	University at Albany			Division:	
* Street1:	1400 Washington Ave.				
Street2:	CK 206				
* City:	Albany	County/ Parish:	New York		
* State:	NY: New York	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code:	12222-0100		
* Phone Number:	518 - 442 - 3348	Fax Number:			
* E-Mail:	ryagelski2@albany.edu				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor		
Degree Type:	Ph.D. in Rhetoric and Composition/English				
Degree Year:	1991				
<b>Attach Biographical Sketch</b>		1243-biosketch - Yagelski.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

## PROFILE - Senior/Key Person 5

Prefix:	Dr.	* First Name:	Tim	Middle Name:	
* Last Name:	Cleary			Suffix:	
Position/Title:	Associate Professor	Department:	Dept. of Psychology		
Organization Name:	Rutgers University			Division:	School Psychology Program
* Street1:	152 Frelinghuysen Road				
Street2:					
* City:	Piscataway	County/ Parish:			
* State:	NJ: New Jersey	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code:	08854-8020		
* Phone Number:	848-445-3982	Fax Number:			
* E-Mail:	timothy.cleary@gsapp.rutgers.edu				
Credential, e.g., agency login:					
* Project Role:	Co-Investigator	Other Project Role Category:			
Degree Type:	Ph.D. in Educational Psychology				
Degree Year:	2001				
<b>Attach Biographical Sketch</b>		1244-biosketch - Cleary_v2.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

# RESEARCH & RELATED Senior/Key Person Profile (Expanded)

## PROFILE - Senior/Key Person 6

Prefix:	Dr.	* First Name:	Abbe	Middle Name:	
* Last Name:	Herzig		Suffix:		
Position/Title:	Director of Education		Department:		
Organization Name:	American Mathematical Society			Division:	
* Street1:	1527 18th St NW				
Street2:					
* City:	Washington	County/ Parish:			
* State:	DC: District of Columbia	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code:	20036-1358		
* Phone Number:	518-727-4755	Fax Number:			
* E-Mail:	ahh@ams.org				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor		
Degree Type:	Ph.D. in Mathematics Education				
Degree Year:	2002				
<b>Attach Biographical Sketch</b>		1245-biosketch - Herzig.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

## PROFILE - Senior/Key Person 7

Prefix:	Dr.	* First Name:	Elijah	Middle Name:	
* Last Name:	Mayfield		Suffix:		
Position/Title:	Entrepreneur in Residence		Department:		
Organization Name:	Carnegie Mellon University			Division:	
* Street1:	406 S Fairmount St				
Street2:					
* City:	Pittsburgh	County/ Parish:			
* State:	PA: Pennsylvania	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code:	15232-1101		
* Phone Number:	412-584-8859	Fax Number:			
* E-Mail:	elijah@treeforts.org				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor		
Degree Type:	M.S. in Language Technologies				
Degree Year:	2011				
<b>Attach Biographical Sketch</b>		1246-biosketch - Mayfield.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

# RESEARCH & RELATED Senior/Key Person Profile (Expanded)

## PROFILE - Senior/Key Person 8

Prefix:	Dr.	* First Name:	Suzanne	Middle Name:	
* Last Name:	Orrell		Suffix:		
Position/Title:	Director of Academic Support		Department:	Academic Support	
Organization Name:	SUNY Empire State College			Division:	
* Street1:	6333 State Route 298				
Street2:					
* City:	East Syracuse	County/ Parish:			
* State:	NY: New York	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code:	13057-633		
* Phone Number:	315-460-3167	Fax Number:			
* E-Mail:	Suzanne.Orrell@esc.edu				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor and Implementation coord		
Degree Type:	Ph.D. in Geology				
Degree Year:	1996				
<b>Attach Biographical Sketch</b>		1247-biosketch - Orrell.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

## PROFILE - Senior/Key Person 9

Prefix:	Dr.	* First Name:	Roger	Middle Name:	
* Last Name:	Wen		Suffix:		
Position/Title:	Senior Director of the Online Campus & MS in	Department:	Office of Academic Affairs		
Organization Name:	CalState East Bay Online Campus			Division:	Cal State East Bay
* Street1:	25800 Carlos Bee Blvd.				
Street2:					
* City:	Hayward	County/ Parish:			
* State:	CA: California	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code:	94542-3000		
* Phone Number:	510-885-7678	Fax Number:			
* E-Mail:	roger.wen@csueastbay.edu				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor and Implementation Coord		
Degree Type:	Ph.D. in Technology Teaching /Information Science				
Degree Year:	2000				
<b>Attach Biographical Sketch</b>		1248-biosketch - Wen.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

# RESEARCH & RELATED Senior/Key Person Profile (Expanded)

## PROFILE - Senior/Key Person 10

Prefix:	Dr.	* First Name:	Philip	Middle Name:	
* Last Name:	Winne		Suffix:		
Position/Title:	Faculty of Education	Department:			
Organization Name:	Simon Fraser University			Division:	
* Street1:	EDB 8515, 8888 University Drive				
Street2:					
* City:	Burnaby, British Columbia	County/ Parish:			
* State:			Province:		
* Country:	CAN: CANADA	* Zip / Postal Code: V5A 1S6			
* Phone Number:	778-782-4858	Fax Number:			
* E-Mail:	winne@sfsu.ca				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor		
Degree Type:	Ph.D. in Educational Psychology				
Degree Year:	1976				
<b>Attach Biographical Sketch</b>		1249-biosketch - Winne.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

## PROFILE - Senior/Key Person 11

Prefix:	Dr.	* First Name:	Brian	Middle Name:	
* Last Name:	Yates		Suffix:		
Position/Title:	Full Professor	Department:	Department of Psychology		
Organization Name:	American University			Division:	
* Street1:	4400 Massachusetts Avenue, N.W.,				
Street2:					
* City:	Washington	County/ Parish:			
* State:	DC: District of Columbia	Province:			
* Country:	USA: UNITED STATES	* Zip / Postal Code: 20016-8062			
* Phone Number:	301-775-1892	Fax Number:			
* E-Mail:	brian.yates@mac.com				
Credential, e.g., agency login:					
* Project Role:	Other (Specify)	Other Project Role Category:	Project Advisor		
Degree Type:	Ph.D. in Psychology				
Degree Year:	1976				
<b>Attach Biographical Sketch</b>		1250-biosketch - Yates.pdf	Add Attachment	Delete Attachment	View Attachment
<b>Attach Current &amp; Pending Support</b>			Add Attachment	Delete Attachment	View Attachment

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Jason Bryer

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Research Associate, University at Albany; Executive Director, Excelsior College

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
The College of Saint Rose, Albany, NY	B.A.	05/1999	Mathematics
University at Albany, Albany, NY	M.S.	05/2009	Educational Psychology & Methodology
University at Albany, Albany, NY	Ph.D.	12/2014	Educational Psychology & Methodology

**A. Personal Statement**

Dr. Jason Bryer is currently an Executive Director at Excelsior College where he has served as Principal Investigator of the FIPSE First in the World grant to develop and research the Diagnostic Assessment and Achievement of College Skills. Prior to this role Dr. Bryer had a dual appointment with the Grants and Institutional Research Offices providing research and evaluation support for the institution. He is also currently an Adjunct Associate Professor for CUNY's Master of Science in Data Science program and has developed a research and data collection platform for New York State's implementation of PBIS (<http://pbisny.org/>). Dr. Bryer's research interests include quasi experimental designs with propensity score analysis, data systems to support formative assessment, and the use of open source software for conducting reproducible research. He is the author of over a dozen R packages, including three related to conducting propensity score analyses.

**B. Positions and Honors**

2015 – present	<b>Research Associate</b> , Educational Psychology & Methodology, University at Albany – SUNY, Albany, NY
2016 – present	<b>Executive Director</b> , Excelsior College, Albany, NY
2015 – present	<b>Adjunct Associate Professor</b> , CUNY School of Professional Studies, New York, NY
2006 – 2014	<b>Senior Research Analyst</b> , Excelsior College, Office of Institutional Research, Albany, NY
2004 – 2006	<b>Senior Applications Developer</b> , Excelsior College, Albany, NY
2004 – 2006	<b>Senior Software Engineer</b> , State University of New York, Albany, NY
1999 – 2004	<b>Software Engineer</b> , MapInfo, Troy, NY

## C. Contributions to Science

### Selected Refereed Articles

Lui, A., Franklin, D., Akhmedjanova, D., Gorgun, G., **Bryer**, J., Andrade, H., & Cleary, T.. (in press). Validity evidence for the DAACS self-regulated learning survey: Internal structure. *Future Review*.

**Bryer**, J. M., Homer, B. D., and Dalrymple, S. (forthcoming). The use of adaptive learning technology in online courses. *Computers and Education*.

Nagelsmith, L., **Bryer**, J. M., and Yan, Z. (2012). Measuring motivation & volition of nursing students in non-traditional learning environments. *Journal of Nursing Measurement*, 20(2).

**Bryer**, J. M. and Pruzek, R. M. (2011). An international comparison of private and public schools using multilevel propensity score methods and graphics. *Multivariate Behavior Research*, 46(6):1010–1011.

### Selected Statistical Software

**Bryer**, J. M. (2016). *IRRsim: R package for simulating inter-rater reliability*. Available from <http://github.com/jbryer/IRRsim>.

**Bryer**, J. M. (2016). *PSAboot: R package for bootstrapping propensity score analysis*. Available from <http://github.com/jbryer/PSAboot>.

**Bryer**, J. M. (2015). *TriMatch: R package for propensity score analysis of non-binary treatments*. Available from <http://github.com/jbryer/TriMatch>.

**Bryer**, J. M. (2014). *multilevelPSA: R package for estimating and visualizing multilevel propensity score analysis*. Available from <http://github.com/jbryer/multilevelPSA>.

**Bryer**, J. M. (2013). *likert: R package to analyze likert based items*. Available from <http://github.com/jbryer/likert>.

### Selected Conference Presentations

**Bryer**, J.M. and Gorgun, G. (2019). *Relationship between intraclass correlation and percent rater agreement*. Paper presentation at the annual meeting of the National Council on Measurement in Education. Toronto, Canada.

Akhmedjanova, D., Lui, A. M., Andrade, H. L., & **Bryer**, J. (2019). *Validity and reliability of the DAACS writing assessment*. Paper presentation at the annual meeting of the National Council on Measurement in Education, Toronto, Canada.

**Bryer**, J., Lui, A. M. & Andrade, H. L., Franklin, D., & Cleary, T. (2019). *Efficacy of the Diagnostic Assessment and Achievement of College Skills on multiple success indicators*. Presentation at the annual meeting of the American Educational Research Association, Toronto, Canada.

Andrade, H.A., **Bryer**, J.M., & Yagelski, R. (2018). *Developing and Validating the DAACS Writing Assessment*. Paper presented at the Sig Writing Conference. Antwerp, Belgium.

**Bryer**, J.M., Andrade, H.A., & Cleary, T. (2018). *The Diagnostic Assessment and Achievement of College Skills*. Paper presented at the Distance Teaching and Learning Conference, Madison, WI.

**Bryer, J.M.** (2018). *Rethinking Placement Exams: Diagnostic Assessment and Achievement of College Skills*. Paper presented at League for Innovation in the Community College Innovations Conference, National Harbor, MD.

**Bryer, J.M., Sahin, F., Lui, A., Akhmedjanova, D., Franklin, D.** (2017). Development of the Large Scale Diagnostic Assessment of College Skills. Paper presented at the Northeastern Educational Research Association. Trumbull, CT.

**Bryer, J.** (2015). Propensity score matching with three groups. Poster presented at the Atlantic Causal Inference Conference. Philadelphia, PA.

**Bryer, J. M., Mumma, P., Hyman, R., Dhyr, B., Cohen, P., Howard, M., and Hammang, J. M.** (2014). Exploring better learning: Three campuses, two disciplines, and one learning platform. Panelist at the American Association of State Colleges and Universities. Ft Lauderdale, FL.

**Bryer, J. M.** (2014). PSABoot: An R package for bootstrapping propensity score analysis. Paper presented at the useR! Conference. Los Angeles, CA.

**Bryer, J. M. and Speerschneider, K.** (2013). TriMatch: An R package for propensity score matching of non-binary treatments. Paper presented at the useR! Conference. Albacete, Spain.

## **D. Additional Information: Research Support and/or Scholastic Performance**

### **Grant Funding**

Role: Co-Investigator @ 100% effort (Andrade, H., Principal Investigator, Cleary, T., Co-Investigators)  
Project: Diagnostic Assessment and Achievement of College Skills: Personalized Feedback and Targeted Student Supports

Source: Institute of Education Sciences

Time Period: 2019 – 2024

Total Funding: \$3,299,059 PENDING

Role: Principal Investigator (Andrade, H., Co-Investigator, Cleary, T., Co-Investigator)  
Project: Diagnostic Assessment and Achievement of College Skills: Personalized Feedback and Targeted Student Supports

Source: U.S. Department of Education Fund for the Improvement of Postsecondary Education

Time Period: 2015 – 2019

Total Funding: Total \$2,999,000

Role: Lead Evaluator

Project: Use of the Excelsior College Online Writing Lab for Community Colleges

Source: NYS Higher Education Servers Corporation

Time Period: 2014 – 2016

Total Funding: \$449,438

Role: Principal Investigator

Project: Adaptive Learning Market Acceleration Project

Source: Bill & Melinda Gates Foundation

Time Period: 2013 – 2015

Total Funding: \$168,572

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Heidi Andrade

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Professor

**EDUCATION/TRAINING** (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Harvard University, Cambridge, MA	Ed.D.	06/1996	Human Development and Psychology
Harvard University, Cambridge, MA	M.Ed.	06/1989	Human Development and Psychology
University of Massachusetts--Boston	B.A.	05/1988	Psychology

**A. Personal Statement**

My work focuses on the relationships between learning and assessment, with emphases on student self-assessment and self-regulated learning. I am a co-PI on the FIPSE-funded DAACS project. I have published about 50 articles and authored, edited and co-edited several books on assessment, including *Using Assessment to Enhance Learning, Achievement, and Academic Self-Regulation* (2017), the SAGE Handbook of Research on Classroom Assessment (2013), the *Handbook of Formative Assessment* (2010), and the *Handbook of Formative Assessment in the Disciplines* (2019). I have also edited or co-edited special issues of *Theory Into Practice* (2009) and *Applied Measurement in Education* (2013).

**B. Positions and Honors**

2019 – present	<b>Professor</b> , Educational Psychology & Methodology, University at Albany—SUNY, Albany, NY
2018 – 2019	<b>Division Director</b> , Educational Psychology & Methodology, University at Albany—SUNY, Albany, NY
2010 – 2016	<b>Associate Dean for Academic Affairs</b> , School of Education, University at Albany—SUNY, Albany, NY

**C. Contributions to Science****Selected Refereed Articles**

- Lui, A., Franklin, D., Akhmedjanova, D., Gorgun, G., Bryer, J., **Andrade**, H., & Cleary, T. (2019). Validity evidence of the internal structure of the DAACS self-regulated learning survey. *Future Review: International Journal of Transition, College, and Career Success*, 1(1), 1-18.
- Andrade**, H., & Brookhart, S. (2019). Classroom assessment as the co-regulation of learning. *Assessment in Education: Principles, Policy & Practice*. doi: 10.1080/0969594X.2019.1571992

- Panadero, E., **Andrade**, H., & Brookhart, S. (2018). Fusing self-regulated learning and formative assessment: A roadmap of where we are, how we got here, and where we are going. *Australian Educational Researcher*. doi:10.1007/s13384-018-0258-y
- Chen, F., Lui, A., **Andrade**, H., Valle, C., & Mir, H. (2017). Criteria-referenced formative assessment in the arts. *Educational Assessment, Evaluation, and Accountability*, 29(3), 297-314. doi:10.1080/00220671.2016.1255870
- Brown, G., **Andrade**, H., & Chen, F. (2015). Accuracy in student self-assessment: Directions and cautions for research. *Assessment in Education*. doi:10.1080/0969594X.2014.996523
- Dugan, R., & **Andrade**, H. (2011). Exploring the construct validity of academic self-regulation using a new self-report questionnaire – the Survey of Academic Self-Regulation. *The International Journal of Educational and Psychological Assessment*, 7(1), 45-63.
- Andrade**, H., Du, Y., & Mycek, K. (2010). Rubric-referenced self-assessment and middle school students' writing. *Assessment in Education*, 17(2), 199-214.
- Andrade**, H., Wang, X., Du, Y., & Akawi, R. (2009). Rubric-referenced self-assessment and self-efficacy for writing. *The Journal of Educational Research*, 102(4), 287-302.
- Andrade**, H., & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory*
- Andrade**, H., Du, Y., & Wang, X. (2008). Putting rubrics to the test: The effect of a model, criteria generation, and rubric-referenced self-assessment on elementary school students' writing. *Educational Measurement: Issues and Practices*, 27(2), 3-13.
- Andrade**, H., & Du, Y. (2007). Student responses to criteria-referenced self-assessment. *Assessment and Evaluation in Higher Education*, 32(2), 159-181.
- Andrade**, H., & Du, Y. (2005). Student perspectives on rubric-referenced assessment. *Practical Assessment, Research and Evaluation*, 10(4). Available: <http://PAREonline.net/getvn.asp?v=10&n=3>
- Andrade**, H. & Boulay, B. (2003). The role of rubric-referenced self-assessment in learning to write. *The Journal of Educational Research*, 97(1), 21-34.

## Selected Books

- Andrade**, H., Bennett, R., & Cizek, G. (Eds.) (2019), *Handbook of formative assessment in the disciplines*. New York: Routledge.
- Andrade**, H., & Heritage, M. (2017). *Using assessment to enhance learning, achievement, and academic self-regulation*. New York: Routledge.
- McMillan, J. H. (Ed.), **Andrade**, H., Bonner, S., Brookhart, S., Parkes, J., & Wiliam, D. (Assoc. Eds.) (2013). *SAGE handbook of research on classroom assessment*. Los Angeles: SAGE.
- Andrade**, H., & Cizek, G. (Eds.) (2010). *Handbook of formative assessment*. New York: Routledge.

## Selected Chapters

- Andrade**, H. (2018). Feedback in the context of self-assessment. In A. Lipnevich & J. Smith (Eds.), *Cambridge handbook of instructional feedback*. Cambridge, UK: Cambridge University Press.
- Andrade**, H. (2016). *Classroom assessment and learning: A selective review of theory and research* [White paper]. Washington, DC: National Academy of Sciences.
- Andrade**, H., & Brookhart, S. M. (2016). The role of classroom assessment in supporting self-regulated learning. In D. Laveault & L. Allal (Eds.), *Assessment for learning: Meeting the challenge of implementation* (pp. 293-309). Heidelberg, Germany: Springer.
- Andrade**, H. L., & Brown, G. T. L. (2016). Student self-assessment in the classroom. In G. T. L. Brown & L. R. Harris (Eds.), *Handbook of human and social conditions in assessment* (pp. 319-334). New York: Routledge.
- Andrade**, H. (2013). Classroom assessment in the context of learning theory and research. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 17-34). New York. SAGE.
- Andrade**, H., Huff, K., & Brooke, G. (2013). Making assessment student centered. In R. Wolfe, A. Steinberg, & N. Hoffman (Eds.). *Anytime, anywhere: Student-centered learning for schools and teachers* (pp 55-74). Cambridge, MA: Harvard Education Press.
- Johnston, P., & **Andrade**, H. (2012). Assessment, teaching and learning in and beyond classrooms. In B. Kaur (Ed.), *Understanding teaching and learning: Classroom research revisited* (pp. 269-280). Rotterdam, The Netherlands: Sense Publishers.

**Andrade**, H. (2010). Students as the definitive source of formative assessment: Academic self-assessment and the self-regulation of learning. In H. **Andrade** & G. Cizek (Eds.), *Handbook of formative assessment* (pp. 90-105). New York: Routledge.

## Selected Media

**Andrade**, H. (2016). *Formative assessment*. A series of professional development videos sponsored by the New York City Department of Education, ArtsConnection, and Studio in the School:  
<http://www.artsachieve.org/formative-assessment>

**Andrade**, H. (2013). *Student-centered assessment video suite*. Available at  
<http://www.studentsatthecenter.org/resources/student-centered-assessment-video-suite>

## Selected Conference Presentations

Akhmedjanova, D., Lui, A. M., **Andrade**, H. L., & Bryer, J. (2019). *Validity and reliability of the DAACS writing assessment*. Paper presentation at the annual meeting of the National Council on Measurement in Education, Toronto, Canada.

Bryer, J., Lui, A. M. & **Andrade**, H. L., Franklin, D., & Cleary, T. (2019). *Efficacy of the Diagnostic Assessment and Achievement of College Skills on multiple success indicators*. Presentation at the annual meeting of the American Educational Research Association, Toronto, Canada.

**Andrade**, H., Bryer, J., & Yagelski, R. (2018). *Developing and validating the DAACS writing assessment*. Paper presentation at the 16<sup>th</sup> international conference of the EARLI special interest group on writing, Antwerp, Belgium.

**Andrade**, H. (March, 2018). *Student-centered assessment as the next best promise*. Keynote presentation at the Teacher Assessment Literacy conference, Universita Degli Studi di Bari, Bari, Italy.

**Andrade**, H. (October, 2017). *Surprises about metacognition and self-assessment*. Presentation at the Harvard Project Zero 50<sup>th</sup> anniversary celebration. Cambridge, MA.

**Andrade**, H. (April, 2017). *Rubrics for classroom assessment: Perils of practice and how to avoid them*. Preconference workshop at the annual meeting of the National Council of Measurement in Education, San Antonio, TX.

**Andrade**, H. (April, 2017). *Classroom assessment as the regulation of learning*. Keynote panel presentation at the annual meeting of the National Council of Measurement in Education, San Antonio, TX.

**Andrade**, H. (April, 2017). *A theory of the role of classroom in the regulation of learning*. Paper presentation at the annual meeting of the National Council of Measurement in Education, San Antonio, TX.

Lui, A., & **Andrade**, H. (April, 2017). *The effects of formative assessment on achievement in the arts: Arts Achieve year two*. Paper presentation at the annual meeting of the American Educational Research Association, San Antonio, TX.

Adie, L., **Andrade**, H., Levault, D., Panadero, E., & Tan, K. (September, 2016). *Assessment for learning: Where are we?* Research and Innovation in Classroom Assessment: International Perspectives. Brisbane, Australia.

**Andrade**, H., & Brown, G. (September, 2016). *Student self-assessment: An overview of research and problems of practice*. Research and Innovation in Classroom Assessment: International Perspectives. Brisbane, Australia.

