

# Granite School District

## Research Applications During the 2022-2023 School Year

The impact of Kaplan’s Depth and Complexity Framework on lowering student resistance to critical thinking.

Investigator: Cindy Fulton

Granite administrator or teacher: Yes

IRB: Utah State University

Proposal ID: 2022-001-Fulton

**Status: Approved 07/15/2022**

Anticipated Start Date: 09/19/2022

Anticipated Completion Date: 10/28/2022

Research Classification: Teaching Strategies [Strategies emphasizing feedback: Questioning]

Requested research results on: 08/09/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>In the past, my students have resisted engaging in critical thinking activities and assessments. They prefer to work on assignments where answers are obvious or easy to find and consistently ask me to give them the answers when it becomes difficult for them. I will be utilizing Kaplan's Depth and Complexity Framework to determine if these prompts and icons will motivate students to engage in critical thinking.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This is a six-week unit. All students in all of my classes will be working on the Depth and Complexity units and will be completing the surveys, lessons, and assessments. During week one, students will complete a pre-test to check for any previous knowledge of depth and complexity that they might have already have and take a survey reflecting their attitudes toward critical thinking activities (both will not be graded). There will then be four weeks of Depth and Complexity prompt lessons (two prompts each week) with activities and a weekly assessment at the end of each week. The assessment at the end of each will be graded and will count toward their grade. At the end of that four weeks, during week six, they will complete a post-test to check their progress with their knowledge of Depth and Complexity prompts and a reflection survey regarding their attitude toward critical thinking activities (both are not graded).</p> <p>I will be utilizing only one class period of students in my US Honors History classes to recruit students for this study. This should be approximately 38 students within that class period that I will recruit to participate. All students in that class period will take the same surveys, pretest and posttest and participate in the same lessons, activities, and assessments, regardless of whether they are participating in the study or not.</p> <p>I will be able to analyze the pre-test and post-test to determine how much their knowledge and understanding of how to utilize the Depth and Complexity Framework has improved.</p> <p>I will also be able to analyze the students' weekly assessments to determine whether the students are demonstrating critical thinking on the assessments through utilizing the Depth and Complexity Framework. I will also be able to analyze the pre and post surveys to determine if there has been any change in their attitude toward critical thinking activities.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>Through teaching and utilizing Kaplan's Depth and Complexity Framework, I am anticipating an improvement in student attitudes toward critical thinking activities. I also expect that the assessments they take at the end of each week's lessons will demonstrate improved student performance on critical thinking and will show depth and complexity in student analysis</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>This research not only will benefit my students participating in the study, but all of my students who will be learning the Depth and Complexity Framework. If this is successful, I will be sharing my methods and resources with my colleagues in my school to encourage them to utilize the Depth and Complexity Framework with their students as well. It is important that all students learn to think critically with depth and complexity.</p>

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## Research Applications During the 2022-2023 School Year

### Examining teacher language perspectives and practice through in-service ESL endorsement programs

Investigator: Leah Davis

Granite administrator or teacher: No

IRB: Utah State University

Proposal ID: 2022-002-Davis

**Status: Approved 08/15/2022**

Anticipated Start Date: 08/15/2022

Anticipated Completion Date: 05/20/2023

Research Classification: Teacher [Teacher education: Professional Development Programs]

Requested research results on: 08/09/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>In order to identify solutions through an ecological approach, this study will examine language perspectives and practice from a systems perspective, inclusive of viewpoints of relevant stakeholders in addition to teachers. The systems to be investigated are an in-service ESL endorsement program, the schools of the teachers enrolled in the endorsement program, and the classrooms of these teachers. Systems can promote specific language perspectives through professional development regarding multilingual learners, regulating linguistic behavior of teachers or students, defining methods and standards by which to deliver multilingual instruction, and through other ways.</p> <p>To accomplish this goal, this project will study how systems promote the development language perspectives, specifically monoglossia and heteroglossia, of teachers who serve multilingual students in public schools. This project will closely examine how language perspectives are connected to practice, and whether and how teachers enact heteroglossic practices, such as translanguaging, within the systems they teach. This study will focus on ideologies and practices related to translanguaging.</p> <p><b>Research Questions</b></p> <ol style="list-style-type: none"> <li>1. Does an in-service ESL endorsement program mediate or support the development of language perspectives among in-service secondary teachers? If so, how?</li> <li>2. What role does an in-service ESL endorsement program play in supporting teacher enactment of language perspectives through practices such as translanguaging?</li> <li>3. What role do school systems (district and school leadership, school culture) play in mediating teacher enactment of language perspectives through practices such as translanguaging?</li> </ol>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p><b>Participants</b></p> <p>The participants will be secondary in-service teachers enrolled in the previously described ESL endorsement program. I will attempt to enroll ten teachers into the study with the expectation that approximately five will complete the study due to attrition. The participants, although all secondary teachers, will come from varied content areas. Because teacher enrollment within the program differs each year, the content areas of the enrolled teachers cannot be predicted before recruitment. However, I will attempt to select teachers from diverse content areas and different secondary grade levels in order to examine the application of their endorsement program learning across various environments. It is expected that most or all participants will teach in urban schools.</p> <p><b>Describe your research method(s)</b></p> <p>This will be a qualitative comparative case study across teachers enrolled in local university's ESL endorsement program. The only data to be collected within your district is audio recordings of lessons by teacher participants. No student data will be collected. Participants will be recruited through the registrar at the university of the ESL endorsement program. The teachers will participate in surveys and interviews outside of their classroom settings. The audio recordings will be the only data collection occurring within schools. The teachers will be provided with audio recorders. They will record four lessons throughout the 2022-2023 school year.</p> <p>Note: IRB approval cannot be given before district approval is granted, so no IRB letter is attached. IRB approval letter will be provided following district approval.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>The results of this study will inform pre-service teacher educators, teachers, administrators, and other relevant stakeholders as they consider the role of heteroglossic language ideology and translanguaging practices within systems of teacher education and public education. Through this study, stakeholders will come to better understand factors that promote heteroglossic ideological and implementational spaces so that they can build these spaces within their own systems. Additionally, findings from this study will illustrate the role and impact of systems on heteroglossic language ideology of teachers as they are introduced to language ideology and heteroglossic practices through an in-service ESL endorsement program. Although this project aims to gain ample data to inform future practice, it is investigational. Limited research has been conducted on teacher language ideology, specifically across multiple teaching contexts. Therefore, this study aims to create a baseline in which future studies can examine other facets of teacher language ideology and practices within multilingual contexts.</p> <p><b>Results: [insert here]</b></p>