**Andrade**, H., & Brookhart, S. (April, 2016). *The role of classroom assessment in supporting self-regulated learning*. Paper presented at the annual meeting of the American Educational Research Association. Washington, DC.

Chen, F., Lui, A., **Andrade**, H., Valle, C., Mir, H., & Hogan, K. (April, 2015). *An empirical investigation of criteria-referenced formative assessment in the arts: Year two of the Arts Achieve Project*. Paper presented at the annual meeting of the American Educational Research Association. Chicago, IL.

**Andrade**, H. (2015). *Rubric-referenced self-assessment promotes learning and students love it*. Formative Assessment Research and Implications for Teaching Conference, sponsored by the Regional Educational Laboratory and Marzano Research. Omaha, NE.

**Andrade**, H., & Brown, G. (August, 2014). *Accuracy in student self-assessment: Directions and cautions for research*. Symposium presentation at the EARLI SIG 1 conference. Madrid, Spain.

- Andrade**, H. (2014). *Intended and unintended consequences of assessment*. Plenary presentation at Assessment for Learning: Canada in Conversation with the World. University of New Brunswick, Fredericton, Canada.
- Andrade**, H., & Brookhart, S. (2014). *Toward a theory of assessment as the regulation of learning*. Symposium presentation at the annual meeting of the American Educational Research Association. Philadelphia, PA.
- Andrade**, H. (2014). *Formative assessment and the regulation of learning*. Presentation at the annual meeting of the Council of Chief State School Officers, FAST SCASS group. Orlando, FL.
- Andrade**, H. (2014). *A new era for educational assessment*. Moderator of panel at the launch of the Deeper Learning Research Series. The National Press Club, Washington, DC.
- Andrade**, H. (2014). *Classroom assessment as the co-regulation of learning: Research, practice, and theory*. Scholar in Residence presentation. Virginia Commonwealth University. Richmond, VA.

## D. Additional Information: Research Support and/or Scholastic Performance

### Grant Funding

Role: Co-Investigator @ 17% effort, 1 month summers (Bryer, J., Principal Investigator, Andrade, H., & Cleary, T., Co-Investigators)

Project: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills

Source: Institute of Education Sciences

Time Period: 2020 – 2024

Total Funding: \$3,299,059 PENDING

Role: Co-Investigator (Bryer, J., Principal Investigator, Cleary, T., Co-Investigator)

Project: Diagnostic Assessment and Achievement of College Skills: Personalized Feedback and Targeted Student Supports

Source: U.S. Department of Education Fund for the Improvement of Postsecondary Education

Time Period: 2015 – 2019

Total Funding: Total \$2,999,000

Role: Co-Investigator (Sheehy, M., Principal Investigator, Scanlon, D., & Deane, G., Co-Investigators).

Project: Development of a Supplemental Instructional Course in Reading and Writing Arguments for Ninth Graders at Risk of Leaving School before Graduating

Source: Institute of Education Sciences

Time Period: 2014 – 2017

Total Funding: \$2,100,000

Role: Principal Investigator

Project: The Student Self-Assessment Study

Source: Edna McConnell Clark Foundation

Time Period: 1996 – 1999

Total Funding: \$109,815

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Timothy Cleary

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Associate Professor, Chair, Department of School Psychology

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Manhattan College	B.S.	1994	Psychology
Queens College	M.S.	2000	Education
Queens College	Ed.S.	2000	School Psychology
CUNY – Graduate Center	Ph.D.	2001	Educational Psychology

**A. Personal Statement**

Timothy J. Cleary is an Associate Professor, Chair, and Director of Clinical Training of the Department of School Psychology in the Graduate School of Applied and Professional Psychology (GSAPP) at Rutgers, The State University of New Jersey. His primary research interests include the development and application of self-regulated learning (SRL) and motivation assessment and intervention practices across academic, athletic, and clinical contexts. He has published over 55 peer-review journal articles and book chapters on SRL issues and applications, has edited 2 scholarly books on SRL, and recently authored a research-to-practice SRL book for K-12 teachers, *The Self-Regulated Learning Guide: Teaching Students to Think in the Language of Strategies* (2018). He has obtained multiple grants from federal agencies and foundations totaling approximately \$5 million. Dr. Cleary also served as a Fellow of the Rutgers Leadership Academy (2015-2017) and recently received the distinguished Rutgers Chancellors Scholar Award in 2017.

**B. Positions and Honors**

2017-current	<b>Department Chair</b> , Department of School Psychology, Rutgers, University
2016-2017	<b>Assistant Department Chair</b> , Department of School Psychology, Rutgers, University
2012-current	<b>Associate Professor</b> , Department of School Psychology, Rutgers, University
2009-2012	<b>Associate Professor (with tenure)</b> , Department of Educational Psychology, University of Wisconsin – Milwaukee
2010-2012	<b>Training Director</b> , <i>School Psychology Program</i> University of Wisconsin – Milwaukee
2004-2009	<b>Assistant Professor</b> , Department of Educational Psychology, University of Wisconsin – Milwaukee
2003-2004	<b>Visiting Professor</b> , Department of Educational Psychology, The Graduate Center, City University of New York

2017	<i>Chancellor's Scholar</i> , Rutgers University
2015-2017	<i>Fellow</i> , Rutgers Leadership Academy
2015	<i>Outstanding Manuscript of 2014</i> , AERA, Division I
2005	<i>Early Career Award</i> , Society for the Study of School Psychology

## C. Contributions to Science

### Selected Refereed Articles

- Callan, G. L., & **Cleary, T. J.** (2019). Examining cyclical phase relations and predictive influences of self-regulated learning processes on mathematics task performance. *Metacognition and Learning*. (Online first).
- Lui, A., Franklin, D., Akhmedjanova, D., Gorgun, G., Bryer, J., Andrade, H., & **Cleary, T. J.** (2018). Validity evidence for the DAACS self-regulated learning survey: Internal structure. *Future Review*.
- Reddy, L., **Cleary, T. J.**, Alperin, A., & Verdesco, A. (in press). A critical review of self-regulated learning interventions for children with Attention Deficit-Hyperactivity Disorder. *Psychology in the Schools*, 55(6), 609-628.
- Cleary, T. J.**, Velardi, B., & Schnaidman, B. (2017). Effects of the Self-Regulation Empowerment Program on middle school students' strategic skills, self-efficacy, and mathematics achievement. *Journal of School Psychology*, 64, 28-42.
- Cleary, T. J.**, & Kitsantas, A. (2017). Motivation and self-regulated learning influences on middle school mathematics achievement. *School Psychology Review*, 46 (1), 88-107.
- Cleary, T. J.**, Dembitzer, L., & Kettler, R. J. (2015). Internal factor structure and convergent validity evidence: The self-report version of the Self-Regulation Strategy Inventory. *Psychology in the Schools*, 52(9), 829-844.
- Chen, P. P., **Cleary, T. J.**, & Lui, A. (2015). Examining parents' ratings of middle school students' academic self-regulation using principal axis factor analysis. *School Psychology Quarterly*, 30(3), 385-397.
- Cleary, T. J.**, Callan, G. L., Malatesta, J., & Adams, T. (2015). Examining the level of convergence among self-regulated learning microanalytic processes, achievement, and a self-report questionnaire. *Journal of Psychoeducational Assessment*, 33(5), 439-450. doi: 10.1177/0734282915594739
- Cleary, T. J.** (2011). Professional development needs and practices among educators and school psychologists. *New Directions for Teaching and Learning*, 2011 (126), 77-87. doi: 10.1002/tl.446.
- Cleary, T. J.** (2009). Monitoring trends and accuracy of self-efficacy beliefs during interventions: Advantages and potential applications to school-based settings. *Psychology in the Schools*, 46(2), 154-171. doi: 10.1002/pits.20360

### Selected Books

- Cleary, T. J.** (2018). *The self-regulated learning guide: Teaching students to think in the language of strategies*. New York: Routledge.
- Cleary, T. J.** (Ed.). (2015). *Self-regulated learning interventions with at-risk youth: Enhancing adaptability, performance, and well-being*. Washington, DC: American Psychological Association.

### Selected Chapters

- Cleary, T. J.**, Kitsantas, A., Pape, S. L., & Slemp, J. (2018). Integration of socialization influences and the development of self-regulated learning (SRL) skills: A social-cognitive perspective. In G. A. D. Alief & D. McInerney (Eds.), *Big Theories Revisited* (2<sup>nd</sup> ed., pp. 269-294). Charlotte, NC: Information Age Publishing.
- Cleary, T. J.**, Peters-Burton, E., Gergel, C., & Willet, K. (2018). Applications of cyclical self-regulated

- learning principles to life science. In M. K. DiBenedetto (Ed.), *Connecting self-regulated learning and performance with instruction across high school content areas* (pp. 127-162). Dordrecht, The Netherlands, Springer.
- Kitsantas, A., & Cleary, T. J. (2016). The development of self-regulated learning in secondary school years: A social-cognitive instructional perspective. In K. Wentzel & D. Miele (Eds.), *Handbook of motivation at school* (2<sup>nd</sup> ed., pp. 169-187). New York: Routledge.
- Peters-Burton, E., Cleary, T. J., & Forman, S. (2015). Professional development contexts that promote self-regulated learning and content learning in trainees. In T. J. Cleary (Ed.), *Self-regulated learning interventions with at-risk youth: Enhancing adaptability, performance, and well-being* (pp. 205-228). Washington, D.C.: American Psychological Association.
- Cleary, T. J., & Zimmerman, B. J. (2012). A cyclical self-regulatory account of student engagement: Theoretical foundations and applications. In S. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 237-258). New York: Springer.
- Zimmerman, B. J., & Cleary, T. J. (2009). Motives to self-regulate learning: A social-cognitive account. In K. Wentzel & A. Wigfield (Eds.), *Handbook on motivation at school* (pp. 247-264). Boca Raton, FL: Taylor & Francis.

## Selected Conference Presentations

- Pawlo, E., Cleary, T. J., Slemp, J., Waire, J., Bryer, J., & Gambino, T. (2019, April). *Academic success in online colleges: The role of self-regulated learning profiles*. Paper presented at the annual meeting of the American Education Research Association, Toronto, Canada.
- Slemp, J., Pawlo, E., Cleary, T. J., Sharoupim, N., & Gambino, T. (2019, April). *Evaluating implementer perceptions of an assessment to feedback system through thematic analysis*. Paper presented at the annual meeting of the American Education Research Association, Toronto, Canada.
- Pawlo, E., Slemp, J., Cleary, T. J., Waire, J., Gambino, T., & Austin, A. (2019, April). *Self-regulation in an online classroom: Linking student profiles to success*. Paper presented at the annual meeting of the National Association of School Psychologists, Atlanta, Georgia.
- Bryer, J., Lui, A., Franklin, D., Andrade, H., & Cleary, T. J. (2019, April). Efficacy of the Diagnostic Assessment and Achievement of college students on multiple success indicators. *Self-regulation in an online classroom: Linking student profiles to success*. Paper presented at the annual meeting of the American Education Research Association, Toronto, Canada.
- Franklin, D., Liu, A. M., Andrade, H., Bryer, J., & Cleary, T. J. (2018, April). *Validity evidence of the internal structure of the DAACS Self-Regulated Learning Survey*. Poster presented at the annual meeting of the American Educational Research Association, New York.
- Cleary, T. J., Peters-Burton, E., Gergel, C., & Willet, K. (2018, April). *Self-regulated learning in the physical sciences and life sciences*. Paper presented at the annual meeting of the American Education Research Association, New York.
- Cleary, T. J. (2016, April). *Examining the strategic and achievement effects of the Self-Regulation Empowerment Program n middle school students*. Paper presented at the annual meeting for the American Educational Research Association, Washington, DC.
- Cleary, T. J. (2015, April). *Microanalytically assessing self-regulated learning during task performance: Conceptual foundations and relations with aptitude and event measures*. Paper presented at the annual meeting for the American Educational Research Association, Chicago, IL.
- Callan, G. L., Cleary, T. J., & Kaminski, A. (2015, April). *The convergence and predictive validity of four self-regulated learning formats*. Paper presented at the annual meeting for the American Educational Research Association, Chicago, IL.
- Cleary, T. J., & Callan, G. L. (2014, April). *Using SRL microanalysis to examine relations among cyclical phase SRL processes during a mathematics task*. Paper presented at the annual meeting for the American Educational Research Association, Philadelphia, PA.
- Artino, A. R., & Cleary, T. J. (2013, November). *Using self-regulated learning microanalysis to examine*

*clinical reasoning in novices*. Paper presented at the annual meeting for the Association of American Medical Colleges, Philadelphia, PA.

#### D. Additional Information: Research Support and/or Scholastic Performance

##### Grant Funding

2020-2024, Grant Amount: \$ 3,299,059 PENDING, Bryer, J. (PI), Andrade, H. (co-I), & **Cleary, T. J. (co-I)**. *Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills*. Funding Source: Institute of Education Sciences. (Yrs. 1-4 @ 21% effort during the duration of the project

2016-2018, Grant Amount: \$1,534,972, Artino, A. R. (co-PI), & Durning, S. J. (co-PI). **Cleary, T. J. (Collaborating Investigator)**. *Developing assessment tools to better understand the mechanisms of clinical reasoning in military medical simulation*. Funded by the Joint Program Committee-1 (JPC-1)/Medical Simulation and Information Sciences Research Program, Congressionally Directed Medical Research Programs.

2015-2019, Grant Amount: \$2,999,877, Bryer, J., **Cleary, T. J. (co-PI)**, & Andrade, H., *Diagnostic Assessment and Achievement of College Skills (DAACS): Personalized Feedback and Targeted Student Supports*, Fund for the Improvement of Postsecondary Education (FIPSE), Department of Education

2014-2016, Grant amount: \$49,928, **Cleary, T. J. (PI; sole)**, *Reforming academic support programs in middle schools: Examining the effects of self-regulated learning (SRL) instruction*. Spencer Foundation. Support to examine the efficacy of a school-based self-regulated learning intervention program in middle schools.

2014-2015, Grant amount: \$24,000, Artino, A.R. (PI), **Cleary, T. J. (co-investigator)**, Durning, S. J., La Rochelle, J. S., Picho, K., & Dong, T. *Combining self-regulated learning microanalysis with virtual-patient simulation to assess clinical reasoning and cognitive engagement*. MedU Research Grants Program. Support to extend prior research on SRL microanalysis and virtual patient simulation

2012-2013, Grant Amount: \$91,000, Artino, A.R. (PI), **Cleary, T. J. (co-investigator)**, La Rochelle, J. S., Voss, J., Dong, T., Durning, S. J., & Knoche, C. *Developing and testing a self-regulated learning assessment methodology combined with virtual-patient simulation in medical education*, U.S. Air Force Medical Research Program. Support to examine the validity and utility of using virtual patient simulation technology to assess medical students' self-regulated learning skills.

##### Grant Consultant

2012-2017: Grant amount: \$2,500,000, DeCastro, J. (PI). *From practice to preceptor (FP2P)*, Health Resources and Services Administration. **Cleary, T. J., Consultant** (as of 2015).

2014-2017: Grant Amount: \$349,489, Jackson, C. (PI), Wooten, O., & Eaton, S. *Broadening participation research project: Effect of self-regulated learning development on student success in STEM*, National Science Foundation. **Cleary, T. J., Consultant**.

## **BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.

Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Marco Varisco

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Associate Professor

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
Università degli Studi di Milano, Milano, Italy	Laurea (B.S.+M.S.)	05/1998	Mathematics
Westfälische Wilhelms-Universität, Münster, Germany	Ph.D.	05/2006	Mathematics

### **A. Personal Statement**

My research and teaching expertise lies in the area of mathematics, and I am dedicated to students' mathematics learning with years of experience teaching a range of mathematics courses. Having served as calculus director at the University at Albany, State University of New York, I am committed to help implement a valid and reliable diagnostic mathematics assessment that will prepare students for pre-calculus or calculus classes so they have the skills required to succeed in these courses. I believe DAACS can do this. Previously, I oversaw the implementation of ALEKS at the University at Albany, to help students learn where they struggled prior to starting their course, so they can learn, prepare, and be ready by the time courses began.

### **B. Positions and Honors**

#### **Positions and Employment**

- Since 2017 Associate Professor, Department of Mathematics and Statistics,  
University at Albany – SUNY, Albany, NY
- 2010-2017 Assistant Professor, Department of Mathematics and Statistics,  
University at Albany – SUNY, Albany, NY
- 2006-2010 Visiting Assistant Professor  
Binghamton University – SUNY, Binghamton, NY

#### **Awards and Honors**

Award: University at Albany's College of Arts and Sciences Dean's Award for *Outstanding achievement in teaching*, 2015

#### **Other Experience and Professional Memberships**

Referee & Reviewer: Annals of K-Theory, Geometry & Topology, Journal of Topology, Topology Proceedings, Topology and its Applications, Proceedings of the AMS, Canadian Journal of Mathematics, Mathematische Nachrichten, Münster Journal of Mathematics, Simons Foundation, Mathematical Reviews (MathSciNet)

Selected Invited Lectures (last two years): Lecture series on *Assembly maps and trace methods*, Homotopy Theory Summer School and Workshop, Berlin, Germany (2018); Colloquium, Syracuse University (2018); Homotopy Theory Conference, University of Illinois at Urbana-Champaign (2017); Groups,

Manifolds, & K-Theory Conference, Münster, Germany (2017); Algebraic K-Theory Seminar, University of Illinois at Chicago (2017)

Organizer: Upstate New York Topology Seminar (2018), Algebra/Topology Seminar (since 2010), Annual Endowed *Maheshwari* Colloquium (2012–2018), Mathematics Colloquium (2010–2018), and faculty advisor for the American Mathematical Society Graduate Student Chapter (since 2013) at the University at Albany, State University of New York

### C. Contribution to Science

#### Five publications most closely related to the proposed project

Wolfgang Lück, Holger Reich, John Rognes, and Marco Varisco, *Assembly maps for topological cyclic homology of group algebras*, Journal für die Reine und Angewandte Mathematik (Crelle's Journal), 31 pages, published online 2017

Wolfgang Lück, Holger Reich, John Rognes, and Marco Varisco, *Algebraic K-theory of group rings and the cyclotomic trace map*, Advances in Mathematics 304 (2017), 930–1020

Holger Reich and Marco Varisco, *On the Adams isomorphism for equivariant orthogonal spectra*, Algebraic & Geometric Topology 16 (2016), no. 3, 1493–1566

Holger Reich and Marco Varisco, *Algebraic K-theory, assembly maps, controlled algebra, and trace methods*, in Space – Time – Matter. Analytic and Geometric Structures, 1–50, de Gruyter, 2017

Ross Geoghegan and Marco Varisco, *On Thompson's group T and algebraic K-theory*, in Geometric and Cohomological Group Theory, London Mathematical Society Lecture Note Series, vol. 444, 34–45, Cambridge University Press, 2017

#### Up to five other significant publications

Wolfgang Lück, Holger Reich, and Marco Varisco, *Commuting homotopy limits and smash products*, K-Theory 30 (2003), no. 2, 137–165

Alexandre Tchernev and Marco Varisco, *Modules over categories and Betti posets of monomial ideals*, Proceedings of the American Mathematical Society 143 (2015), no 12, 5113–5128

Alexandre Tchernev and Marco Varisco, *Betti categories of graded modules and applications to monomial ideals and toric rings*, 2016, 24 pages, submitted, arXiv:1605.09748

### D. Additional Information: Research Support and/or Scholastic Performance

#### Pending:

Role: Subject Matter Expert and Project Advisor @ 3% effort (Bryer, J., Principal Investigator, Andrade, H., & Cleary, T., Co-Investigators)

Project: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills

Source: Institute of Education Sciences

Time Period: 2020 – 2024

Total Funding: \$ 3,299,059 PENDING

#### Active or Previous

External Grants: Simons Foundation's Collaboration Grant for Mathematicians, *Algebraic K-theory and equivariant stable homotopy theory* (# 419561, 2016–2021), NSF Conference Grant for the Upstate New York Topology Seminar (# 1844273, 2018, with Ellen Gasparovic and Brenda Johnson)

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Robert P. Yagelski

ERA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Associate Vice Provost and Director, Program in Writing and Critical Inquiry; Professor, Department of Educational Theory & Practice

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
Pennsylvania State University	B.A.	11/1980	English
University of New Hampshire	M.A.	5/1985	English/Composition
Ohio State University	Ph.D.	8/1991	Rhetoric and Composition/English

#### A. Personal Statement

My research and scholarly inquiry focus broadly understanding writing and helping to improve writing instruction at all levels of education. To that end, I have examined literacy as a social activity and writing as a technology. I have studied revision in student writing, formal error in the writing of adolescent students, and the analytical strategies college students employ in their writing; I have also studied the impact of online technologies on classroom discourse. My recent scholarly work explores the ontological dimensions of writing and the transformative capacity of writing and its relationship to student well-being. I have written or co-edited three scholarly monographs on writing and writing instruction and I have published numerous scholarly articles on various aspects of writing theory, writing instruction and curriculum, and the preparation of teachers of writing. I am also the author of three college writing textbooks and the co-author of a fourth writing textbook. In addition, I have directed a site of the National Writing Project, through which I conducted dozens of professional development workshops for K-12 teachers and consulted with school districts on how best to improve writing instruction in their classrooms.

#### B. Positions and Honors

*Associate Vice Provost and Director, Program in Writing & Critical Inquiry, the University at Albany, State University of New York, 2013 – present.*

*Professor, Department of Educational Theory and Practice, the University at Albany, State University of New York; courtesy appointment in Department of English; 2016 – present.*

*Director, Capital District Writing Project; 2004-2017.*

*Associate Professor, Department of Educational Theory and Practice, the University at Albany, State University of New York; courtesy appointment in Department of English; 2001 - 2016.*

*Associate Dean for Academic Affairs, School of Education, the University at Albany, State University of New York, 2009 - 2010.*

*Associate Professor*, Department of English, the University at Albany, State University of New York, 2000 - 2001.

*Assistant Professor*, Department of English, the University at Albany, State University of New York, 1995 - 2000.

*Assistant Professor*, jointly appointed in Departments of English and Curriculum & Instruction, Purdue University, 1991 - 1995.

*Adjunct Instructor*, English, Ohio University (Lancaster) Correctional Programs, 1990.

*Chair*, English Department, Vermont Academy, Saxtons River, VT, 1986-1988.

*Teacher*, English Department, Vermont Academy, Saxtons River, VT, 1985-1988.

## **C. Contributions to Science**

### **Books:**

Yagelski, R. P. (2011). *Writing as a way of being: Writing instruction, nonduality, and the crisis of sustainability*. New York: Hampton Press.

Yagelski, R. P., and Leonard, S. A. (eds.). (2002). *The relevance of english: Teaching that matters in students' lives*. Urbana, IL: NCTE.

Yagelski, R. P. (2000). *Literacy matters: Writing and reading the social self*. New York: Teachers College Press.

### **Textbooks:**

Yagelski, R. P. (2018). *Writing: Ten core concepts*, 2<sup>nd</sup> ed. Boston: Cengage.

Yagelski, R. P. (2015). *Writing: Ten core concepts*. Boston: Cengage.

Yagelski, R. P. (2009). *Reading our world: Conversations in context*, 2nd edition. Boston, MA: Wadsworth/Cengage Publishing.

Yagelski, R. P. (2007). *The Thomson reader: Conversations in context*. Boston, MA: Wadsworth/Thomson Publishing.

Yagelski, R. P. (2001). *Literacies and technologies: A reader for contemporary writers*. New York: Addison Wesley Longman.

Yagelski, R.P., and Miller, R. (2010). *The Informed Argument*, 8th edition. Boston: Cengage.

Yagelski, R.P. , and Miller, R. (2003). *The Informed Argument*, 6th edition. Boston: Wadsworth/Cengage Publishing.

### **Selected Refereed Articles:**

Wilder, L., and Yagelski, R.P. (2018). Examining cross-disciplinary analytic strategies in first-year college writing. *Research in the Teaching of English*, 52(4).

Yagelski, R. P. Writing, silence, and well-being. (2017-2018) *Journal of the Assembly for Expanded Perspectives on Writing*, 23, pp. 14-24.

- Whitney, A., Hicks, T., Zuidema, L., Fredricksen, J., & Yagelski, R.P. (2014). Teacher-writers: Then, now, and next. *Research in the Teaching of English*, 49(2), 177-184.
- Wilcox, K., Yagelski, R. P., & Yu, F. (2014). The nature of error in adolescent student writing. *Reading and Writing: An Interdisciplinary Journal*, 27(6), 1073-1094.
- Yagelski, R. P. (2012). Writing as praxis. *English Education*, 44(2), 188-204.
- Yagelski, R. P. (2009). A thousand writers writing: Seeking change through the radical practice of writing as a way of being in the world. *English Education*, 42(1), 6-28. [Winner of 2010 NCTE Janet Emig Award for exemplary scholarship]
- Yagelski, R. P., and Grabill, J. T. (1998). Computer-mediated communication in the undergraduate writing classroom: A study of the relationship of online discourse and classroom discourse in two writing classes. *Computers and Composition*, 15(1), 11-40.
- Yagelski, R. P. (1995). The role of classroom context in the revision strategies of student writers. *Research in the Teaching of English*, 29(2), 216-38.
- Yagelski, R. P. (1994). Literature and literacy: Rethinking English as a school subject. *English Journal*, 83(3), 30-36.
- Selected Recent Conference Papers and Invited Talks:**
- Yagelski, R.P. (2018, March). Retention, student success, and first-year writing: purposes and cross-purposes. Paper presented at the Conference on College Composition and Communication. Kansas City, MO.
- Altarriba, J., Fogarty, R., Krzykowski, L., Malatesta, J. and Yagelski, R. P. (2018, January). Integrated strategy for undergraduate retention, success, and preparation for the 21st century. Roundtable at the 104th annual meeting of the Association of American Colleges and Universities (AAC&U). Washington, DC.
- Yagelski, R.P. (2017, November). "Writing, Teaching, and well-being." Keynote address, 12<sup>th</sup> Annual IDEAS Symposium. Nassau Community College, Hempstead, NY.
- Yagelski, R.P. (2017, June). "Writing, silence, and well-being." Keynote address, Annual Conference of the Assembly for Expanded Perspectives on Learning. Estes Park, CO.
- Yagelski, R.P. (2017, March). "Writing about more than writing: Teaching academic writing as a means to well-being." Paper presented at the Conference on College Composition and Communication. Portland, OR.
- Yagelski, R.P. (2016, March). "Writing and well-being: Thoughts on teaching academic writing as a humane practice." Invited lecture. Temple University, Philadelphia, PA.
- Yagelski, R.P., and Wilder, L. (2015, June). Integrating research, assessment, and practice to improve first-year college writing. Paper presented at the 10<sup>th</sup> Annual Conference of the International Association for the Improvement of Mother Tongue Education (IAIMTE). University of Southern Denmark, Odense, Denmark.
- Yagelski, R.P. (2015, February). The myth of authenticity in writing: Voice and the experience of writing. Keynote Address. Pacific Rim Conference on Literature and Rhetoric. University of Alaska, Anchorage, AK.
- Yagelski, R.P. (2014, September). Inquiry-based writing program development: Mediating first-year challenges. Annual Conference of the SUNY Council on Writing. Syracuse, NY.
- Yagelski, R.P., and Wilder, L. (2014, August). Describing cross-disciplinary analytic moves in first-year college student writers. Conference on Writing Research. University of Amsterdam, Netherlands.

Yagelski, R.P. (2013, November). Writing and teaching as transformative practices. Paper presented at the Annual Convention of the National Council of Teachers of English. Boston, MA.

Wilcox, K., and Yagelski, R.P. (2012, July). The nature and frequency of formal error in the writing of adolescent students. Paper presented (In absentia) at the Conference on Writing Research. Porto, Portugal.

Yagelski, R.P. (2012, March). Writing, well-being, and change: A theory of writing and instruction for a threatened world. Paper presented at the Conference on College Composition and Communication. St. Louis, MO.

#### **D. Additional Information: Research Support and/or Scholastic Performance**

Role: Subject Matter Expert and Project Advisor @ 7% effort (Bryer, J., Principal Investigator, Andrade, H., & Cleary, T., Co-Investigators)

Project: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills

Source: Institute of Education Sciences

Time Period: 2020 – 2024

Total Funding: \$ 3,299,059 PENDING

Role: Co-Investigator (Principal Investigator: L. Wilder)

Project: Investigating the Impact of First-Year Composition: A Comparative Study on One Campus.

Source: CCCC Research Initiative (National Council of Teachers of English).

Time Period: 2015 – 2017.

Total Funding: \$9750.

Role: Principal Investigator

Project: SEED Grant for Continuation of College-Ready Writers Program

Source: National Writing Project

Time Period: 2016 – 2017

Total Funding: \$20,000

Role: Principal Investigator

Project: SEED Grant for Teacher Leadership Development

Source: National Writing Project

Time Period: 2014 – 2015

Total Funding: \$20,000

Role: Principal Investigator

Project: College-Ready Writers Program

Source: U.S. Department of Education I3 Program (through the National Writing Project)

Time Period: 2013 – 2016

Total Funding: \$593,000

Role: Principal Investigator

Project: SEED Grant for Teacher Leadership Development

Source: National Writing Project

Time Period: 2012 – 2013

Total Funding: \$20,000

Role: Principal Investigator

Project: Capital District Writing Project

Source: National Writing Project

Time Period: 2004 – 2011

Total Funding: \$330,000

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Abbe Herzog

ERA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Lecturer, Adjunct Faculty, Product Owner

**EDUCATION/TRAINING** (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
State University of New York at Stony Brook	B.S.	05/1981	Applied Mathematics and Statistics
State University of New York at Stony Brook	M.S.	05/1982	Statistics
Yale University	M.Phil.	12/1985	Statistics
University of Wisconsin-Madison	M.A.	05/1999	Mathematics
University of Wisconsin-Madison	M.S.	12/1999	Mathematics Education
University of Wisconsin-Madison	Ph.D.	05/2002	Mathematics Education

**A. Personal Statement****B. Positions and Honors**

Product Owner and Statistician, 3M Health Information Systems, Albany, NY	2017 – present
Consultant III, Client Engagement, 3M Health Information Systems, Albany, NY	2013 – 2017
Lecturer, Department of Mathematics and Physics, Excelsior College, Albany, NY	2011 – present
Subject Matter Expert and Course Developer, Department of Mathematics and Physics, Excelsior College, Albany, NY	2011 – 2017
Lecturer, Department of Educational Theory and Practice, University at Albany, Albany, NY	2011 – present
Provost's Fellow, Office of the Vice President for Research University at Albany, Albany, NY	2013
Research Assistant Professor, Dept. of Educational Theory and Practice, University at Albany, Albany, NY	2009 – 2014
Assistant Professor, Department of Educational Theory and Practice University at Albany, Albany, NY	2003 – 2009
Statistical Program Leader, Health Ratings Center, Consumer Reports, Yonkers, NY	2008 – 2013
Assistant Professor, Department of Learning and Teaching, Rutgers University, New Brunswick, NJ	2001 – 2003
Statistical Program Leader, Consumer Reports, Division of Statistical Services, Yonkers, NY	1987 - 1995
Mathematics Teacher, Hamden Hall Country Day School, Hamden, CT	1986 – 1987

Mathematics and Science Specialist, Academic Development Center, Albertus Magnus College, Hamden, CT	1984 – 1986
Residence Hall Director, Division of Campus Residences, SUNY Stony Brook, Stony Brook, NY	1983 – 1984
Lecturer, Department of Applied Mathematics and Statistics, SUNY Stony Brook, Stony Brook, NY	1982 – 1984
Statistician, Applied Mathematics and Medical Departments, Brookhaven National Laboratory, Upton, NY	1982 – 1983
<b>Select Consulting Clients</b>	
Algebra Nation, 2017	
The Urban Institute, 2011 – 2012	
The Pew Charitable Trusts, 2007 – 2009	
ETS K-12 Assessments, 1999 – 2008	
Homeroom.com, Princeton Review Products. 1999 – 2002	
United Nations Secretariat Statistics Office, 1989	
Yale School of Medicine, 1985 – 1986	
Legal Defense Fund of the NAACP, 1982 – 1983	
<b>Fellowships and Awards</b>	
Excellence in Teaching Award, School of Education, University at Albany, 2017	
Initiatives for Women Award, University at Albany, 2004	
Teaching Fellow, College of Letters and Science, University of Wisconsin-Madison, 1999	
Elizabeth Hirschfelder Scholarship, Department of Mathematics, University of Wisconsin-Madison, 1999	
Excellence in Teaching Award, Department of Mathematics, University of Wisconsin-Madison, 1998	
Vilas Professional Development Fellowship, University of Wisconsin-Madison, 1999	
Spencer Research Training Program Fellow, Wisconsin Center for Education Research, 1995 – 1997	
Wisconsin Alumni Research Foundation Fellow, University of Wisconsin-Madison, 1995 – 1996	
Yale University Fellowship, 1984 – 1985	
SUNY Stony Brook University Association Graduate Fellowship, 1981 – 1982	

### C. Contributions to Science

- Herzig, A. & Steinthorsdottir, O. (2019). Cultural influences in mathematics education. In S. Lerman (Ed.), *Encyclopedia of Mathematics Education*. Springer, Cham: Berlin.
- Oeffinger, K.C., Fontham, E.T.H., Etzioni, R., Herzig, A., Michaelson, J.S., Shih, Y.T., Walter, L.C., et.al. (2015). Breast cancer screening for women at average risk: 2015 guideline update from the American Cancer Society. *Journal of the American Medical Association*, 314(15), 1599-1614.
- Saslow, D., Solomon, D., Lawson, H.W., Killackey, M., Kulasingam, S.L. Cain, J.M., Garcia, F.A., Moriarty, A.T., Waxman, A.G., Wilbur, D.C., Wentzensen, N., Downs,L.S., Spitzer, M., Moscicki, A.B., Franco, E.L, Stoler, M.H. Schiffman, M., Castle, P.E., Myers, E.R., Cemlow, D., Herzig, A., Kim, J.J., Kinney, W., Herschel, W.L, & Waldman, J. (2012). American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology screening guidelines for the prevention and early detection of cervical cancer. *Journal of Lower Genital Tract Disease*, 16(3), 175-204.
- Herzig, A. (2011). Mathematics. In B.J. Bank (Ed.), *Gender & Higher Education* (pp. 227-233). Baltimore: The Johns Hopkins University Press.
- Herzig, A. (2010). Women belonging in the social worlds of graduate mathematics. *The Mathematics Enthusiast*, 7(2&3), 177-208. <http://scholarworks.umt.edu/tme/vol7/iss2/2>

- Lacampagne, C.B., Campbell, P.B., Herzig, A., Damarin, S. & Vogt, C.M. (2007). Gender equity in mathematics. In S. Klein (Ed.). *Handbook for Achieving Gender Equity through Education* (pp. 235-254). Mahwah, NJ: Erlbaum.
- Herzig, A. (2006). "I just didn't see that I had a place in the old white guy's club": How can women and students of color come to belong in graduate mathematics? In J. Byzinstinsky & S. R. Bird (Eds.). *Removing Barriers: Women in Academic Science, Technology, Engineering and Mathematics* (pp. 254-270). Bloomington: Indiana University Press.
- BIRS Workshop on Women in Mathematics (2006). *Women Mathematicians in the Academic Ranks: A Call to Action*. Report prepared by the participants in the Workshop on Women in Mathematics, Banff International Research Station for Mathematical Innovation and Discovery, Banff, AB, Canada.
- Herzig, A., Cohen-Corwin, A. & Manderscheid, D. (2006). *Finding and Keeping Graduate Students in the Mathematical Sciences*. Report on outcomes of a workshop by the same name presented at the American Institute of Mathematics (AIM) Research Conference Center, Palo Alto, CA.
- Herzig, A. (2005). Goals for achieving diversity in mathematics classrooms. *Mathematics Teacher (Focus Issue on the Human Dimensions of Mathematical Diversity)*, 99(4), 253-259.
- Herzig, A. (2004). Becoming mathematicians: Women and students of color choosing and leaving doctoral mathematics. *Review of Educational Research*, 74(2), 171-214.
- Herzig, A. (2004). "Slaughtering this beautiful math": Graduate women choosing and leaving mathematics. *Gender and Education*, 16(3), 379-395.
- Herzig, A., Ambrose, R. & Steinthorsdottir, O. (2004). Mathematics instruction that works for girls. In M.F. Chappell, J. Choppin, & J. Salls (Eds.), *Empowering the Beginning Teacher of Mathematics in High School* (pp. 48-50). Reston, VA: National Council of Teachers of Mathematics. Also published in:
- M.F. Chappell & T.Pateracki (Eds.), *Empowering the Beginning Teacher of Mathematics in Middle School* (pp. 45-46). Reston, VA: NCTM.
- M.F.Chappell, J.F. Schielack, & S.Zagorski (Eds.), *Empowering the Beginning Teacher of Mathematics in Elementary School* (pp. 46-47). Reston, VA: NCTM.
- Herzig, A. & Kung, D.T. (2004). Making group work effective in the mathematics classroom. In M.F. Chappell, J. Choppin, & J. Salls (Eds.), *Empowering the Beginning Teacher of Mathematics in High School* (pp.19, 50). Reston, VA: National Council of Teachers of Mathematics. Also published in:
- M.Chappell, J. Schielack, & S. Zagorski (Eds.), *Empowering the Beginning Teacher of Mathematics in Elementary School*. Reston, VA: NCTM. pp. 36-37
- Herzig, A. (2004). Thinking, feeling, acting like a mathematician: Women and people of color in doctoral mathematics. In D.E. McDougall & J.A. Ross (Eds.) *Proceedings of the 26th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Vol. 2 (pp. 721-728). Toronto: OISE/UT.
- Herzig, A. & Kung, D.T. (2003). Cooperative learning in calculus reform: What have we learned? In A. Selden, E. Dubinsky, G. Harel, & F. Hitt (Eds.), *Research in Collegiate Mathematics Education V* (pp. 30-55). Washington, DC: American Mathematical Society and Mathematical Association of America.
- Herzig, A. (2002). Where have all the students gone? Participation of doctoral students in authentic mathematical activity as a necessary condition for persistence toward the Ph.D. *Educational Studies in Mathematics*, 50(2), 177-212.
- Herzig, A. (2002). Reflections on mathematics epistemology and its implications for post-secondary instruction. In D.S. Mewborn, P. Sztajn, D.Y. White, H.G. Wiegel, R.L. Bryant, & K. Nooney, K. (Eds.). *Proceedings of the 24th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Vol. 4 (pp. 1843-1846). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

Herzig, A. (2001). The role of the intellectual culture of mathematics in doctoral student attrition. In R. Speiser, C.A. Maher, & C.N. Walter (Eds.). *Proceedings of the 23rd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 617-630). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

#### D. Additional Information: Research Support and/or Scholastic Performance

Role: Subject Matter Expert and Project Advisor @ 3% effort (Bryer, J., Principal Investigator, Andrade, H., & Cleary, T., Co-Investigators)

Project: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills

Source: Institute of Education Sciences

Time Period: 2020 – 2024

Total Funding: \$ 3,299,059 PENDING

*GEMSTONES: Graduate Education in the Mathematical Sciences to Nurture Every Student.* National Science Foundation, 2008 – 2010. Principal Investigator

*Career: Women and Students of Color in Graduate Mathematics.* Early Career Award, National Science Foundation, 2004 – 2009. Principal Investigator

*Mathematics-Science Partnership,* University of the State of New York, State Education Department, 2004 – 2007. Co-principal Investigator

*Mathematical Biographies of Mathematicians of Color.* Faculty Research Awards Program, University at Albany, 2005 – 2006. Principal Investigator

Award from Hewlett-Packard Foundation to the School of Engineering, Rutgers University. 2003 – 2006. Co-principal investigator

Exxon-Mobil Foundation award to the Department of Mathematics, Rutgers University. 2002. Principal Investigator

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Elijah Mayfield

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Research Consultant

**EDUCATION/TRAINING** (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Minnesota, Morris	B.A.	05/2009	Computer Science with Honors
Carnegie Mellon University	M.S.	08/2011	Language Technologies

**A. Personal Statement**

Elijah Mayfield is Entrepreneur-in-Residence at Carnegie Mellon University, where he researches how human decision-making and biases are encoded in machine learning systems, and adjunct faculty at the University of Pennsylvania, where he teaches in the School of Social Policy and Practice. Previously, he was Vice President of New Technologies at Turnitin, managing machine learning and NLP research for educational products used by more than 30 million students globally. He joined Turnitin when they acquired LightSide Labs, which he founded as CEO with support from the Gates Foundation, the College Board, the US Department of Education, and others. Mayfield has coauthored more than 40 peer-reviewed publications on language technologies and human-computer interaction, receiving awards including a Siebel Scholarship, an IBM Ph.D. Fellowship, and being named to Forbes 30 under 30 in Education.

**B. Positions and Honors****Positions****Carnegie Mellon University - Entrepreneur-in-Residence, September 2018-Present**

- Advise students, faculty, and staff in technology transfer from research to startup businesses.
- Support students in the Project Olympus incubator in fundraising, business, and product development

**Bill & Melinda Gates Foundation / Chan Zuckerberg Initiative - Policy Advisor, July - December 2018**

- Serve as subject matter expert on the intersection of edtech and literacy.
- Participate in strategic planning, authoring RFI and RFPs, and funding grant proposals.

**Turnitin - Vice President, New Technologies, October 2014 - July 2018**

- Led all departments in launching Revision Assistant, a new machine learning-based edtech product; built to \$3M ARR and net-negative churn after two years in market.
- On executive leadership team during a 3-year period where recurring revenue grew by over \$50 million, with over 95% annual customer retention and high operating margins.
- Grew the company's Pittsburgh office to 35 employees, including an industry-leading AI research team with a track record of deployed algorithms in the classroom and peer-reviewed publication.
- Championed the company's shift to machine learning products, user-centered design practices,

customer success, and standard best practices in B2B SaaS.

**LightSide Labs - Founder and CEO, March 2013 - October 2014**

- Launched a startup out of Ph.D. research in natural language processing and machine learning at Carnegie Mellon University; bootstrapped growth to 10 employees.
- Won grants and contracts totaling more than \$1 million from organizations like the College Board, the Bill & Melinda Gates Foundation, and the US Department of Education through SBIR.
- Sold to Turnitin within 18 months, delivering 8x return to investors, without institutional VC.

**GSV Accelerate I - Strategic Advisory Board, 2018-Present**

- Subject matter expert on AI and machine learning in education for \$100M venture capital fund.
- General partners Deborah Quazzo, Michael Moe, Michael Cohn, Julia Stiglitz

**US Department of Education IES Grant R305A160245 - Advisory Board, 2016-2019**

- “Response-to-Text Tasks to Assess Students' Use of Evidence and Organization in Writing: Using Natural Language Processing for Scoring Writing and Providing Feedback At-Scale.” PIs Diane Litman, Richard Correnti, and Lindsay Clare Matsumara.

**BGC3 - Advisor, 2015**

- Served as subject matter expert to Bill Gates on technology in literacy education (with Steve Graham, Bror Saxberg, and Eileen Murphy)

**Council of Chief State School Officers - Advisor, 2014**

- Subject Matter Expert at Advancement in Automated Scoring Summit
- Subject Matter Expert at Innovation in Scoring Students' Mathematical Reasoning Meeting

**Carnegie Mellon University - Research Assistant, 2009-13 (with Carolyn Penstein Rosé)**

**The College Board - Research Consultant, 2012-13**

**IBM T.J. Watson Research Center - Research Intern, 2012 (with Shimei Pan and Jennifer Lai)**

**Worth Publishers - Research Consultant, 2011**

**Honors**

**Forbes - 30 Under 30 (Education), 2017**

**World Economic Forum - Global Shaper, 2013**

**IBM - Ph.D. Fellowship, 2013**

**Thomas & Stacey Siebel Foundation - Siebel Scholarship, 2011**

**C. Contributions to Science**

**Elijah Mayfield** and Alan W Black (2019). Analyzing Wikipedia Deletion Debates with a Group Decision-Making Forecast Model. *ACM Conference on Computer-Supported Collaborative Work (CSCW)*.

Shrimai Prabhumoye, **Elijah Mayfield**, and Alan W Black (2019). Principled Frameworks for Evaluating Ethics in NLP Systems. *Workshop on Widening NLP at the Association for Computational Linguistics (ACL)*.

**Elijah Mayfield**, Michael Madaio, Shrimai Prabhumoye, David Gerritsen, Brittany McLaughlin, Ezekiel Dixon-Román, and Alan W Black (2019). Equity Beyond Bias in Language Technologies for Education. *Workshop on Innovative Use of NLP for Building Educational Applications at the Association for Computational Linguistics (ACL)*.