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<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	This research can inform teacher practice, specifically relating to strengths and weaknesses of teachers in working with multilingual learners. The results can provide guidance on professional development for students in your district. The research team will be happy to provide a presentation of results at the conclusion of the study.
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### Manual of trauma informed teaching

Investigator: Marriah Brown

Granite administrator or teacher: Yes

IRB: Western Governors University

Proposal ID: 2022-003-Brown

**Status: Approved 08/15/2022**

Anticipated Start Date: 08/15/2022

Anticipated Completion Date: 09/30/2022

Research classification: Teacher [Teacher education: Teacher subject matter knowledge]

Research results received on: 08/12/2023

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	<p>Educators in the researcher's school do not have the resources to help students of trauma. This phenomenon negatively impacts proper behavior management and intervention supports. This is happening because no one has taken the time to develop and distribute material on the subject.</p> <p>The outcome of my research will be a resource handbook for educators on research-based trauma informed practices. This handbook will include information about what trauma is, how it manifests in students, as well as research-based strategies and curriculum they can use with students of trauma.</p>
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p><b>Data Collection Methods and Instruments</b></p> <p>The first instrument for data collection will be a qualitative survey. The survey will be conducted through Google Forms. This survey will be used to collect data on the researcher's coworkers' level of knowledge on ACEs' as well as the level of training they have received. It will also be used to find out the need for the handbook and ways to increase the likelihood of the handbooks being used.</p> <p>The second data collection instrument will be archival data. The researcher will be analyzing current literature and research on the topic of ACEs. The method of secondary data will be collected via the internet. The official method will be a qualitative document review of current scholarly texts and articles. The key terms of ACEs definition, manifestation of behaviors in adolescence, and curriculum and strategies to support will be used to code the literature. The literature will then be compiled into a qualitative matrix based on the key word. The focus topics will be on background knowledge on ACEs as well as current best practices as it applies to the field of education.</p> <p><b>Method and Instrument Alignment to Research Question</b></p> <p>The data collection method of creating a qualitative survey is aligned to the research question because the question asks if the creation of a teacher survey can support the creation of a handbook on best practices of trauma informed teaching. The survey would provide information on what educators already know and the gaps in their understanding on the topic. It would also provide information about preferences to hopefully increase the chances of the manual being used.</p> <p>The qualitative archival data aligns to the research question because it asks how best practice literature can help in the creation of a handbook on trauma informed teaching. The data collected based on the three key phrases directly align to the three proposed sections of the research handbook. The research collected is designed to fill in the gaps in knowledge on the topic as noted in the survey provided to educators in the researcher's school. All data compiled would be research based.</p> <p><b>Describe your research method(s)</b></p> <p>I will be asking staff at Oakridge for voluntary participation in the survey. They will also be provided with an informed consent document that they will sign.</p> <p><b>Timeline of Data Collection Activities</b></p> <p>The survey data would be distributed to educators at the researcher's school through Google Forms. The educators would be given two weeks to respond to the survey. The researcher would contact educators that had not responded after a week to encourage participation. The goal would be to have 75% of the staff participate in the survey. Once the surveys have been submitted it would take another week to analyze the data. This time would be used to address and categorize what most educators already know and what they need to learn. It would also be a chance to categorize methods of presentation to increase the likelihood of the manual being implemented. The data from the survey would be used to tailor the handbook to the needs of the school.</p>

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	<p>Once the data had been collected and evaluated the researcher would take two- three weeks to collect archival data on ACEs and best practices surrounding ACEs. The researcher would take another two – three weeks to analyze the current literature to create a final product that was concise, focused, and tailored to the needs of the school.</p> <p>The next section of the project will be the creation of the handbook. The researcher will take another two-three weeks to organize the information into logical and concise sections. During this time, they will also produce the manual using various multimedia presentation methods. These methods will be determined by the educators’ survey responses and preferences. Time will be taken to make the handbook user friendly as well as aesthetically pleasing. Graphics and other media will be added to enhance the presentation of information. All together the creation of the finished product should take approximately two and a half months.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>My expectation is to create a customized resource handbook on ACEs and trauma informed teaching to be prepared for staff use at Oakridge Elementary. The resource handbook would include research based best practices on the topic.</p> <p><b>Results.</b> The results of the survey found that 83% of the participants had been with the district for five or more years. Only one participant was new to the district. While 42% of participants were new to the school. 75% of participants said they have seen an increase in worry and concern in the students. 58% of participants said they were not familiar with ACEs, while 100% said they had no training on the subject. All but one participant said they have never been trained in trauma informed teaching. 67% said they are not at all confident in addressing ACEs in their classroom. The researcher noticed a pattern of lack of training on the subject as well as lack of confidence in addressing ACEs. There was also a trend that 92% of participants were not new to the district. This speaks