**Elijah Mayfield** and Alan W Black (2019). Stance Classification, Outcome Prediction, and Impact Assessment: NLP Tasks for Studying Group Decision-Making. *Workshop on Natural Language Processing + Computational Social Science at the North American Association for Computational Linguistics (NAACL)*.

Diyi Yang, Robert Kraut, Tenbroeck Smith, **Elijah Mayfield**, and Dan Jurafsky (2019). Seekers, Providers, Welcomers, and Storytellers: Modeling Social Roles in Online Health Communities. *ACM Conference on Human Factors in Computing Systems (CHI)*. Best Paper Honourable Mention.

**Elijah Mayfield** and Alan W Black (2018). Constraining Decision-Making Over Time with Categories and Policies. *ACM Conference on Computer-Supported Collaborative Work (CSCW) Workshop on "Participation" in Data-driven Algorithmic Ecosystems*.

**Elijah Mayfield** and Stephanie Butler (2018). Districtwide Implementations Outperform Isolated Use of Automated Feedback in High School Writing. *International Conference of the Learning Sciences (ICLS) Industry/Commercial Track*.

Patti West-Smith, Stephanie Butler, and **Elijah Mayfield** (2018). Trustworthy Automated Essay Scoring without Explicit Construct Validity. *AAAI Spring Symposium on AI and Society*.

**Elijah Mayfield**, David Adamson, Shayne Miel, Bronwyn Woods, Stephanie Butler, and Jill Crivelli (2018). Beyond Automated Essay Scoring: Forecasting and Improving Outcomes in Middle and High School Writing. *ACM Learning Analytics and Knowledge (LAK)*.

Bronwyn Woods, David Adamson, Shayne Miel, and **Elijah Mayfield** (2017). Formative Essay Feedback Using Predictive Scoring Models. *ACM Knowledge Discovery and Data Mining (KDD)*.

Shayne Miel, Holly Garner, David Adamson, and **Elijah Mayfield** (2016). Generating Rubric Scores from Pairwise Comparisons. *National Council on Measurement in Education Conference (NCME)*.

Mark Shermis, Susan Lottridge, and **Elijah Mayfield** (2015). The Impact of Anonymization for Automated Essay Scoring. *Journal of Educational Measurement (JEM)*. 52(4), pp. 419-436.

Shimei Pan, **Elijah Mayfield**, Jie Lu, and Jennifer Lai (2015). Signals of Expertise in Public and Enterprise Social Q&A. *AAAI Conference on Weblogs and Social Media (ICWSM)*.

**Elijah Mayfield** and Stephanie Butler (2014). Talking With Teachers: Reflective Design of Automated Formative Writing Assessment With LightSide. *Conference of the American Educational Research Association (AERA)*.

**Elijah Mayfield**, Michael Barton Laws, Ira Wilson, and Carolyn Penstein Rosé (2013). Automating Annotation of Information-Giving for Analysis of Clinical Conversation. *Journal of the American Medical Informatics Association (JAMIA)*. 21(1), pp. 122-128.

**Elijah Mayfield**, David Adamson, and Carolyn Penstein Rosé (2013). Recognizing Rare Phenomena in Conversation: Empowerment Detection in Support Group Chatrooms. *Conference of the Association for Computational Linguistics (ACL)*.

Heuristics for Understanding Small Groups in Synchronous Collaborative Learning. *ACM Conference on Learning Analytics and Knowledge (LAK)*.

**Elijah Mayfield** and Carolyn Penstein Rosé (2013). LightSIDE: Open Source Machine Learning for Text. In *Handbook of Automated Essay Evaluation*, pp. 124-135. Routledge.

Iris Howley, **Elijah Mayfield**, Carolyn Penstein Rosé, and Jan-Willem Strijbos (2013). A Multivocal Process Analysis of Social Positioning in Small Groups. In *Productive Multivocality in the Analysis of Group Interactions*, pp. 205-223. Springer.

Iris Howley, Rohit Kumar, **Elijah Mayfield**, Gregory Dyke, and Carolyn Penstein Rosé (2013). Gaining Insights from Sociolinguistic Style Analysis for Redesign of Conversational Agent Based Support for Collaborative Learning. In *Productive Multivocality in the Analysis of Group Interactions*, pp. 477-494. Springer.

Iris Howley, **Elijah Mayfield**, and Carolyn Penstein Rosé (2013). Linguistic Analysis Methods for Studying Small Groups. In *International Handbook of Collaborative Learning*, pp. 184-202. Routledge.

Ross Nehm, Minsu Ha, and **Elijah Mayfield** (2012). Transforming Biology Assessment with Machine Learning: Automated Scoring of Written Evolutionary Explanations. *Journal of Science Education and Technology (JOSTE)*. 21(1), pp. 183-196. *Science "Editor's Choice" Article*.

**Elijah Mayfield**, Miaomiao Wen, Mitch Golant, and Carolyn Penstein Rosé (2012). Discovering Habits of Effective Online Support Group Chatrooms. *ACM Conference on Supporting Group Work*.

**Elijah Mayfield**, David Adamson, and Carolyn Penstein Rosé (2012). Hierarchical Conversation Structure Prediction in Multi-Party Chat. *SIGDIAL Meeting on Dialogue and Discourse*.

Jin Mu, Karsten Stegmann, **Elijah Mayfield**, Carolyn Penstein Rosé, and Frank Fischer (2012). The ACODEA Framework: Developing Segmentation and Classification Schemes for Fully Automatic Analysis of Online Discussions. *International Journal of Computer-Supported Collaborative Learning (IJCSCl)*. 7(2), pp. 285-305.

William Yang Wang, **Elijah Mayfield**, Suresh Naidu, and Jeremiah Dittmar (2012). Historical Analysis of Legal Opinions with a Sparse Mixed-Effects Latent Variable Model. *Conference of the Association for Computational Linguistics (ACL)*.

Iris Howley, David Adamson, Gregory Dyke, **Elijah Mayfield**, Jack Beuth, and Carolyn Penstein Rosé (2012). Group Composition and Intelligent Dialogue Tutors for Impacting Students' Academic Self-Efficacy. *Conference on Intelligent Tutoring Systems (ITS)*.

Amy Ogan, Samantha Finkelstein, **Elijah Mayfield**, Claudia D'Adamo, Noboru Matsudo, and Justine Cassell (2012). Oh, Dear Stacy! Social Interaction, Elaboration, and Learning with Teachable Agents. *Conference on Human Factors in Computing Systems (CHI)*.

**Elijah Mayfield**, David Adamson, Alexander Rudnicky, and Carolyn Penstein Rosé (2012). Computational Representations of Discourse Practices Across Populations in Task-Based Dialogue. *ACM Conference on Intercultural Communication (IC/C)*.

**Elijah Mayfield**, Michael Garbus, David Adamson, and Carolyn Penstein Rosé (2011). Data-Driven Interaction Application. *Res 5:200318*

Patterns: Authority and Information Sharing in Dialogue. *AAAI Fall Symposium on Building Representations of Common Ground with Intelligent Agents*.

**Elijah Mayfield** and Carolyn Penstein Rosé (2011). Recognizing Authority in Dialogue with an Integer Linear Programming Constrained Model. *Conference of the Association for Computational Linguistics (ACL)*.

Iris Howley, **Elijah Mayfield**, and Carolyn Penstein Rosé (2011). Missing Something? Authority in Collaborative Learning. *Conference on Computer-Supported Collaborative Learning (CSCL)*.

Jin Mu, Karsten Stegmann, **Elijah Mayfield**, Carolyn Penstein Rosé, and Frank Fischer (2011). ACODEA: A Framework for the Development of Classification Schemes for Automatic Classification of Online Discussions. *Conference on Computer-Supported Collaborative Learning (CSCL)*.

Dong Nguyen, **Elijah Mayfield**, and Carolyn Penstein Rosé (2010). An Analysis of Perspectives in Interactive Settings. Workshop on Social Media Analysis at the ACM Conference on Knowledge Discovery and Data Mining (KDD).

**Elijah Mayfield** and Carolyn Penstein Rosé (2010). Using Feature Construction to Avoid Large Feature Spaces in Text Classification. *Genetic and Evolutionary Computation Conference (GECCO)*.

Shilpa Arora, **Elijah Mayfield**, Carolyn Penstein Rosé, and Eric Nyberg (2010). Sentiment Classification Using Automatically Extracted Subgraph Features. *Emotion in Text Workshop at the Conference of the North American Association for Computational Linguistics (NAACL)*.

**Elijah Mayfield** and Carolyn Penstein Rosé (2010). An Interactive Tool for Supporting Error Analysis for Text Mining. *Demo Session at the Conference of the North American Association for Computational Linguistics (NAACL)*.

**Elijah Mayfield** (2009). Sentence Diagram Generation Using Dependency Parsing. *Student Research Workshop at the Conference of the Association for Computational Linguistics (ACL)*.

**Elijah Mayfield**, John Roth, Daniel Selifonov, Nathan Dahlberg, and Elena Machkasova (2007). Optimizing Java Programs Using Generic Types. *Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)*.

## D. Additional Information: Research Support and/or Scholastic Performance

### Grant Funding

Role: Subject Matter Expert and Advisory Board @ 10% during Years 1-2, and 5% during Years 3-4 (Bryer, J., Principal Investigator; Andrade, H., & Cleary, T., Co-Investigators)

Project: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)

Source: Institute of Education Sciences

Time Period: 2020-2024

Total Funding: PENDING

“Literacy Courseware Challenge.” Bill & Melinda Gates Foundation. \$225,000, 2013-2014.

“Automated, Personalized Formative Feedback for Student Writing with the LightSide Revision Assistant”. US Department of Education Institute of Education Sciences Small Business Innovative Research Grant EDIES14C0045

**BIOGRAPHICAL SKETCH**

NAME: Suzanne E. Orrell, Ph.D.

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Director of Academic Support

**EDUCATION/TRAINING** (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Completion Date MM/YYYY	FIELD OF STUDY
SUNY College at Buffalo	BA	05/1984	Studio Art
	BS	05/1984	Geology
University of Southern California	MS	05/1988	Geological Sciences
University of Kansas	PhD	05/1996	Geology

**A. Personal Statement**

The Directors of Academic Support have been interested in instituting a front-end academic assessment of students since we took our positions over eleven years ago. As one of the three senior directors, working with Decision Support personnel, I have been advocating for, researching, and considering how to implement such an assessment for the last two years. I am prepared and eager to act on this preparation now, working with well-known reliable factors of the SUNY Empire State College support environment.

First, the Directors of Academic Support have a habit and a history of working as a team; individual directors have diverse individual strengths so that collectively, we handle a breadth of issues. Various directors have strengths in reading development, writing development, and learning skills development. My strengths are in quantitative skills: I have a Ph.D in a natural science, and my subfield involved geochronology and thermodynamics, both measurement-based and requiring copious data reduction and interpretation. Since then I have supported and taught basic Statistics courses, and based on this as well as experiences described below, I am confident with basic research design.

Second, the SUNY Empire Directors of Academic Support have a habit and a history of working effectively with Decision Support, having just completed phase one on each of two projects. The first, managed by Decision Support, was implementation of a college-wide early warning system, making it easy for faculty to flag struggling students and direct them to appropriate supports, either in Academic Support or in Student Success and Development. The second, designed and managed by the Directors of Academic Support in consultation with Decision Support, was an examination of our own effectiveness with students. Pilot data from this project strongly suggest that a student who works with Academic Support is two to three times more likely to succeed in their courses. We will refine and rerun this project this year and prepare it for publication after that. Decision Support personnel have already indicated their interest in working with us to implement a front-end academic assessment as a third project.

Finally, I have a strong background in policy and responsible leadership. I chaired the major undergraduate policy committee for six years, and continue to serve as an active member reviewing policy implications of front-end assessment for the college, and future policy discussions revisions.

## B. Positions and Honors

SUNY Empire State College (January 2007 to present)

Director of Academic Support:

Responsibilities:

- providing direct services to students including writing assistance, assistance with mathematics, study skills and/or time management coaching and academic counseling of all varieties
- hiring and supervising learning coaches
- collaborating with faculty and professional employees to find ways to serve students
- collaborating with directors of academic support to provide college-wide student programming
- teaching credit-bearing studies in maths through calculus and in earth and environmental sciences
- serving as member and then chair of Committee on Undergraduate Studies & Policies, and then as member of Undergraduate Committee on Academic Policy
- serving as member and one of many authors of the 2015 Academic Plan
- serving as parliamentarian to the college's Senate from fall of 2016 on
- serving as member of Undergraduate Committee on Academic Policies, fall of 2017 on

Excellence in Professional Service Award, March 2018

Hobart and William Colleges, Center for Teaching and Learning (fall 2001 through spring 2006)

Learning Specialist/Specialist for Writing and Math/Writing specialist

Responsibilities:

- providing direct services to students including writing assistance, assistance with mathematics, study skills and/or time management coaching and academic counseling of all varieties
- instructing in academic programs for students on probation and for first-year students
- hiring and supervision of peer writing tutors and student office workers
- writing for center's webpage
- deployment and analysis of student surveys
- development of system for tracking student use of the center

Acting Director (April 2005 to August 2005)

Responsibilities:

- supervising staff
- preparing the campus for its first profoundly deaf student in decades
- preparing the center's annual report
- organizing summer staffing
- preparing the annual budget request
- improving the center's equipment and building layout

## Teaching Experience:

Empire State College (Fall 2007 to present):

- Statistics
- Calculus I and II
- Technical Writing
- Math for Artists
- Crystallography and Visualization

- Photography
- Pre-calculus
- Basic College Math
- Math for Cooking
- Dynamic Earth
- Earth Science
- Archaeoastronomy
- Geology of New York State

Hobart and William Smith Colleges (January 1997 through July 2006)

- Foundations of Science (Integrated Science and Math) for the Summer Academic Opportunity Program): Summers, 1999 through 2006
- First-Year Seminar on Plate Tectonics, titled Unavoidable Collision, Fall 1998, 1999, 2000, 2001, 2003, & 2005
- Elementary Functions (2 sections), Spring 2002
- Various introductory and advanced geology courses, including Mineralogy, Optical Mineralogy, Igneous and Metamorphic Geology, and Structural Geology ( 5 per year), with and without labs, between 1996 and 2005

State University of New York, College at Plattsburgh (Fall 1996):

- The Way the Earth Works

Syracuse University (1993-1996):

- Evolution of the Earth & Life, Summer 1995 & 1997. Spring 1995 (University College)
- Environmental Geology, Spring 1996 (University College)
- Geology of New York State, Summer 1996
- Historical Geology, Fall 1995 (Independent Studies Degree Program)
- Earth Science , Fall 1993, Spring 1995, Fall 1995
- Introductory geology, Fall 1994 (University College)\

### **Other Professional Employment**

Syracuse University Isotope and Geochemistry Laboratories: February 1991 to May 1997

Technical Temporary

Responsibilities: Collection, preparation, and chemical analysis of geologic samples.  
Maintenance of inventory of reagents and supplies

### **C. Contributions to Science**

Orrell, Suzanne E, & Bickford, M & F. Lewry, J. (1999). Crustal evolution and age of thermotectonic reworking in the western hinterland of the Trans-Hudson Orogen, northern Saskatchewan. Precambrian Research. 95. 10.1016/S0301-9268(98)00117-X.

### **D. Additional Information: Research Support and/or Scholastic Performance**

Type of Support	Project Name	Funding Agency	Project Location	Project Role	Start Date	End Date	Effort
Pending	Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)	IES	University at Albany, College of Education	Implementation coordinator and project advisor of partnering institution (ESC)	9/1/2020	8/30/2024	8%

Total amount \$3,299,059 PENDING

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Wen, Roger

ERA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE: Sr. Dir. of the Online Campus

**EDUCATION/TRAINING** (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Pittsburg State University, KS	BBA	05/1995	Business Admin
Pittsburg State University, KS	MS	05/1996	Human Resources Development
University of Missouri - Columbia	Ph.D.	05/2000	Technology Teaching /Information Science

**A. Personal Statement**

My passion to students' learning /learning infrastructure and dedication to higher education is reflected in my research and presentation regarding online learning, assessment, course design, delivery, campus-wide wireless network and learning infrastructure management, and statewide network management. I have more than 15 years of university/college academic leadership experience and 20 years of IT related technical/professional experience, including several years in faculty and staff development, strategic planning, learning systems design, administration, faculty and student IT support, statewide multisite conferencing structure development and management, campus-side wireless network design and deployment, self-study and accreditation, revenue generation through program development and expansion, faculty and staff recruitment/retention, policy development, federal compliance, state authorization, internal/external funding and budgeting, and management of external vendors. In my leadership positions at the university level, I have been asked to take on various leadership roles and was chosen or promoted for each of those positions because of my technical and professional background in information science, instructional design, educational technology, reputation for providing customer-centric faculty support, skills in curricular design and enhance impact on students' learning.

**B. Positions and Honors**

2014 ~ Present	Sr. Director of the Online Campus   MS in Education - Online Teaching and Learning Cal State East Bay, CA
2004 ~ 2014	Tenured Professor of Education and Business   Dean of the Online Campus William Woods University, MO
2000 ~2004	Director of Educational Technology Center Northeastern Oklahoma A&M College, OK

**C. Contributions to Science**

Most of my presentation focused on eLearning related field. Below is the list of the presentations or publications that I have done since 2013.

- April 2019, OLC Innovate (proposal accepted). Topic: Reenvisioning An Instructional Design System for Higher Education: A Case Study for Online Course Curriculum Development.
- November 2018, OLC Annual Conference. Topic: Building a Culture of Quality Online Teaching & Learning: A 3-Year Case Study & Student Impact Study
- November 2018, Directors of Educational Technology / California Higher Education Annual Conference. Topic: Planning an Academic Technology Ecosystem: A panel of different perspectives.
- November 2018, Directors of Educational Technology / California Higher Education Annual Conference. Topic: Reenvisioning An Instructional Design System for Higher Education: A Case Study for Online Course Curriculum Development.
- October/November, 2018, Quality Matters National Conference. Topic: Building a Culture of Quality Online Teaching & Learning: A 3-Year Case Study & Student Impact Study
- October/November, 2018, Quality Matters National Conference. Topic: Chief Online Learning Officers Perspectives on Management, Governance, and Quality Assurance. [By Invitation]
- October/November, 2018, Quality Matters National Conference. Topic: Becoming a QM Believer -- Certification and Institutional Support. [By Invitation]
- Wen, R., Saelee, C., Munoz, M. (2018). Re-envisioning An Instructional Design System for Higher Education: A Case Study for Online Course Curriculum Development . Hayward, CA: Office of the Online Campus, California State University, East Bay. <http://www.csueastbay.edu/online/course-design-system.html>
- December, 2016, Director of Educational Technology / California Higher Education annual conference. Topic: Online Initiatives & Enrollment Management.
- October, 2016, CSU Symposium. Topic: Letting the Elephant Out of the Closet! Building a Culture of Quality Course Review.
- October, 2016, CSU QA-PLC Webinar, CSUEB QA data analysis.
- June, 2016, Blackboard World. Topic: Journey from Self-hosted, Manage-hosted, to SaaS migration.
- November, 2015, Quality Matters 7<sup>th</sup> Annual Conference. Topic: Making Quality Standard: Building a Sustainable Quality Assurance Culture and Establishing a Standard Operating Procedure (SOP)
- September, 2015, CSU Office of the Chancellor Webcast. Topic: Electronic RTP and WPAF
- September, 2014, CSUEB Back to the Bay. Topic: What I wish I had known before teaching an online course?
- April, 2014, Higher Learning Commission Annual Conference. Topic: Effects of Course and Faculty Quality on Achievement and Satisfaction.
- November, 2013, Sloan-C annual conference on Online Learning. Topic: Online Course Delivery Assessment Tool.
- May 2013, Webinar presentation invited by TK20 Inc. Topic: Assessment for Teacher Education Program.

#### **D. Additional Information: Research Support and/or Scholastic Performance**

Currently, I am involved with the Cal State Universities Student Impact on Quality Research initiative. I am the coordinator for Cal State East Bay since 2015. This is the research looking at the faculty participation of the Quality Matters training on its impact on students' repeatable grades.

Type of Support	Project Name	Funding Agency	Project Location	Project Role	Start Date	End Date	Effort
\$ 3,299,059 Pending	Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)	IES	University at Albany, College of Education	Implementation coordinator and project advisor of partnering institution (CalState East Bay Online)	9/1/2020	8/30/2024	2.5%

## **Refereed and Invited Journal Articles (101 lifetime)**

- Winne, P. H. (in press). Self-regulated learning in research with gifted learners. *High Ability Studies*.
- Winne, P. H., Teng, K., Chang, D., Lin, M. P-C., Marzouk, Z., Nesbit, J. C., Patzak, A., Raković, M., Samadi, D., & Vytasek, J. (in press). nStudy: Software for learning analytics about processes for self-regulated learning. *Journal of Learning Analytics*.
- Winne, P. H. (2019). Paradigmatic dimensions of instrumentation and analytic methods in research on self-regulated learning. *Computers in Human Behavior*, 96, 285-289.
- Zhou, M., Adesope, O. O., Winne, P. H., & Nesbit, J. C. (2019). Relations of multivariate goal profiles to motivation, epistemic beliefs and achievement. *Journal of Pacific Rim Psychology*, 13.
- Bisra, K., Liu, Q., Nesbit, J. C., Salimi, F., & Winne, P. H. (2018). Inducing self-explanation: A meta-analysis. *Educational Psychology Review*, 30, 703-725.
- Muis, K., Sinatra, G., Pekrun, R., Winne, P. H., Trevors, G., Vivian, J. A., Losenno, K. M., & Munzar, B. (2018). Main and moderator effects of refutation on task value, epistemic emotions, and learning strategies during conceptual change. *Contemporary Educational Psychology*, 55, 155-165.
- Winne, P. H. (2018). Theorizing and researching levels of processing in self-regulated learning. *British Journal of Educational Psychology*, 88, 9-20.
- Winne, P. H. (2017). Leveraging big data to help each learner upgrade learning and accelerate learning science. *Teachers College Record*, 119(3), 1-24.
- Winne, P. H., Nesbit, J. C., & Popowich, F. (2017). nStudy: A system for researching information problem solving. *Technology, Knowledge and Learning*, 22(3), 369-376.
- Marzouk, Z., Raković, M., Liaqat, A., Vytasek, J., Samadi, D., Stewart-Alonso, J., Ram, I., Woloshen, S., Winne, P. H. & Nesbit, J. C. (2016). What if learning analytics were based on learning science? *Australasian Journal of Educational Technology*, 32(6), 1-18.
- Muis, K. R., Winne, P. H., Ranellucci, J. (2016). The role of calibration bias and performance feedback in achievement goal regulation. *International Education Research*, 4, 14-36.
- Trevors, G., Muis, K. R., Pekrun, R., Sinatra, G., & Winne, P. H. (2016). Identity and epistemic emotions during knowledge revision: A potential account for the backfire effect. *Discourse Processes*, 56, 339-370.
- Winne, P. H. (2015). What is the state of the art in self-, co- and socially shared regulation in CSCL? *Computers in Human Behavior*, 52, 628-631.
- Roll, I., & Winne, P. H. (2015). Understanding, evaluating, and supporting self-regulated learning using learning analytics. *Journal of Learning Analytics*, 2(1), 7-12.
- ## **Chapters in Books (61 lifetime)**
- Hadwin, A. F., Davis, S. K., Bakhtiar, A., & Winne, P. H. (2019). Academic challenges as opportunities to learn to self-regulate learning. In H. Askell-Williams & J. Orrell (Eds.), *Problem solving for teaching and learning*. Routledge.
- Vytasek, J., Patzak, A., Winne, P. H. (2019). Analytics for student engagement. In Virvou, M., Alepis, E., Tshirintzis, G. A., & Jain, L. C. (Eds.), *Machine learning paradigms: Advances in learning analytics* (pp. 23-48). New York, NY: Springer.
- Winne, P. H. (2019). Enhancing self-regulated learning for information problem solving with ambient big data gathered by nStudy. In O. O. Adesope & A. G. Rud (Eds.), *Contemporary technologies in education: Maximizing student engagement, motivation, and learning* (pp. 145-162). New York, NY: Palgrave Macmillan.
- Winne, P. H., & Marzouk, Z. (2019). Learning strategies and self-regulated learning. In J. Dunlosky & K. Rawson (Eds.), *Cambridge handbook of cognition and education* (pp. 696-715). New York, NY: Cambridge University Press.

- Perry, N. E., Mazabel, S., Dantzer, B., & Winne, P. H. (2018). Supporting self-regulation and self-determination in the context of music education. In G. A. D. Liem and D. M. McInerney (Eds.), *Research on sociocultural influences on motivation and learning. Big theories revisited 2*. Greenwich, CT: Infoage.
- Winne, P. H. (2018). Cognition and metacognition in self-regulated learning. In D. Schunk & J. Greene (Eds.), *Handbook of self-regulation of learning and performance*. (2<sup>nd</sup> ed., pp. 36-48). New York, NY: Routledge.
- Winne, P. H. (2017). The trajectory of research on self-regulated learning. *Teachers College Record*, 119(13).
- Winne, P. H. (2017). Learning analytics for self-regulated learning. In C. Lang, G. Siemens, A. Wise & D. Gašević (Eds.), *Handbook of learning analytics* (pp. 241-249). Beaumont, AB: Society for Learning Analytics Research.
- Winne, P. H., Vytasek, J. M., Patzak, A., Rakovic, M., Marzouk, Z., Pakdaman-Savoji, A., Ram, I., Samadi, D., Lin, M. P. C., Liu, A., Liaqat, A., Nashaat, N., Mozaffari, Z., Stewart-Alonso, J., & Nesbit, J. C. (2017). Designs for learning analytics to support information problem solving. In J. Buder & F. W. Hesse (Eds.) *Informational environments: Effects of use, effective designs* (pp. 249-272). New York, NY: Springer.
- Winne, P. H. (2015). Self-regulated learning. In J. D. Wright (Ed.), *International encyclopedia of social & behavioral sciences* (2<sup>nd</sup> ed., Vol 21, pp. 535-540). Elsevier: Oxford, UK.

#### **D. Additional Information: Research Support and/or Scholastic Performance (last 5 years)**

My research program has been funded continuously since 1981 by competitively reviewed grants awarded by the Social Sciences and Humanities Research Council of Canada and other funders. Percent time describes proportion of total job time. Grants awarded as principal or co-investigator in the past 5 years.

*Coaching Discovery Competencies with Context-Sensitive Questioning* (J. C. Nesbit, Principal Investigator), Social Sciences & Humanities Research Council of Canada, 2019-2023, \$287,225 (15%)

*Fostering Student Computational Thinking in Data Analysis through Self-Regulated Learning Prompts and Analytics* (Principal Investigator: E. Peters-Burton) [subgrant], U.S. National Science Foundation, 2018-2023, US \$741,963. (20%)

*Uncovering Students' Enrollment Patterns Leading to Dropping Out vs. Success From The Engineering Program* (M. Hatala, Principal Investigator), KEY: Simon Fraser University Big Data Center, \$25,000, 2018. (complete)

*Building Information Problem Solving Skills in Post-Secondary Education* (Co-Investigators: J. C. Nesbit, F. P. Popowich), Social Sciences & Humanities Research Council of Canada, \$308,314, 2016-2020. (15%)

*Online Learning Ecosystem*, MITACS Accelerate Program, \$90,000, 2016-2018. (complete)

*Boosting Information Problem Solving and Writing in Post-Secondary Education*, SFU Vice-President Research, \$9947, 2015.

*Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills* (Bryer, J., Principal Investigator, Andrade, H., & Cleary, T., Co-Investigators), Institute of Education Sciences, 2020-2024, \$ 3,299,059 PENDING (subject matter expert and advisory member)

## BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME <b>Yates, Brian Taylor</b>	POSITION TITLE <b>Professor</b>
eRA COMMONS USER NAME (credential, e.g., agency login) <b>YATESBT</b>	

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
University of California, San Diego	B.A.	06/1972	Psychology
Stanford University	Ph.D.	09/1976	Psychology

### A. Personal Statement

Brian Yates is a tenured full Professor in the Department of Psychology at American University in Washington, DC, where he began working as an Assistant Professor in 1976. Dr. Yates has published or has in-press 92 articles and book chapters plus 5 books. Most of his publications apply cost-effectiveness or cost-benefit analysis to the systematic evaluation and improvement of human services. Dr. Yates has conducted Resources → Activities → Process → Outcome Analysis (RAPOA) for human service enterprises and research initiatives in prevention of alcohol, tobacco, and other substance abuse and suicide, and in treatment of opiate, cocaine, and alcohol addictions, residential programs for urban youth and for mentally retarded adults, and consumer-operated services. He wrote a manual for helping substance abuse treatment programs measure, report, and improve their cost, cost-effectiveness, and cost-benefit, was published in 1999 by the National Institute on Drug Abuse. Dr. Yates consults regularly on a variety of federally funded projects in health, alcohol and drug addiction, media-based substance abuse prevention, mental health services for children and families, and multi-site studies of the costs, benefits, cost-effectiveness, and cost-benefit of adding consumer-operated services to traditional mental health services, and of new accreditation procedures for opioid treatment programs.

### B. Positions and Honors

#### **Positions and Employment**

- 1976-1982 Assistant Professor (tenure track), Dept. of Psychology, American University, Washington, DC  
1982-1997 Associate Professor (tenured), Dept. of Psychology, American University, Washington, DC  
1997-2003 Full Professor (tenured), Department of Psychology, American University, Washington, DC  
2003 Visiting Professor, Center for Mental Health Services Research, Department of Psychiatry, Medical School, University of Massachusetts, Worcester, MA (during sabbatical from AU)  
2004- Full Professor (tenured), Department of Psychology, American University, Washington, DC

#### **Other Experience and Professional Memberships**

- 1976- Member, American Psychological Association  
1976- Member, American Evaluation Association  
1988-1990 Acting Chair, Department of Psychology, for several summers and one semester as well

1990-1991	Associate Dean for Graduate Affairs, College of Arts and Sciences, American University
2004	Member, appointed to American Psychological Association Task Force on Evidence-Based Practice.
2008-2013	Treasurer, Member of the Board, Member of Executive Committee, and Chair, Finance Committee, American Evaluation Association.
2006-	Editorial Board, Evaluation and Program Planning
2010-	Editorial Board, The Evaluation Center, Western Michigan University
2010-2014	Member, Advisory Group, Evaluation of Paid Mentoring, Office of Juvenile Justice and Delinquency Prevention and Research Triangle Institute
2012-2013	Member of Steering Committee, CoAuthor, and Member, Calculating the Costs of Child Welfare Programs and Services, Child Welfare Research and Evaluation Workgroup, Children's Bureau, U.S. Department of Health and Human Services.
2014 to now	Member, Scientific Advisory Board, Psychotherapy Development Research Center, Psychiatry, School of Medicine, Yale University.

### **Honors**

1984	Faculty Award for Outstanding Contributions to Academic Program Development, College of Arts and Sciences, American University, Washington, DC.
2014	Faculty Award for Teaching with Technology, American University, Washington, DC

### **C. Selected Peer-reviewed Publications (Selected from 89 publications, most peer-reviewed)**

#### **Most relevant to the current application**

1. Yates, B. T., & Zimbardo, P. G. (1977). Self-monitoring, academic performance, and retention of content in a self-paced course. *Journal of Personalized Instruction*, 2, 76-79.
2. Yates, B. T. (1978). Improving the cost-effectiveness of obesity programs: Reducing the cost per pound. *International Journal of Obesity*, 2, 249-266.
3. Yates, B. T. (1980). Improving effectiveness and reducing costs in mental health. Springfield, IL: Thomas.
4. Yates, B. T. (1981). Testimony of the American Psychological Association on the subject of effectiveness and cost-benefit of outpatient mental health services. *Congressional Record*, Serial No. 97-11, 124-130.
5. Yokley, J. M., Coleman, D. J., & Yates, B. T. (1990). Cost-effectiveness of three child mental health assessment methods: Computer-assisted assessment is effective and inexpensive. *Journal of Mental Health Administration*, 17, 99-107.
6. Yates, B. T., Yokley, J. M., & Thomas, J. V. (1994). Cost-benefit analysis of six alternative payment incentives for child therapists. *Journal of Consulting and Clinical Psychology*, 62, 627-635.
7. Yates, B. T. (1996). Analyzing costs, procedures, processes, and outcomes in human services: An introduction. Five-chapter book. Thousand Oaks, CA: Sage Publications.
8. Yates, B. T. (1999). Measuring and improving cost, cost-effectiveness, and cost-benefit for substance abuse treatment programs. Bethesda, MD: National Institute on Drug Abuse, NIH Publication Number 99-4518, 124-page manual, initial press run 10,000 copies. Full copy readable and downloadable from NIDA site <http://www.nida.nih.gov/IMPCOST/IMPCOSTIndex.html>
9. Yates, B. T. (2000). Cost-benefit analysis and cost-effectiveness analysis. In A. Kazdin (Ed.), *Encyclopedia of Psychology*. Washington, DC: American Psychological Association.
10. Yates, B. T., & Taub, J. (2003). Assessing the costs, benefits, cost-effectiveness, and cost-benefit of psychological assessment: We should, we can, and here's how. *Psychological Assessment*, 15, 478-495.
11. DuBois, D. L., Doolittle, F., Yates, B. T., Silverthorn, N., & Tebes, J. K. (2006). Research methodology and youth mentoring. *Journal of Community Psychology*, 34, 657-676.
12. American Psychological Association Presidential Task Force on Evidence-Based Practice (All authors listed in Author Note only; I'm one of those authors, who are listed alphabetically). Goodheart, C. D., Levant, R. F., Barlow, D. H., Carter, J., Davidson, K. W., Hagglund, K. J., Hollon, S. D., Johnson, J. D., Leviton, L. C., Mahrer, A. R., Newman, F. L., Norcross, J. C., Silverman, D. K., Smedley, B. D., Wampold,

- B. E., Westen, D. I., Yates, B. T., Zane, N. W., Reed, G. M., Bufka, L. F., Nelson, P. D., Belar, C. D., Bullock, M. (2006). Evidence-based practice in psychology. *American Psychologist*, 61, 271-285.
13. McKay, C. E., Yates, B. T., & Johnsen, M. (2007). Costs of clubhouses: An international perspective. *Administration and Policy in Mental Health and Mental Health Services Research*, 34, 62-72.
14. Freed, M. C., Rohan, K. J. & Yates, B. T. (2007). Estimating health utilities and quality adjusted life years in seasonal affective disorder research. *Journal of Affective Disorders*, 100, 83-89.
15. Yates, B. T. (2008). Cost-effectiveness and cost-benefit of family involvement initiatives. *The Evaluation Exchange*, 14, 33.
16. Sava, F. A., Yates, B. T., Lupu, V., Hatieganu, I., Szentagotai, A., & David, D. (2009). Cost-effectiveness and cost-utility of cognitive therapy, rational emotive behavioral therapy, and fluoxetine (Prozac ®) in treating depression: A randomized clinical trial. *Journal of Clinical Psychology*, 65, 36-52.
17. Yates, B. T. (2011). Delivery systems can determine therapy costs, and effectiveness, more than type of therapy. *Perspectives on Psychological Science*, 6, 498-502.
18. Yates, B. T., Mannix, D., Freed, M. C., Campbell, J., Johnsen, M., Jones, K., & Blyler, C. (2011). Consumer-operated service programs: Monetary and donated costs and cost-effectiveness. *Psychiatric Rehabilitation Journal*, 35(2), 91-99.
19. Yates, B. T. (2012). Step arounds for common pitfalls when valuing resources used versus resources produced. In G. Julnes (Ed.), *Promoting valuation in the public interest: Informing policies for judging value in evaluation*. New Directions in Program Evaluation, 133, 43-52.
20. Yates, B. T. (2012). Program evaluation: Outcomes and costs of putting psychology to work. In H. Cooper (Ed.), *Handbook of research methods in psychology*, Volume 2. Washington, DC: American Psychological Association.
21. Yates, B. T. (2014, July 30). Cost-inclusive evaluation. Part III: Cost-benefit analysis. AEA365 A Tip-a-Day by and for Evaluators. Retrieved from <http://aea365.org/blog/pd-presenters-week-brian-yates-on-doing-cost-inclusive-evaluation-part-iii-cost-benefit-analysis/>
22. Yates, B. T. (2014, August 11). Cost-inclusive evaluation. Part IV: Cost-effectiveness analysis and cost-utility analysis. AEA365 A Tip-a-Day by and for Evaluators. Retrieved from [http://aea365.org/blog/pd-presenters-brian-yates-on-doing-cost-inclusive-evaluation-part-iv-cost-effectiveness-analysis-and-cost-utility-analysis/?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+aea365+%28AEA365%29](http://aea365.org/blog/pd-presenters-brian-yates-on-doing-cost-inclusive-evaluation-part-iv-cost-effectiveness-analysis-and-cost-utility-analysis/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+aea365+%28AEA365%29)
23. Yates, B. T., (2015). Cost-benefit and cost-effectiveness analyses in evaluation research. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (2nd ed.), Vol 5. Oxford: Elsevier. pp. 55–62.
24. Long, K., Brown, J. L., Jones, S. M., Aber, J. L., & Yates, B. T. (2015). Cost analysis of a school-based social and emotional learning and literacy intervention." *Journal of Benefit-Cost Analysis*. April, 1-27. DOI: 10.1017/bca.2015.6

**Additional selected recent publications of importance to the field (others back to 1977)**

1. Yates, B. T., & Mischel, W. (1979). Young children's preferred attentional strategies for delaying gratification. *Journal of Personality and Social Psychology*, 37, 286-300.
2. Siegert, F. A., & Yates, B. T. (1980). Cost-effectiveness of individual in-office, individual in-home, and group delivery systems for behavioral child-management. *Evaluation and the Health Professions*, 3, 123-152.
3. Carroll, L. J., Yates, B. T., & Gray, J. J. (1980). Predicting obesity reduction from client characteristics in behavioral and nonbehavioral therapy. *Behavior Therapy*, 11, 189-197.
4. Yates, B. T. (1980). Survey comparison of success, morbidity, mortality, fees, and psychological benefits and costs of 3146 patients receiving jejunoileal or gastric bypass. *American Journal of Clinical Nutrition*, 33, 518-522.
5. Yates, B. T. (1980). Benefits and costs of community-academia interaction in a paraprofessional training course. *Teaching of Psychology*, 7, 8-12.
6. Yates, B. T. (1980). The theory and practice of cost-utility, cost-effectiveness, and cost-benefit analysis in behavioral medicine: Toward delivering more health care for less money. In J. Ferguson & C. B. Taylor

Program Director/Principal Investigator (Last, First, Middle):

- (Eds.), The comprehensive handbook of behavioral medicine (Vol. 3) (pp. 165-205). New York: SP Medical & Scientific.
7. Yates, B. T., & Newman, F. L. (1980a). Approaches to cost-effectiveness analysis and cost-benefit analysis of psychotherapy. In G. VandenBos (Ed.), Psychotherapy: Practice, research, policy (pp. 103-162). Beverly Hills, CA: Sage.
  8. Yates, B. T., & Newman, F. L. (1980b). Findings of cost-effectiveness and cost-benefit analyses of psychotherapy. In G. VandenBos (Ed.), Psychotherapy: Practice, research, policy (pp. 163-185). Beverly Hills, CA: Sage.
  9. Yates, B. T. (1985). Self-management: The science and art of helping yourself. Belmont, CA: Wadsworth.
  10. Yates, B. T. (1986). Applications in self-management. Belmont, CA: Wadsworth.
  11. Yates, B. T. (1986). Economics of suicide: Toward cost-effectiveness and cost-benefit analysis of suicide prevention. In R. Cross (Ed.), Non-natural death: Coming to terms with suicide, euthanasia, withholding or withdrawing treatment. Denver, CO: Rose Medical Center.
  12. Yates, B. T., Delany, P. J., & Lockwood Dillard, D. (2001). Using cost → procedure → process → outcome analysis to improve social work practice. In B. A. Thyer (Ed.), Handbook of social work research (pp. 207-238). Thousand Oaks, CA: Sage.
  13. Freed, M. C., Rohan, K. J., Yates, B. T. (2004). Cost-Effectiveness of light therapy, cognitive-behavioral therapy, or their combination for seasonal affective disorder. Chronobiology International, 21(4-5), 788. (Abstract number 16.8; peer-reviewed; brief publication).
  14. Yates, B. T. (2005). Cost-effectiveness analysis and cost-benefit analysis. In D. DuBois & M. Karcher (Eds.), Handbook for youth mentoring (pp. 525-545). Thousand Oaks, CA: Sage Publications.
  15. Yates, B. T. (2010). Evaluating costs and benefits of consumer-operated services: Unexpected resistance, unanticipated insights, and déjà vu all over again. Case 7 in J. A. Morell (Ed.), Evaluation in the face of uncertainty: Anticipating surprise and responding to the inevitable. New York: Guilford Press.
  16. Yates, B. T. (2012). Quantitative approaches to outcome measurement: A commentary. In J. Magnabosco & R. Manderscheid (Eds.), Outcomes measurement in human services (2nd ed.). pp. 47-57. Washington, DC: National Association of Social Workers Press.
  17. Yates, B. T. (2015). Understanding resistance to cost-inclusive evaluation. In H. Preskill & D. Russ-Eft (Eds.), *Building evaluation capacity: Activities for teaching and training* (2nd ed.) (pp. 169-174). Los Angeles: Sage. ISBN 978-1-4833-3432-5

## D. Research Support

### Pending

Role: Subject Matter Expert and Project Advisor (Bryer, J., Principal Investigator, Andrade, H., & Cleary, T., Co-Investigators)

Project: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills

Source: Institute of Education Sciences

Time Period: 2020 – 2024

Total Funding: \$ 3,299,059 PENDING

### Ongoing Research Support

214.0560 Hansen 12/5/2014– 8/31/2015

Annie E. Casey Foundation

Support for the analysis of Costs and Benefits of interventions that Reduce Group and Institutional Care

The major goals of this project are to develop a Resource => Activity => Process => Outcome Analysis model of Quality Parenting Initiative and other foster care innovations.

Role: coPI

### Completed Research Support

Measuring costs and cost-valued outcomes of gender-specific practices in substance abuse treatment programs. NIDA (subcontract between AU and Westat Corp., Dr. Robert Orwin) 8/2007-8/31/2013.

Program Director/Principal Investigator (Last, First, Middle):

Webinar "Cost-effectiveness, cost-benefit, and cost-utility analysis" for the National Minority AIDS Council, Washington, DC, April - June 2013.

Panel Member, Parent Information and Resource Centers, Local Program Evaluation, 2005 and 2006, U.S. Department of Education.

Subcontractor to Northrop-Grumman Health Information Technology, CSAT contract, cost → procedure → process → outcome analysis, Opioid Treatment Program Accreditation Evaluation, 2002-2005.

Consultant on Cost → Procedure → Process → Outcome Analysis, U.S. Children's Bureau, "Fathers and Children Together (FACT): An Evaluation of the Resources, Services and Outcomes of a Prison-Based Parenting Program." PI: Mary Secret, School of Social Work, University of Kentucky. 3-year \$600,000 grant, ending 12/2006. Advise on use of Cost → Procedure → Process → Outcome Analysis.

Cost Study Task Force Chair, Consumer-Operated Service Program, Missouri Institute of Mental Health, University of Missouri-Columbia, 1998-2003. This is a four-year grant beginning October 1998, with an extension through December 2003, involving sites in 8 different states. Consumers are assigned randomly to consumer-operated or traditional services, or mixtures thereof which different from site to site. This is a grant from the Center for Mental Health Services (CMHS) of the Substance Abuse and Mental Health Services Administration (SAMSHA). I am responsible for guiding all 8 sites in collect of cost data. I also am responsible for storing, analyzing, and report cost, cost-effectiveness, and cost-benefit findings for this study. This research implements my CPPOA model for cost-effectiveness and cost-benefit analysis in human services.

Consultation to RAND Health Sciences on cost-effectiveness and cost-benefit analysis of Starting Early Starting Smart (SESS) multi-site cooperative agreement, Pentagon, VA, 2000. Funded as a consultant.

(16 more projects 1976-2000)

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 1

OMB Number: 4040-0001  
Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 1 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Jason		Bryer	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	12.00			100,000.00	42,000.00	142,000.00	142,000.00	0.00

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Heidi		Andrade	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
		1.53	1.00	30,950.00	13,486.00	44,436.00	44,436.00	0.00

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Cheryl		Dozier	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
		0.27		2,920.00	1,817.00	4,737.00	4,737.00	0.00

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Marco		Varisco	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
		0.27		2,945.00	1,833.00	4,778.00	4,778.00	0.00

Application: R305A200318

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr	Robert		Yalgelski	

#### \* Project Role

### Project Advisor

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
		0.63		8,885.00	5,531.00	14,416.00	14,416.00	0.00

**Additional Senior Key Persons:**

## Add Attachment

### Delete Attachment

## [View Attachment](#)

**Total Funds requested for all Senior Key Persons in the attached file**

### Total Senior/Key Person

## **B. Other Personnel**

## C. Equipment Description

**List items and dollar amount for each item exceeding \$5,000**

**\* Equipment item**

\* Federal (\$)

\* Non-Federal (\$)

\* Total (Fed + Non-Fed) (\$)

#### **Additional Equipment:**

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**Add Attachment**

[Delete Attachment](#)

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[View Attachment](#)

Total funds requested for all equipment listed in the attached file

## Total Equipment

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	5,900.00	0.00	5,900.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>5,900.00</b>	<b>0.00</b>	<b>5,900.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies	6,120.00	0.00	6,120.00
2. Publication Costs			
3. Consultant Services	54,000.00	0.00	54,000.00
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs	121,584.00	0.00	121,584.00
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. GA Tuition	18,000.00	0.00	18,000.00
9. meeting expenses	500.00	0.00	500.00
10.			
<b>Total Other Direct Costs</b>	<b>200,204.00</b>	<b>0.00</b>	<b>200,204.00</b>

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	<b>556,781.00</b>	<b>0.00</b>	<b>556,781.00</b>

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	54.50	460,177.00	250,796.00	0.00	250,796.00
<b>Total Indirect Costs</b>			<b>250,796.00</b>	<b>0.00</b>	<b>250,796.00</b>

Cognizant Federal Agency  
 (Agency Name, POC Name, and  
 Phone Number)

I. Total Direct and Indirect Costs	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	807,577.00	0.00	807,577.00

J. Fee	Federal (\$)

K. Total Costs and Fee	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Costs and Fee (I + J)</b>	807,577.00	0.00	807,577.00

#### L. \* Budget Justification

(Only attach one file.)

1234-Budget Narrative Andrade IES Fina

Add Attachment

Delete Attachment

View Attachment

## RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 2

OMB Number: 4040-0001  
Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 2 \* Start Date:  \* End Date:

### A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Jason"/>	<input type="text"/>	<input type="text" value="Bryer"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text" value="12.00"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="102,000.00"/>	<input type="text" value="43,860.00"/>	<input type="text" value="145,860.00"/>	<input type="text" value="145,860.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Heidi"/>	<input type="text"/>	<input type="text" value="Andrade"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.53"/>	<input type="text" value="1.00"/>	<input type="text" value="31,569.00"/>	<input type="text" value="14,070.00"/>	<input type="text" value="45,639.00"/>	<input type="text" value="45,639.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Cheryl"/>	<input type="text"/>	<input type="text" value="Dozier"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="0.27"/>	<input type="text"/>	<input type="text" value="2,978.00"/>	<input type="text" value="1,893.00"/>	<input type="text" value="4,871.00"/>	<input type="text" value="4,871.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Marco"/>	<input type="text"/>	<input type="text" value="Varisco"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="0.27"/>	<input type="text"/>	<input type="text" value="3,004.00"/>	<input type="text" value="1,910.00"/>	<input type="text" value="4,914.00"/>	<input type="text" value="4,914.00"/>	<input type="text" value="0.00"/>

Application: R305A200318

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Robert		Yalgelski	

\* Project Role

Project Advisor

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
			0.63	9,062.00	5,761.00	14,823.00	14,823.00	0.00

Additional Senior Key Persons:  Add Attachment Delete Attachment View Attachment

Total Funds requested for all Senior Key Persons in the attached file	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Senior/Key Person	216,107.00	216,107.00	0.00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
2	Graduate Students	6.00			42,840.00	7,026.00	49,866.00	49,866.00	0.00
	Undergraduate Students								
	Secretarial/Clerical								
1	Research Project Manager	12.00			59,160.00	25,439.00	84,599.00	84,599.00	0.00
1	part-time Research Associate				4,000.00	1,720.00	5,720.00	5,720.00	0.00
4	<b>Total Number Other Personnel</b>						140,185.00	140,185.00	0.00
	<b>Total Salary, Wages and Fringe Benefits (A+B)</b>						356,292.00	356,292.00	0.00

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)

Additional Equipment:  Add Attachment Delete Attachment View Attachment

Total funds requested for all equipment listed in the attached file	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Total Equipment</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	12,900.00	0.00	12,900.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>12,900.00</b>	<b>0.00</b>	<b>12,900.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies	1,000.00	0.00	1,000.00
2. Publication Costs			
3. Consultant Services	54,000.00	0.00	54,000.00
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs	130,157.00	0.00	130,157.00
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. GA Tuition	18,900.00	0.00	18,900.00
9. meeting expenses	500.00	0.00	500.00
10.			
<b>Total Other Direct Costs</b>	<b>204,557.00</b>	<b>0.00</b>	<b>204,557.00</b>

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	<b>573,749.00</b>	<b>0.00</b>	<b>573,749.00</b>

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	54.50	431,712.00	235,283.00	0.00	235,283.00
<b>Total Indirect Costs</b>		<b>235,283.00</b>		<b>0.00</b>	<b>235,283.00</b>

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

I. Total Direct and Indirect Costs	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	809,032.00	0.00	809,032.00

J. Fee	Federal (\$)

K. Total Costs and Fee	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Costs and Fee (I + J)</b>	809,032.00	0.00	809,032.00

#### L. \* Budget Justification

(Only attach one file.)

1234-Budget Narrative Andrade IES Fina

Add Attachment

Delete Attachment

View Attachment

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 3

OMB Number: 4040-0001  
Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 3 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Jason"/>	<input type="text"/>	<input type="text" value="Bryer"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text" value="12.00"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="104,040.00"/>	<input type="text" value="45,257.00"/>	<input type="text" value="149,297.00"/>	<input type="text" value="149,297.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Heidi"/>	<input type="text"/>	<input type="text" value="Andrade"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.53"/>	<input type="text" value="1.00"/>	<input type="text" value="32,200.00"/>	<input type="text" value="14,613.00"/>	<input type="text" value="46,813.00"/>	<input type="text" value="46,813.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Cheryl"/>	<input type="text"/>	<input type="text" value="Dozier"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="0.27"/>	<input type="text"/>	<input type="text" value="3,038.00"/>	<input type="text" value="1,972.00"/>	<input type="text" value="5,010.00"/>	<input type="text" value="5,010.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Marco"/>	<input type="text"/>	<input type="text" value="Varisco"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="0.27"/>	<input type="text"/>	<input type="text" value="3,064.00"/>	<input type="text" value="1,989.00"/>	<input type="text" value="5,053.00"/>	<input type="text" value="5,053.00"/>	<input type="text" value="0.00"/>

Application: R305A200318

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Robert		Yalgelski	
* Project Role				
Project Advisor				
Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)
			0.63	9,243.00
				* Fringe Ben. (\$)
				6,000.00
				* Total (Sal & FB) (Fed + Non-Fed)(\$)
				15,243.00
				* Federal (\$)
				15,243.00
				* Non-Federal (\$)
				0.00

Additional Senior Key Persons:  [Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

**Total Senior/Key Person**  221,416.00  221,416.00  0.00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
2	Graduate Students	6.00			43,697.00	7,865.00	51,562.00	51,562.00	0.00
	Undergraduate Students								
	Secretarial/Clerical								
1	Research Project Manager	12.00			60,343.00	26,249.00	86,592.00	86,592.00	0.00
1	part-time Research Associate				4,000.00	1,740.00	5,740.00	5,740.00	0.00
4	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b> <input type="text"/> 143,894.00	<input type="text"/> 143,894.00	<input type="text"/> 0.00
							<b>Total Salary, Wages and Fringe Benefits (A+B)</b> <input type="text"/> 365,310.00	<input type="text"/> 365,310.00	<input type="text"/> 0.00

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)

Additional Equipment:  [Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total funds requested for all equipment listed in the attached file

**Total Equipment**

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	12,900.00	0.00	12,900.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>12,900.00</b>	<b>0.00</b>	<b>12,900.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies	1,120.00	0.00	1,120.00
2. Publication Costs			
3. Consultant Services	54,000.00	0.00	54,000.00
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs	132,081.00	0.00	132,081.00
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. GA Tuition	19,836.00	0.00	19,836.00
9. meeting expenses	500.00	0.00	500.00
10.			
<b>Total Other Direct Costs</b>	<b>207,537.00</b>	<b>0.00</b>	<b>207,537.00</b>

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	<b>585,747.00</b>	<b>0.00</b>	<b>585,747.00</b>

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	54.50	433,831.00	236,438.00	0.00	236,438.00
<b>Total Indirect Costs</b>			<b>236,438.00</b>	<b>0.00</b>	<b>236,438.00</b>

Cognizant Federal Agency  
 (Agency Name, POC Name, and  
 Phone Number)

I. Total Direct and Indirect Costs	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	822,185.00	0.00	822,185.00

J. Fee	Federal (\$)

K. Total Costs and Fee	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Costs and Fee (I + J)</b>	822,185.00	0.00	822,185.00

#### L. \* Budget Justification

(Only attach one file.)

1234-Budget Narrative Andrade IES Fina

Add Attachment

Delete Attachment

View Attachment

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 4

OMB Number: 4040-0001  
Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 4 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Jason"/>	<input type="text"/>	<input type="text" value="Bryer"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text" value="12.00"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="106,121.00"/>	<input type="text" value="46,163.00"/>	<input type="text" value="152,284.00"/>	<input type="text" value="152,284.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Heidi"/>	<input type="text"/>	<input type="text" value="Andrade"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.53"/>	<input type="text" value="1.00"/>	<input type="text" value="32,844.00"/>	<input type="text" value="14,905.00"/>	<input type="text" value="47,749.00"/>	<input type="text" value="47,749.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Cheryl"/>	<input type="text"/>	<input type="text" value="Dozier"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="0.27"/>	<input type="text"/>	<input type="text" value="3,098.00"/>	<input type="text" value="2,011.00"/>	<input type="text" value="5,109.00"/>	<input type="text" value="5,109.00"/>	<input type="text" value="0.00"/>

Prefix	* First Name	Middle Name	* Last Name	Suffix
<input type="text" value="Dr."/>	<input type="text" value="Marco"/>	<input type="text"/>	<input type="text" value="Varisco"/>	<input type="text"/>

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="0.27"/>	<input type="text"/>	<input type="text" value="3,126.00"/>	<input type="text" value="2,029.00"/>	<input type="text" value="5,155.00"/>	<input type="text" value="5,155.00"/>	<input type="text" value="0.00"/>

Application: R305A200318

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Robert		Yalgelski	
* Project Role				
Project Advisor				
Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)
			0.63	9,428.00
				* Fringe Ben. (\$)
				6,120.00
				* Total (Sal & FB) (Fed + Non-Fed)(\$)
				15,548.00
				* Federal (\$)
				15,548.00
				* Non-Federal (\$)
				0.00

Additional Senior Key Persons:  [Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

**Total Senior/Key Person**  225,845.00  225,845.00  0.00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
2	Graduate Students	6.00			44,571.00	8,023.00	52,594.00	52,594.00	0.00
	Undergraduate Students								
	Secretarial/Clerical								
1	Research Project Manager	12.00			61,550.00	26,774.00	88,324.00	88,324.00	0.00
1	part-time Research Associate				4,000.00	1,740.00	5,740.00	5,740.00	0.00
4	<b>Total Number Other Personnel</b>						<b>Total Other Personnel</b> <input type="text"/> 146,658.00 <input type="text"/> 146,658.00 <input type="text"/> 0.00		
							<b>Total Salary, Wages and Fringe Benefits (A+B)</b> <input type="text"/> 372,503.00 <input type="text"/> 372,503.00 <input type="text"/> 0.00		

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)

Additional Equipment:  [Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total funds requested for all equipment listed in the attached file

**Total Equipment**

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	12,900.00	0.00	12,900.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>12,900.00</b>	<b>0.00</b>	<b>12,900.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies	1,000.00	0.00	1,000.00
2. Publication Costs			
3. Consultant Services	69,000.00	0.00	69,000.00
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs	135,051.00	0.00	135,051.00
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. GA Tuition	20,844.00	0.00	20,844.00
9. meeting expenses	500.00	0.00	500.00
10.			
<b>Total Other Direct Costs</b>	<b>226,395.00</b>	<b>0.00</b>	<b>226,395.00</b>

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	<b>611,798.00</b>	<b>0.00</b>	<b>611,798.00</b>

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	54.50	455,902.00	248,467.00	0.00	248,467.00
<b>Total Indirect Costs</b>		<b>248,467.00</b>		<b>0.00</b>	<b>248,467.00</b>

Cognizant Federal Agency  
 (Agency Name, POC Name, and  
 Phone Number)

Application: R305A200318

I. Total Direct and Indirect Costs	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	860,265.00	0.00	860,265.00

J. Fee	Federal (\$)

K. Total Costs and Fee	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Costs and Fee (I + J)</b>	860,265.00	0.00	860,265.00

#### L. \* Budget Justification

(Only attach one file.)

1234-Budget Narrative Andrade IES Fina

Add Attachment

Delete Attachment

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**RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - Cumulative Budget**

	Total Federal (\$)	Total Non-Federal (\$)	Totals (\$)
<b>Section A, Senior/Key Person</b>	873,735.00	0.00	873,735.00
<b>Section B, Other Personnel</b>	571,047.00	0.00	571,047.00
Total Number Other Personnel			20
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	1,444,782.00	0.00	1,444,782.00
<b>Section C, Equipment</b>			
<b>Section D, Travel</b>	44,600.00	0.00	44,600.00
1. Domestic	44,600.00	0.00	44,600.00
2. Foreign			
<b>Section E, Participant/Trainee Support Costs</b>			
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
6. Number of Participants/Trainees			
<b>Section F, Other Direct Costs</b>	838,693.00	0.00	838,693.00
1. Materials and Supplies	9,240.00	0.00	9,240.00
2. Publication Costs			
3. Consultant Services	231,000.00	0.00	231,000.00
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs	518,873.00	0.00	518,873.00
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. Other 1	77,580.00	0.00	77,580.00
9. Other 2	2,000.00	0.00	2,000.00
10. Other 3			
<b>Section G, Direct Costs (A thru F)</b>	2,328,075.00	0.00	2,328,075.00
<b>Section H, Indirect Costs</b>	970,984.00	0.00	970,984.00
<b>Section I, Total Direct and Indirect Costs (G + H)</b>	3,299,059.00	0.00	3,299,059.00
<b>Section J, Fee</b>			
<b>Section K, Total Costs and Fee (I + J)</b>	3,299,059.00	0.00	3,299,059.00

Application: R305A200318

**Institute of Education Sciences  
Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills  
(DAACS)**

**The Research Foundation of SUNY on Behalf of the University at Albany – SUNY  
Dr. Jason Bryer**

**Grant Period: 09/01/2020 to 8/31/2024**

**Budget Justification**

**Personnel**

**Jason Bryer, Ph.D.**, Principal Investigator, (Yrs. 1-4 @ 100% effort during the calendar year).

**Organization:** Research Associate, Educational and Counseling Psychology, University at Albany—SUNY. **Role on Project:** Dr. Bryer will oversee the integration of the technology framework into the student systems of participating institutions; supervise the collection of and manage the data; work with individual institutions to ensure the advisor dashboard is customized to their specific needs; conduct statistical analyses related to improving automated scoring models, computer adaptive testing framework, and on the efficacy of DAACS; provide professional development for academic advisors; and co-author presentations, papers, and reports.

**Heidi Andrade, Ed.D.**, Co-Investigator, (Yrs. 1-4 @ 17% (1.53 months) effort during the academic year, and 33% (1 month) effort during the summer). **Organization:** Professor, Educational and Counseling Psychology, University at Albany—SUNY. **Role on Project:** Dr. Andrade will assist in the implementation of study design and advisor training; collaborate on training of staff of participating institutions on the use of DAACS; supervise graduate assistants; write conference presentations and publications; and manage budgets and write reports.

**Cheryl Dozier, Ph.D.**, Subject Matter Expert and Project Advisor, (Yrs. 1-4 @ 3% effort during the academic year). **Organization:** Associate Professor, Literacy Teaching and Learning, University at Albany—SUNY. **Role on Project:** Dr. Dozier will provide guidance on evaluating the reading assessment, feedback, and OERs; and attend advisory meetings.

**Marco Varisco, Ph.D.**, Subject Matter Expert and Project Advisor (Yrs. 1-4 @ 3% effort during the academic year). **Organization:** Associate Professor, College of Arts and Sciences, Mathematics and Statistics, University at Albany—SUNY. **Role on Project:** Dr. Varisco will provide guidance on evaluating the mathematics assessment, feedback, and OERs; and attend advisory meetings.

**Robert Yagelski, Ph.D.**, Subject Matter Expert and Project Advisor (Yrs. 1-4 @ 7% effort during the academic year). **Organization:** Associate Vice Provost for Writing and Critical Inquiry, University at Albany—SUNY. **Role on Project:** Dr. Yagelski will provide guidance on evaluating the writing assessment, feedback, and OERs; assist in the trainings for essay raters and scoring the writing assessment; serve as the lead expert rater during scoring of the writing assessment; and attend advisory meetings.

**Angela Lui, Ph.D. Candidate**, Research Project Manager, (Yrs. 1-4 @ 100% effort during the academic year). **Organization:** Educational and Counseling Psychology, University at Albany—SUNY. **Role on Project:** Angela Lui will manage project activities, including team meetings, implementation of project design, rater and advisor trainings, and data collection at the two institutions; assist in data management, data analyses and reporting; co-write conference presentations, and publications.

**Diana Akhmedjanova, Ph.D. Candidate**, Diana Akhmedjanova, (Yrs. 1-4 @ 50% effort). **Organization:** Educational and Counseling Psychology, University at Albany—SUNY. **Role on Project:** Diana Akhmedjanova will provide guidance on the implementation of DAACS; co-author conference presentations and publications; and attend advisory meetings.

**TBD, Graduate Assistants, (2)** (Yrs. 1-4 @ 100% effort during the calendar year). The graduate assistants will provide technical assistance with the implementation of the intervention; assist in data analyses as validity evidence of the four assessments and to answer research questions; co-author papers and presentations.

**TBD, Essays Raters** (Yrs. 1 @ \$25/hour). Four expert raters will score essays written by students for the DAACS in order to monitor the validity and reliability of the inferences drawn from the scores.

## Fringe Benefits

Fringe benefit costs are calculated at the Research Foundation of State University of New York and the University at Albany rates for July 1, 2020. A fringe benefit rate of 62.25% is applied to academic year salaries; 15% is used in the calculation for summers. Graduate Assistants rate will be 16% and the Research Foundation rate is 42%. Increases have been applied in the out years.

## Consultants

**Abbe Herzig, Ph.D.**, Subject Matter Expert and Project Advisor (Yrs. 1-4). Dr. Herzig will provide guidance on evaluating the mathematics assessment, feedback, and OERs. Dr. Herzig will also attend regular advisory meetings.

**Elijah Mayfield, M.S.**, Subject Matter Expert and Project Advisor (Yrs. 1-4). Mr. Mayfield will provide guidance on the use and retraining of LightSide models for automated scoring and feedback of the writing assessment. In addition, Mr. Mayfield will attend regular advisory meetings.

**Philip Winne, Ph.D.**, Project Advisor (Yrs. 1-4). Dr. Winne will provide guidance on the use of SRL strategies, assessments, and feedback. Dr. Winne will also attend regular advisory meetings.

**Brian Yates, Ph.D.**, Subject Matter Expert and Project Advisor (Yrs. 1-4). Dr. Yates will provide guidance on activities related to cost analysis and cost-effectiveness analysis. Dr. Yates will also attend advisory meetings.

**Metis Associates**, External Evaluator (Yrs. 1-4). Susanne Harnett, Ph.D., is the Managing Senior Associate of Metis Associates. Dr. Harnett will lead a team of evaluators from Metis to design and implement a cost-analysis and cost-effectiveness analysis.

**Gavant Software**, Hosting, Technology Support, and Software Interface Maintenance and Enhancements (Yrs 1-4). Gavant designed the DAACS software interface and has the background knowledge needed to maintain it. They will provide the technological support for hosting and integrating DAACS at three new institutions; they will also provide customer service for software interface, and provide support for enhancements to the software, as needed.

## **Subcontracts**

**Rutgers University, Tim Cleary, Ph.D.**, Co-Investigator (Yrs 1-4). Dr. Cleary is an Associate Professor at Rutgers University, and is also the Chair of the Department of School Psychology, and the Director of the School Psychology program. He will assist in the implementation design at the three institutions, including DAACS and SRL training for the advisors. He will also co-author presentation, papers, and reports; and supervise graduate assistants from Rutgers who will work on this project.

**SUNY Empire State College, Suzanne Orrell, Ph.D.**, Dr. Orrell is the Director of Academic Support at the Central New York Region of SUNY Empire State College (ESC). She will oversee the implementation of the DAACS at ESC, including the integration of DAACS into the student information system and orientation, and training of advisors. She will make decisions on and implement the plan for treatment/control assignment at ESC; work with Joseph King, the director of Institutional Effectiveness, on data collection and management. and review findings in collaboration with the PIs. Since SUNY Empire State College is a separate SUNY campus, The Research Foundation for the State University of New York, University at Albany did not charge indirect costs on the first \$25,000 on their budget.

**California State University - East Bay, Roger Wen, Ph.D.**, Dr. Wen is the Senior Director of the online campus and Master's program in Education at the California State University East Bay (CSUEB) campus. He will oversee the implementation of the DAACS at CSUEB for only fully online programs, including the integration into the student information system and orientation, and training of advisors. He will make decisions on and implement the plan for treatment/control assignment at CSUEB; work establish and implement procedures for data collection and management, and review findings in collaboration with the PIs.

**Equipment:** None

## **Supplies**

**Laptops (3)**: The project will require 3 laptop computers (\$2,000 per laptop) for data collection and analysis. They are also needed to conduct literature searches and prepare dissemination documents, such as presentations and papers.

**External hard drives (2):** The project will use external hard drives (\$120 per hard drive in Year 1 and Year 3) to secure and backup all data and project-related information.

**Research Materials** – The project will require research materials (\$1,000 in Years 2, 3, and 4) to move forward each year. This will include, but not limited to, duplication of data, flash drives to share data and materials for integration activities.

## Travel

**Project Director Mandatory Annual Meeting:** The PI is required to attend the annual mandatory Project Director's meeting in Washington, DC. A Co-I will also attend the meeting.

Destination	Purpose	Traveler(s)	Conference Fees	Airfare per attend.	Per Diem Per attend	Lodging (/night) Per attend	Days	Total
Washington DC	Program Directors Meeting	2	0	\$492	\$57	\$179	3	\$2,400

**Professional Conferences:** The PI, co-I, research project manager and GAs will attend professional conferences for professional development and to disseminate the results of the project.

One such conference is the American Educational Research Association. Staff would attend every year for professional development and to disseminate the results of the project. The anticipated location and dates of these conferences are specified below. The per diem rates for 2019 are also provided, with the expectation that they will likely increase by the time of the conference.

### 2021: Orlando, FL (April 9 to April 12)

- Lodging Rate: \$122/day/person
- Meal and Incidental Rate: \$66/day/person

### 2022: San Diego, CA (April 22 to April 25)

- Lodging Rate: \$160/day/person
- Meal and Incidental Rate: \$71/day/person

### 2023: Chicago, IL (April 13 to April 16)

- Lodging Rate: \$183/day/person
- Meal and Incidental Rate: \$76/day/person

### 2024: TBD (in the month of April)

- N/A
- N/A

Travels to other conferences might be planned in addition to, or in replace of AERA, if they are deemed to be more appropriate venues for the dissemination of our work. Due to uncertainties of the duration and location of the *all* the conferences, we have made an educated estimate of

conferences expenses based on the figures above (\$1750 per person), as actual figures are unavailable.

## **Miscellaneous Expenses**

**GA Tuition:** Each GA will receive 18 credits of tuition annually. There is a 5% increase included in the calculation.

## **Indirect Cost Rate**

The indirect cost rate requested in the budget is in accordance with the Department of Health and Human Services negotiated rate with The Research Foundation of SUNY on behalf of the University at Albany, SUNY. A 54.5% research rate is used in the calculations. The most recent indirect cost rate letter is dated June 26, 2019.

## R&R Subaward Budget (Fed/Non-Fed) Attachment(s) Form

**Instructions:** On this form, you will attach the R&R Subaward Budget (Fed/Non-Fed) files for your grant application. Complete the subawardee budget(s) in accordance with the R&R (Fed/Non-Fed) budget instructions. Please remember that any files you attach must be a PDF document.

[Click here to extract the R&R Budget \(Fed/Non-Fed\) Attachment](#)

**Important:** Please attach your subawardee budget file(s) with the file name of the subawardee organization. Each file name must be unique.

1) Please attach Attachment 1	Rutgers The State University	Add Attachment	Delete Attachment	View Attachment
2) Please attach Attachment 2	SUNY Empire State College	Add Attachment	Delete Attachment	View Attachment
3) Please attach Attachment 3	CalState Uni East Bay Found	Add Attachment	Delete Attachment	View Attachment
4) Please attach Attachment 4		Add Attachment	Delete Attachment	View Attachment
5) Please attach Attachment 5		Add Attachment	Delete Attachment	View Attachment
6) Please attach Attachment 6		Add Attachment	Delete Attachment	View Attachment
7) Please attach Attachment 7		Add Attachment	Delete Attachment	View Attachment
8) Please attach Attachment 8		Add Attachment	Delete Attachment	View Attachment
9) Please attach Attachment 9		Add Attachment	Delete Attachment	View Attachment
10) Please attach Attachment 10		Add Attachment	Delete Attachment	View Attachment

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 1

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 1 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Tim		Cleary	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.25"/>	<input type="text" value="1.00"/>	<input type="text" value="26,065.00"/>	<input type="text" value="7,705.00"/>	<input type="text" value="33,770.00"/>	<input type="text" value="33,770.00"/>	<input type="text" value="0.00"/>

Additional Senior Key Persons:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
<input type="text"/>	Post Doctoral Associates	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Graduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
<input type="text"/>	Undergraduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	Secretarial/Clerical	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Total Number Other Personnel	Total Other Personnel					<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
		Total Salary, Wages and Fringe Benefits (A+B)					<input type="text" value="53,762.00"/>	<input type="text" value="53,762.00"/>	<input type="text" value="0.00"/>

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total funds requested for all equipment listed in the attached file

Total Equipment

<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	1,440.00	0.00	1,440.00
2. Foreign Travel Costs			
Total Travel Costs	1,440.00	0.00	1,440.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
Number of Participants/Trainees			
Total Participant/Trainee Support Costs			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
Total Other Direct Costs			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
Total Direct Costs (A thru F)	55,202.00	0.00	55,202.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
mtdc	56.00	55,202.00	30,913.00	0.00	30,913.00
Total Indirect Costs		30,913.00		0.00	30,913.00

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

DHHS, Ryan McCarthy, 212-264-0918

Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	86,115.00	0.00	86,115.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	86,115.00	0.00	86,115.00

#### **L. \* Budget Justification**

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(Only attach one file.)

[Add Attachment](#)
[Delete Attachment](#)
[View Attachment](#)

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 2

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 2 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Tim		Cleary	

\* Project Role

PD/PI

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.25"/>	<input type="text" value="1.00"/>	<input type="text" value="26,847.00"/>	<input type="text" value="7,937.00"/>	<input type="text" value="34,784.00"/>	<input type="text" value="34,784.00"/>	<input type="text" value="0.00"/>

Additional Senior Key Persons:

Add Attachment

Delete Attachment

View Attachment

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person

<input type="text" value="34,784.00"/>	<input type="text" value="34,784.00"/>	<input type="text" value="0.00"/>
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## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
<input type="text"/>	Post Doctoral Associates	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Graduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
<input type="text"/>	Undergraduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	Secretarial/Clerical	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Total Number Other Personnel	Total Other Personnel					<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>

Total Salary, Wages and Fringe Benefits (A+B)

<input type="text" value="54,776.00"/>	<input type="text" value="54,776.00"/>	<input type="text" value="0.00"/>
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## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment:

Add Attachment

Delete Attachment

View Attachment

Total funds requested for all equipment listed in the attached file

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Total Equipment

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	4,755.00	0.00	4,755.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>4,755.00</b>	<b>0.00</b>	<b>4,755.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>	<b>Total Participant/Trainee Support Costs</b>		

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>	<b>59,531.00</b>		

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	<b>59,531.00</b>	<b>0.00</b>	<b>59,531.00</b>

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
mtdc	57.00	59,531.00	33,933.00	0.00	33,933.00
<b>Total Indirect Costs</b>	<b>33,933.00</b>	<b>0.00</b>	<b>33,933.00</b>		

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

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Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	93,464.00	0.00	93,464.00
<b>J. Fee</b>			
	<b>Federal (\$)</b>		
<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	93,464.00	0.00	93,464.00

#### **L. \* Budget Justification**

(Only attach one file.)

## RESEARCH &amp; RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 3

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS: Enter name of Organization: \* Budget Type:  Project  Subaward/ConsortiumBudget Period: 3 \* Start Date:  \* End Date: **A. Senior/Key Person**

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Tim		Cleary	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.25"/>	<input type="text" value="1.00"/>	<input type="text" value="27,652.00"/>	<input type="text" value="8,174.00"/>	<input type="text" value="35,826.00"/>	<input type="text" value="35,826.00"/>	<input type="text" value="0.00"/>

Additional Senior Key Persons: 

Total Funds requested for all Senior Key Persons in the attached file

<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Senior/Key Person	<input type="text" value="35,826.00"/>	<input type="text" value="35,826.00"/>
	<input type="text" value="0.00"/>	

**B. Other Personnel**

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Graduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
	Undergraduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Secretarial/Clerical	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Total Number Other Personnel					Total Other Personnel	<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
						Total Salary, Wages and Fringe Benefits (A+B)	<input type="text" value="55,818.00"/>	<input type="text" value="55,818.00"/>	<input type="text" value="0.00"/>

**C. Equipment Description**

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment: 

Total funds requested for all equipment listed in the attached file

<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Equipment	<input type="text"/>	<input type="text"/>

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	4,755.00	0.00	4,755.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>4,755.00</b>	<b>0.00</b>	<b>4,755.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>	<b>Total Participant/Trainee Support Costs</b>		

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>	<b></b>		

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	<b>60,573.00</b>	<b>0.00</b>	<b>60,573.00</b>

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
mtdc	57.00	60,573.00	34,527.00	0.00	34,527.00
<b>Total Indirect Costs</b>	<b></b>	<b>34,527.00</b>	<b></b>	<b>0.00</b>	<b>34,527.00</b>

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

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<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	95,100.00	0.00	95,100.00
<b>J. Fee</b>			
	<b>Federal (\$)</b>		
<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	95,100.00	0.00	95,100.00

#### **L. \* Budget Justification**

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(Only attach one file.)

## RESEARCH &amp; RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 4

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS: Enter name of Organization: \* Budget Type:  Project  Subaward/ConsortiumBudget Period: 4 \* Start Date:  \* End Date: **A. Senior/Key Person**

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Tim		Cleary	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
<input type="text"/>	<input type="text"/>	<input type="text" value="1.25"/>	<input type="text" value="1.00"/>	<input type="text" value="28,481.00"/>	<input type="text" value="8,419.00"/>	<input type="text" value="36,900.00"/>	<input type="text" value="36,900.00"/>	<input type="text" value="0.00"/>

Additional Senior Key Persons: 

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person

**B. Other Personnel**

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
<input type="checkbox"/>	Post Doctoral Associates	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Graduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
<input type="checkbox"/>	Undergraduate Students	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Secretarial/Clerical	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Total Number Other Personnel	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="19,992.00"/>	<input type="text" value="19,992.00"/>	<input type="text" value="0.00"/>
<b>Total Salary, Wages and Fringe Benefits (A+B)</b> <input type="text" value="56,892.00"/> <input type="text" value="56,892.00"/> <input type="text" value="0.00"/>									

**C. Equipment Description**

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment: 

Total funds requested for all equipment listed in the attached file

Total Equipment

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	4,755.00	0.00	4,755.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	<b>4,755.00</b>	<b>0.00</b>	<b>4,755.00</b>

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>	<b>Total Participant/Trainee Support Costs</b>		

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>	<b></b>		

**G. Direct Costs**

Total Direct Costs (A thru F)	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
	61,647.00	0.00	61,647.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
mtdc	57.00	61,647.00	35,139.00	0.00	35,139.00
<b>Total Indirect Costs</b>			<b>35,139.00</b>	<b>0.00</b>	<b>35,139.00</b>

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

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<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	96,786.00	0.00	96,786.00
<b>J. Fee</b>			
	<b>Federal (\$)</b>		
<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	96,786.00	0.00	96,786.00

#### **L. \* Budget Justification**

(Only attach one file.)

## RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - Cumulative Budget

	Total Federal (\$)	Total Non-Federal (\$)	Totals (\$)
<b>Section A, Senior/Key Person</b>	141,280.00	0.00	141,280.00
<b>Section B, Other Personnel</b>	79,968.00	0.00	79,968.00
Total Number Other Personnel			4
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	221,248.00	0.00	221,248.00
<b>Section C, Equipment</b>			
<b>Section D, Travel</b>	15,705.00	0.00	15,705.00
1. Domestic	15,705.00	0.00	15,705.00
2. Foreign			
<b>Section E, Participant/Trainee Support Costs</b>			
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
6. Number of Participants/Trainees			
<b>Section F, Other Direct Costs</b>			
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. Other 1			
9. Other 2			
10. Other 3			
<b>Section G, Direct Costs (A thru F)</b>	236,953.00	0.00	236,953.00
<b>Section H, Indirect Costs</b>	134,512.00	0.00	134,512.00
<b>Section I, Total Direct and Indirect Costs (G + H)</b>	371,465.00	0.00	371,465.00
<b>Section J, Fee</b>			
<b>Section K, Total Costs and Fee (I + J)</b>	371,465.00	0.00	371,465.00

Application: R305A200318

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 1

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 1 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Suzanne		Orrell	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0.80			5,496.00	3,350.00	8,846.00	8,846.00	0.00

Additional Senior Key Persons:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person

8,846.00	8,846.00	0.00
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## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	Dir. Institutional Effectiveness	0.30			2,565.00	1,565.00	4,130.00	4,130.00	0.00

1 Total Number Other Personnel

Total Other Personnel

4,130.00	4,130.00	0.00
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Total Salary, Wages and Fringe Benefits (A+B)

12,976.00	12,976.00	0.00
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## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

\* Equipment item

\* Federal (\$)

\* Non-Federal (\$)

\* Total (Fed + Non-Fed) (\$)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Additional Equipment:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total funds requested for all equipment listed in the attached file

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Total Equipment

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	174.00	0.00	174.00
2. Foreign Travel Costs			
Total Travel Costs	174.00	0.00	174.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
Number of Participants/Trainees			
Total Participant/Trainee Support Costs			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
Total Other Direct Costs			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
Total Direct Costs (A thru F)	13,150.00	0.00	13,150.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	33.00	13,150.00	4,339.00	0.00	4,339.00
Total Indirect Costs			4,339.00	0.00	4,339.00

Cognizant Federal Agency  
 (Agency Name, POC Name, and  
 Phone Number)

DHHS Ryan McCarthy 212-264-0918

Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	17,489.00	0.00	17,489.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	17,489.00	0.00	17,489.00

#### **L. \* Budget Justification**

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(Only attach one file.)

1252-Budget Narrative Empire.pdf

Add Attachment

Delete Attachment

View Attachment

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 2

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 2 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Suzanne		Orrell	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0.80			5,661.00	3,446.00	9,107.00	9,107.00	0.00

Additional Senior Key Persons:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file	0.00	0.00	0.00
<b>Total Senior/Key Person</b>	9,107.00	9,107.00	0.00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	Dir. Institutional Effectiveness	0.30			2,642.00	1,723.00	4,365.00	4,365.00	0.00

1 Total Number Other Personnel	4,365.00	4,365.00	0.00
<b>Total Other Personnel</b>	4,365.00	4,365.00	0.00

**Total Salary, Wages and Fringe Benefits (A+B)**

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)

Additional Equipment:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total funds requested for all equipment listed in the attached file			
<b>Total Equipment</b>			

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	170.00	0.00	170.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	170.00	0.00	170.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>			

**G. Direct Costs**

Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	13,642.00	0.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	33.00	13,642.00	4,502.00	0.00	4,502.00
<b>Total Indirect Costs</b>			4,502.00	0.00	4,502.00

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

DHHS Ryan McCarthy 212-264-0918

Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	18,144.00	0.00	18,144.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	18,144.00	0.00	18,144.00

#### **L. \* Budget Justification**

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(Only attach one file.)

[1252-Budget Narrative Empire.pdf](#)

Add Attachment

Delete Attachment

[View Attachment](#)

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 3

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 3 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Suzanne		Orrell	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0.80			5,831.00	3,707.00	9,538.00	9,538.00	0.00

Additional Senior Key Persons:

Add Attachment

Delete Attachment

View Attachment

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person

9,538.00	9,538.00	0.00
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## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	Dir. Institutional Effectiveness	0.30			2,268.00	1,441.00	3,709.00	3,709.00	0.00

1 Total Number Other Personnel

Total Other Personnel

3,709.00	3,709.00	0.00
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Total Salary, Wages and Fringe Benefits (A+B)

13,247.00	13,247.00	0.00
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## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

\* Equipment item

\* Federal (\$)

\* Non-Federal (\$)

\* Total (Fed + Non-Fed) (\$)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Additional Equipment:

Add Attachment

Delete Attachment

View Attachment

Total funds requested for all equipment listed in the attached file

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Total Equipment

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	170.00	0.00	170.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	170.00	0.00	170.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	13,417.00	0.00	13,417.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	33.00	13,417.00	4,428.00	0.00	4,428.00
<b>Total Indirect Costs</b>		4,428.00	0.00	4,428.00	

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

DHHS Ryan McCarthy 212-264-0918

Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	17,845.00	0.00	17,845.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	17,845.00	0.00	17,845.00

#### **L. \* Budget Justification**

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(Only attach one file.)

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 4

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 4 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Suzanne		Orrell	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0.80			6,006.00	3,898.00	9,904.00	9,904.00	0.00

Additional Senior Key Persons:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person

9,904.00	9,904.00	0.00
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## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	Dir. Institutional Effectiveness	0.30			2,336.00	1,516.00	3,852.00	3,852.00	0.00

1 Total Number Other Personnel

Total Other Personnel

3,852.00	3,852.00	0.00
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Total Salary, Wages and Fringe Benefits (A+B)

13,756.00	13,756.00	0.00
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## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

\* Equipment item

\* Federal (\$)

\* Non-Federal (\$)

\* Total (Fed + Non-Fed) (\$)

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Additional Equipment:

[Add Attachment](#)

[Delete Attachment](#)

[View Attachment](#)

Total funds requested for all equipment listed in the attached file

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Total Equipment

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Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	170.00	0.00	170.00
2. Foreign Travel Costs			
Total Travel Costs	170.00	0.00	170.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
Number of Participants/Trainees			
Total Participant/Trainee Support Costs			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
Total Other Direct Costs			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
Total Direct Costs (A thru F)	13,926.00	0.00	13,926.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	33.00	13,926.00	4,596.00	0.00	4,596.00
Total Indirect Costs			4,596.00	0.00	4,596.00

Cognizant Federal Agency  
 (Agency Name, POC Name, and  
 Phone Number)

DHHS Ryan McCarthy 212-264-0918

Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	18,522.00	0.00	18,522.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	18,522.00	0.00	18,522.00

#### **L. \* Budget Justification**

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(Only attach one file.)

[1252-Budget Narrative Empire.pdf](#)

Add Attachment

Delete Attachment

[View Attachment](#)

## RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - Cumulative Budget

	Total Federal (\$)	Total Non-Federal (\$)	Totals (\$)
<b>Section A, Senior/Key Person</b>	37,395.00	0.00	37,395.00
<b>Section B, Other Personnel</b>	16,056.00	0.00	16,056.00
Total Number Other Personnel			4
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	53,451.00	0.00	53,451.00
<b>Section C, Equipment</b>			
<b>Section D, Travel</b>	684.00	0.00	684.00
1. Domestic	684.00	0.00	684.00
2. Foreign			
<b>Section E, Participant/Trainee Support Costs</b>			
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
6. Number of Participants/Trainees			
<b>Section F, Other Direct Costs</b>			
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. Other 1			
9. Other 2			
10. Other 3			
<b>Section G, Direct Costs (A thru F)</b>	54,135.00	0.00	54,135.00
<b>Section H, Indirect Costs</b>	17,865.00	0.00	17,865.00
<b>Section I, Total Direct and Indirect Costs (G + H)</b>	72,000.00	0.00	72,000.00
<b>Section J, Fee</b>			
<b>Section K, Total Costs and Fee (I + J)</b>	72,000.00	0.00	72,000.00

Application: R305A200318

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 1

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 1 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Roger		Wen	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0 .30			3 ,433 .00	1 ,360 .00	4 ,793 .00	4 ,793 .00	0 .00

Additional Senior Key Persons:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person
4 ,793 .00

4 ,793 .00

0 .00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	eLearning Specialist	0 .40			3 ,750 .00	2 ,719 .00	6 ,469 .00	6 ,469 .00	0 .00

1 Total Number Other Personnel

Total Other Personnel 

6 ,469 .00	6 ,469 .00	0 .00
------------	------------	-------

Total Salary, Wages and Fringe Benefits (A+B)

11 ,262 .00	11 ,262 .00	0 .00
-------------	-------------	-------

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)

Additional Equipment:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total funds requested for all equipment listed in the attached file

Total Equipment

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	1,011.00	0.00	1,011.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	1,011.00	0.00	1,011.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	12,273.00	0.00	12,273.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	46.50	12,273.00	5,707.00	0.00	5,707.00
<b>Total Indirect Costs</b>		5,707.00	0.00	5,707.00	

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

DHHS, : Patrick Smith (415) 437-7820

Application: R305A200318

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	17,980.00	0.00	17,980.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	17,980.00	0.00	17,980.00

#### **L. \* Budget Justification**

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(Only attach one file.)

1253-Wen Budget Narrative CalState.pdf

Add Attachment

Delete Attachment

View Attachment

# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 2

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 2 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Roger		Wen	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0 .30			3 ,536 .00	1 ,400 .00	4 ,936 .00	4 ,936 .00	0 .00

Additional Senior Key Persons:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person
4 ,936 .00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	eLearning Specialist	0 .40			3 ,863 .00	2 ,801 .00	6 ,664 .00	6 ,664 .00	0 .00

1 Total Number Other Personnel

Total Other Personnel

Total Salary, Wages and Fringe Benefits (A+B)

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total funds requested for all equipment listed in the attached file

Total Equipment
<input type="text"/>

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	1,061.00	0.00	1,061.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	1,061.00	0.00	1,061.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	12,661.00	0.00	12,661.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	46.50	12,661.00	5,888.00	0.00	5,888.00
<b>Total Indirect Costs</b>		5,888.00	0.00		5,888.00

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

--

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	18,549.00	0.00	18,549.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	18,549.00	0.00	18,549.00

#### **L. \* Budget Justification**

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(Only attach one file.)

1253-Wen Budget Narrative CalState.pdf

Add Attachment

Delete Attachment

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# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 3

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 3 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Roger		Wen	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0 .30			3 ,642 .00	1 ,442 .00	5 ,084 .00	5 ,084 .00	0 .00

Additional Senior Key Persons:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person
5 ,084 .00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	eLearning Specialist	0 .40			3 ,978 .00	2 ,886 .00	6 ,864 .00	6 ,864 .00	0 .00

1 Total Number Other Personnel

Total Other Personnel

Total Salary, Wages and Fringe Benefits (A+B)

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total funds requested for all equipment listed in the attached file

Total Equipment
<input type="text"/>

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	1,114.00	0.00	1,114.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	1,114.00	0.00	1,114.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>			

**G. Direct Costs**

	Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	13,062.00	0.00	13,062.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	46.50	13,062.00	6,074.00	0.00	6,074.00
<b>Total Indirect Costs</b>		6,074.00	0.00		6,074.00

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

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<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	19,136.00	0.00	19,136.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	19,136.00	0.00	19,136.00

#### **L. \* Budget Justification**

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(Only attach one file.)

1253-Wen Budget Narrative CalState.pdf

Add Attachment

Delete Attachment

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# RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - BUDGET PERIOD 4

OMB Number: 4040-0001

Expiration Date: 10/31/2019

\* ORGANIZATIONAL DUNS:

Enter name of Organization:

\* Budget Type:  Project  Subaward/Consortium

Budget Period: 4 \* Start Date:  \* End Date:

## A. Senior/Key Person

Prefix	* First Name	Middle Name	* Last Name	Suffix
Dr.	Roger		Wen	

\* Project Role

Base Salary (\$)	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed)(\$)	* Federal (\$)	* Non-Federal (\$)
	0 .30			3 ,751 .00	1 ,486 .00	5 ,237 .00	5 ,237 .00	0 .00

Additional Senior Key Persons:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total Funds requested for all Senior Key Persons in the attached file

Total Senior/Key Person
5 ,237 .00

## B. Other Personnel

* Number of Personnel	* Project Role	Cal. Months	Acad. Months	Sum. Months	* Req. Salary (\$)	* Fringe Ben. (\$)	* Total (Sal & FB) (Fed + Non-Fed) (\$)	* Federal (\$)	* Non- Federal (\$)
	Post Doctoral Associates								
	Graduate Students								
	Undergraduate Students								
	Secretarial/Clerical								
1	eLearning Specialist	0 .40			4 ,098 .00	2 ,971 .00	7 ,069 .00	7 ,069 .00	0 .00

Total Number Other Personnel

Total Other Personnel

Total Salary, Wages and Fringe Benefits (A+B)

## C. Equipment Description

List items and dollar amount for each item exceeding \$5,000

* Equipment item	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Additional Equipment:

[Add Attachment](#) [Delete Attachment](#) [View Attachment](#)

Total funds requested for all equipment listed in the attached file

Total Equipment
<input type="text"/>

Application: R305A200318

**D. Travel**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Domestic Travel Costs (Incl. Canada, Mexico, and U.S. Possessions)	1,171.00	0.00	1,171.00
2. Foreign Travel Costs			
<b>Total Travel Costs</b>	1,171.00	0.00	1,171.00

**E. Participant/Trainee Support Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
<b>Number of Participants/Trainees</b>			
<b>Total Participant/Trainee Support Costs</b>			

**F. Other Direct Costs**

	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8.			
9.			
10.			
<b>Total Other Direct Costs</b>			

**G. Direct Costs**

Federal (\$)	Non-Federal (\$)	Total (Fed + Non-Fed) (\$)
<b>Total Direct Costs (A thru F)</b>	13,477.00	0.00

**H. Indirect Costs**

Indirect Cost Type	Indirect Cost Rate (%)	Indirect Cost Base (\$)	* Federal (\$)	* Non-Federal (\$)	* Total (Fed + Non-Fed) (\$)
MTDC	46.50	13,477.00	6,266.00	0.00	6,266.00
<b>Total Indirect Costs</b>			6,266.00	0.00	6,266.00

**Cognizant Federal Agency**  
 (Agency Name, POC Name, and  
 Phone Number)

--

<b>I. Total Direct and Indirect Costs</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Direct and Indirect Institutional Costs (G + H)</b>	19,743.00	0.00	19,743.00

<b>J. Fee</b>	<b>Federal (\$)</b>

<b>K. Total Costs and Fee</b>	<b>Federal (\$)</b>	<b>Non-Federal (\$)</b>	<b>Total (Fed + Non-Fed) (\$)</b>
<b>Total Costs and Fee (I + J)</b>	19,743.00	0.00	19,743.00

#### **L. \* Budget Justification**

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(Only attach one file.)

1253-Wen Budget Narrative CalState.pdf

Add Attachment

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View Attachment

## RESEARCH & RELATED BUDGET (TOTAL FED + NON-FED) - Cumulative Budget

	Total Federal (\$)	Total Non-Federal (\$)	Totals (\$)
<b>Section A, Senior/Key Person</b>	20,050.00	0.00	20,050.00
<b>Section B, Other Personnel</b>	27,066.00	0.00	27,066.00
Total Number Other Personnel			4
<b>Total Salary, Wages and Fringe Benefits (A+B)</b>	47,116.00	0.00	47,116.00
<b>Section C, Equipment</b>			
<b>Section D, Travel</b>	4,357.00	0.00	4,357.00
1. Domestic	4,357.00	0.00	4,357.00
2. Foreign			
<b>Section E, Participant/Trainee Support Costs</b>			
1. Tuition/Fees/Health Insurance			
2. Stipends			
3. Travel			
4. Subsistence			
5. Other			
6. Number of Participants/Trainees			
<b>Section F, Other Direct Costs</b>			
1. Materials and Supplies			
2. Publication Costs			
3. Consultant Services			
4. ADP/Computer Services			
5. Subawards/Consortium/Contractual Costs			
6. Equipment or Facility Rental/User Fees			
7. Alterations and Renovations			
8. Other 1			
9. Other 2			
10. Other 3			
<b>Section G, Direct Costs (A thru F)</b>	51,473.00	0.00	51,473.00
<b>Section H, Indirect Costs</b>	23,935.00	0.00	23,935.00
<b>Section I, Total Direct and Indirect Costs (G + H)</b>	75,408.00	0.00	75,408.00
<b>Section J, Fee</b>			
<b>Section K, Total Costs and Fee (I + J)</b>	75,408.00	0.00	75,408.00

Application: R305A200318

## Budget Justification

Subaward to Rutgers University, Graduate School of Applied and Professional Psychology

Timothy Cleary – co-PI

Time period: 09/01/2020 - 08/31/2024

**Title of Project:** Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills

### **A. Personnel: \$221,248**

**Principal Investigator: Salary: \$109,044 + \$32,236 (Fringe)**

Over the duration of the grant, Dr. Cleary will commit 12.5% (1.25 AY months) and 1 summer month each year. During the academic year, Dr. Cleary will be involved with all aspects of project design and will assist with the PD activities, data analysis, and manuscript preparation. He will also oversee the work of student hourly helpers regarding data entry and analysis. The summer months will be devoted primarily to data analysis and subsequent modification and refinement of DAACS assessments and resources. He will also be involved with proposal and manuscript submissions during these months.

### **Hourly graduate students: \$79,968**

For each of the four years of the grant, \$19,992 will be allocated to pay doctoral level graduate students. Over the span of approximately 48 weeks per year, graduate students will collectively work a total of 24.5 hours per week at \$17/hr (48 weeks X 24.5 hrs/wk X \$17/hr = **\$19,992** per year). Students will provide assistance with literature searches, data entry, coding, data analysis, and conference proposal and manuscript preparation.

### **Fringe Benefits**

Rutgers University charges fringe rates of 49.04% for salaried employees & faculty and 7.65% for summer salary and part time employees. No fringe is charged on student hourly salary. Actual rates in place during the time of the award will be charged. The fringe benefit rates are negotiated between Rutgers University and the U.S. Department of Health and Human Services

### **B. Total Travel: \$15,705**

#### **Travel to Albany, \$5,760**

Funds for travel from New Jersey to Albany for PI meetings and/or professional development training will be scheduled. Two trips per year over the four years of the grant are planned (total of 8 trips). Each trip will cost \$720, for a total cost for the entire grant:  $\$720 \times 8 = \$5,760$ . Itemization for each trip is as follows: (a) rental car (\$150), (b) hotel (2 nights; \$420), (c) per diem (\$75/day; 2 days; \$150)

#### **National Conference Travel: \$9,945**

Funds to support conference travel for PI and students are allocated for Years 2-4. For the PI, we budgeted \$3,315/trip for Years 2-4 (\$600 airfare + 4 nights hotel @ \$210 (\$840) + 5 days per

diem @ \$75 (\$375) = \$1,815/year for a total cost for three years: **\$5,445**). A \$1,500 stipend/year will be provided to the research assistant support conference travel in Years 2-4 (Total cost = **\$4,500**).

**Indirect Cost Rate**

As per Rutgers University federally negotiated rate, indirect cost of 56% for FY21 & 57% for FY22 onwards is charged on modified total direct costs (MTDC) effective 02/15/2019.

**Subaward to Empire State College, State University of New York**  
**TITLE: Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills (DAACS)**

**Budget Justification**

**Personnel**

**Suzanne Orrell, Ph.D.**, Implementation Coordinator and Project Advisor, (Yrs 1-4 @ 7% effort annually). **Organization:** Director of Academic Support, Empire State College – SUNY. **Role on Project:** Dr. Orrell will oversee the implementation at Empire State College (ESC), including the integration in the student information system and orientation, and training of advisors; work with Joseph King, Director of Institutional Effectiveness on data collection and management; make decisions on and implement plan for treatment/control assignment at ESC; establish and implement procedures for data collection; and review findings in collaboration with the PIs.

**Joseph King, M.Sc.**, Analyst, (Yrs 1-2 @ 3% and Yrs 3-4 @ 2.5%). **Organization:** Director of Institutional Effectiveness, Empire State College – SUNY. **Role on Project:** Mr. King will work with Dr. Orrell on random assignment of students and will collaborate with her to determine what data to collect and how best to automate and validate collection. Mr. King will combine data collected from students who will complete the DAACS, analyzing results and guiding responses to internal trends. Mr. King will assist in finalization of data and creation of final reports.

**Fringe**

Fringe benefit costs are calculated at the Research Foundation of State University of New York and the SUNY Empire State College negotiated rates and applied to fiscal year salaries. Increases have been applied for each subsequent year: 62.25%, 63.57% and 64.91%.

**Travel**

**In-Person Project Advisory Team Meetings:** The DAACS team will have 3 advisory meetings a year, one of which will be held in Albany. Dr. Orrell or Mr. King will attend these meetings every year to represent Empire. Travel is allotted for the travel from Saratoga to Albany, with no lodging because of its proximity.

**Indirect Cost Rate**

The indirect cost rate requested in the budget is in accordance with the Department of Health and Human Services negotiated rate with The Research Foundation of SUNY on behalf of the SUNY Empire State College – at a predetermined on-campus research rate of 33% for Federal awards. The Research Foundation - SUNY Empire State College, negotiated on March 18, 2015 is currently implementing its negotiated provisional rate for 07/01/2019 – 06/30/2020.

**Subaward to California State University, East Bay Foundation, Inc.**

**TITLE: Project Examining the Efficacy of the Diagnostic Assessment and Achievement of College Skills**

**Budget Narrative**

**Personnel**

Roger Wen: \$14,362 is requested for 2.5% effort during the project period. Dr. Wen's responsibilities include overseeing the DAACS implementation at Cal State East Bay Online Campus, working with his team to establish and implement procedures for data collection, and reviewing research results in collaboration with the Principal Investigators.

eLearning Specialist: \$15,639 is requested for 5% effort during the project period. The eLearning specialist will be responsible for handling communications and course level operations; including integration of DAACS into the student information system, orientation and communication with students, and coordinating professional development and/or workshops for advisors.

Anticipated salary increases of 5% per year are included. Total personnel costs are: \$30,051.

**Fringe Benefits**

Dr. Wen's fringe benefits are calculated at the current actual rate: 55.77%.

The eLearning Specialist's fringe benefits are calculated at a rate of 57.72%, which is the average benefit rate for employees in the technical services unit.

Rates for release time include costs for retirement, OASDI, Medicare, Health/Dental/Vision, Workers Comp, and Unemployment. Total benefit costs are \$17,065.

**Travel**

Travel funds are requested for Dr. Wen to attend one advisory meeting each year to provide updates on the DAACS implementation at Cal State East Bay Online Campus and participate in discussions on next steps. Travel rates are based on our campus travel policy. Reimbursements are only paid based on actual expenses incurred. These are maximum rates to be reimbursed. Price per trip is broken down as follows: Airfare round trip \$600, Lodging is \$275 per night for 3 nights= \$825, Shuttle/transportation= \$70 and per diem is \$62/day (including incidentals) x 3 days=\$186. Total cost per meeting is \$1,011 in year 1. Increased costs for subsequent years are projected at 5%, for a total of \$4,358.

**Total Direct Costs**

The total amount of total direct costs is \$51,473 for July 1, 2020 through June 30, 2024.

**Indirect Costs**

California State University, East Bay Foundation's Federally-Negotiated Indirect Cost Rate is 46.5% of modified total direct cost, which excludes equipment, capital expenditures, charges for patient care, student tuition remission, rental costs of off-site facilities, scholarships and fellowships and any portion of a subcontract in excess of \$25K. A total of \$23,935 in indirect costs is requested.

**Total Costs**

The total amount of this request is \$75,408 for July 1, 2020 through June 30, 2524.

# RESEARCH & RELATED Other Project Information

OMB Number: 4040-0001

Expiration Date: 10/31/2019

1. Are Human Subjects Involved?  Yes  No

1.a. If YES to Human Subjects

Is the Project Exempt from Federal regulations?  Yes  No

If yes, check appropriate exemption number.  1  2  3  4  5  6  7  8

If no, is the IRB review Pending?  Yes  No

IRB Approval Date:

Human Subject Assurance Number:

2. Are Vertebrate Animals Used?  Yes  No

2.a. If YES to Vertebrate Animals

Is the IACUC review Pending?  Yes  No

IACUC Approval Date:

Animal Welfare Assurance Number:

3. Is proprietary/privileged information included in the application?  Yes  No

4.a. Does this Project Have an Actual or Potential Impact - positive or negative - on the environment?  Yes  No

4.b. If yes, please explain:

4.c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed?  Yes  No

4.d. If yes, please explain:

5. Is the research performance site designated, or eligible to be designated, as a historic place?  Yes  No

5.a. If yes, please explain:

6. Does this project involve activities outside of the United States or partnerships with international collaborators?  Yes  No

6.a. If yes, identify countries:

6.b. Optional Explanation:

7. Project Summary/Abstract

8. Project Narrative

9. Bibliography & References Cited

10. Facilities & Other Resources

11. Equipment

12. Other Attachments

## Human Subjects Non-Exempt Research Narrative

### **Human Subjects Involvement and Characteristics**

Three very different postsecondary education institutions will participate: the University at Albany, State University of New York (UA; n ≈ 5000 per year), Empire State College, State University of New York (ESC; n ≈ 5000 per year), and California State East Bay Online (CSUEB; n ≈ 2000 per year). The characteristics of these three institutions are summarized in Table 1.

Table 1. *Demographic Characteristics of the Three Target Research Sites*

	<b>University at Albany, SUNY</b>	<b>Empire State College, SUNY</b>	<b>Cal State East Bay</b>
<b>Public/Private</b>	Public research	Public liberal arts	Public
<b>Type of Institution</b>	Traditional	Blended	Online*
<b>Admissions</b>	54% of applicants	Open admissions	72% of applicants
<b>Enrollment</b>	19% of admitted	---	13% of admitted
<b>Faculty</b>			
Full-time	685	169	371
Part-time	463	685	435
<b>UG enrollment in Fall '18</b>	13,598	9,307	12,836
<b>Distance Education</b>			
Fully	1%	47%	11%
Partially	12%	12%	48%
Fully in-person	88%	41%	41%
<b>Race/Ethnicity</b>			
American Indian or Alaska...	0%	0%	0%
Asian	8%	3%	23%
Black or African American	19%	16%	10%
Hispanic/Latino	17%	14%	35%
Native Hawaiian or other...	0%	0%	1%
White	44%	58%	15%
Multiracial	3%	2%	5%
Race Unknown	3%	7%	5%
Non-resident alien	5%	0%	6%
<b>Student Age</b>			
24 and under	94%	19%	67%
25 and over	6%	81%	33%
<b>Attendance Status</b>			
Full-time	95%	39%	79%
Part-time	5%	61%	21%
<b>Gender</b>			
Male	49%	38%	39%
Female	51%	62%	61%

Source: Integrated Postsecondary Education Data System (IPEDS). \* Statistics are for Cal State East Bay; this study will include only fully online programs.

All newly enrolled undergraduate students and undergraduate academic advisors at UA, ESC, and CSUEB will be invited to participate in the study. Students who decline participation will be excluded from the study but still given access to the intervention.

Students will participate in a randomized controlled trial study to examine the efficacy of DAACS in promoting student success in terms of credit completion, retention, and GPA. At each institution, students will be randomly assigned to the DAACS group or a comparison group. The DAACS group will receive the DAACS intervention, as described in the Project Narrative; the comparison group will receive business-as-usual treatment. Students in the DAACS group will also be recruited for the implementation study and participate in interviews. Undergraduate academic advisors will also be invited to participate in interviews for the implementation study.

### Sources of Materials

Four sources of materials will be collected, and the PI, with the support of the Center for Institutional Research at each institution, will de-identify the data before they are transmitted for other researchers to use.

1. **DAACS assessments and trace data.** DAACS assessment data will be collected electronically upon students' completion of the DAACS assessment and their use of the DAACS feedback and resources.
2. **Students' academic information.** The institutional research departments at each participating institution have agreed to compile de-identified data on students' baseline academic achievement, demographics, and socioeconomic status. This information will be used to determine baseline equivalence. Several of our outcome variables (i.e., credit completion, retention, GPA) will also be requested. All of the students' academic information will have been collected already as institutional records.
3. **Questionnaires.** Questionnaires will be administered to students and advisors on the usability and perceptions about DAACS.
4. **Interviews and focus groups with audio recording.** Interviews and focus groups will be conducted with a subsample of students and advisors to further inquire about their perceptions about and satisfaction with the DAACS. The interviews will be semi-structured. An interview protocol for students (Appendix C, p. 3), and a focus group protocol for advisors (Appendix C, p. 4) will be used as a guide; the direction of the interview will be partially dependent upon participant responses.

Data will be secured in a password protected drive at the University at Albany, Empire State College, and Cal State East Bay Online. Data requests will be submitted to the Center for Institutional Research at each institution. Only data of students and advisors who have provided consent will be provided to us. The students' academic information (e.g., demographics, courses taken, GPA) will be merged with the DAACS data on students' scores on the four online assessments (reading, math, self-regulated learning, and writing). The datafiles that the DAACS research team receives will have students' identifiable information replaced with a unique token. Only two individuals responsible for merging the datafiles will have access to a file that matches the students' identifiable information with their unique token. Project personnel at the participating institutions are experienced in the secure handling of confidential data and possess

the ability to securely transmit data files. All data will be anonymized to ensure student confidentiality.

### **Recruitment and Consent Procedures**

The first time students access the DAACS online system, an informed consent form will pop up. The form explains the research project and asks students for permission to use their information, with acknowledgement that information collected will remain confidential and reported only in aggregate. Students will be given the choice to select, "I consent and give the DAACS team permission to use my information" or "I do not consent and do not give the DAACS team permission to use my information."

On the consent form, students will also be advised that some students will be invited to participate in an interview about the DAACS system. Students who are invited to participate in interviews will be contacted via email.

Advisors will also be asked to review and sign a consent form, which asks them for permission to use their information with acknowledgement that information collected will remain confidential and reported in aggregate. Advisors will also be advised that they will be invited to participate in an interview about the DAACS system. Those who consent and give the DAACS team permission to use their information will be contacted via email with an invitation to participate in an interview.

### **Potential Risks**

A small risk exists whenever data is transmitted that it may be intercepted, however this project poses no additional risk of exposure.

A second potential area of concern is that a student receiving feedback that their preparation for college is seriously lacking may be discouraged from signing up for courses. This risk will be mitigated by the support of advisors, and the supportive tone of the feedback that students receive from DAACS.

### **Planning Procedures for Protecting Against Potential Risks**

During data collection and analysis the privacy of the students will be maintained and data will be used purely for research purposes, without adverse effects on research participants. The participating institutions regularly handle and transmit student data and have unblemished security records.

As a benefit to being a student, all students are matched with an advisor, whether they are in the treatment or control group. All advisors will be trained to understand and use DAACS, and thus will be ready to provide services to any students who have shown evidence of feeling discouraged by the DAACS results.

### **Importance of the Knowledge to Be Gained**

Identifying and addressing the preparedness of newly enrolled college students is one of the most pressing issues in higher education today. Many institutions use placement exams to identify incoming students' preparedness in core academic content areas (reading, writing, and

mathematics), and then use their exam scores to place students in remedial courses. This approach is ineffective in several ways: 1) Placement exams typically do not offer students individualized feedback on academic strengths and weaknesses, nor do they link students to free resources that can help them succeed; 2) The exams do not assess important factors linked to academic achievement such as self-regulated learning (SRL) and motivation; 3) Remediation is associated with increased cost, time to degree, and attrition, since the majority of students drop out of non-credit courses that operate in isolation from program of study requirements (Belfield & Crosta, 2012; see also Scott-Clayton, 2012).

The Diagnostic Assessment and Achievement of College Skills (DAACS) was developed to address the shortcomings of placement exams and remediation. Developed with the support of a Fund for the Improvement of Postsecondary Education (FIPSE) First in the World Grant (FITW; Grant #P116F150077). DAACS is a diagnostic assessment and feedback system comprised of free, online assessments of reading, mathematics, and writing, as well as important regulatory processes including motivation, metacognition, and strategy use. DAACS provides immediate results and feedback, and online and social supports that help all students, particularly those who are academically at-risk, manage the challenges of college life. This system offers a means for students to assess their abilities and then develop strategies, with the guidance of academic advisors, to attain college-level skills.

The purposes of our proposed project are to examine the efficacy of the DAACS in terms of college students' academic outcomes, and the generalizability of these effects across different types of postsecondary institutions. It is our goal to gather data that supports the DAACS, and more broadly the emerging models of remediation support services, with which DAACS is aligned. Ultimately, this knowledge could provide empirical evidence to strengthen the justification for the replacement of placement exams and traditional remediation efforts, and provide insights to the reform of remediation.

### **Collaborating Sites**

In addition the research sites that will be involved in implementation and data collection (UA, ESC, and CSUEB), the co-investigator at Rutgers University, Dr. Cleary, and his graduate students will use data generated from the project for educational research. UA, ESC, CSUEB, and Rutgers all have their own Institutional Review Boards (IRB). Individuals at all participating institutions will seek approval from their own IRBs for research activities related to DAACS to ensure ethical procedures are upheld.

### Project/Performance Site Location(s)

**Project/Performance Site Primary Location**

I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: DUNS Number: \* Street1: Street2: \* City: County: \* State: Province: \* Country: \* ZIP / Postal Code: \* Project/ Performance Site Congressional District: **Project/Performance Site Location 1**

I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: DUNS Number: \* Street1: Street2: \* City: County: \* State: Province: \* Country: \* ZIP / Postal Code: \* Project/ Performance Site Congressional District: **Project/Performance Site Location 2**

I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: DUNS Number: \* Street1: Street2: \* City: County: \* State: Province: \* Country: \* ZIP / Postal Code: \* Project/ Performance Site Congressional District:

## Project/Performance Site Location(s)

**Project/Performance Site Location 3**

I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: California State University, East Bay Foundation, Inc.

DUNS Number: 1940443350000

\* Street1: 25800 Carlos Bee Blvd

Street2:

\* City: Hayward

County:

\* State: CA: California

Province:

\* Country: USA: UNITED STATES

\* ZIP / Postal Code: 94542-3001

\* Project/ Performance Site Congressional District: CA-015

Additional Location(s)

## 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

The Research Foundation for SUNY, University at Albany

\* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix:  \* First Name:  Middle Name:

\* Last Name:  Suffix:

\* Title:

\* SIGNATURE:  \* DATE: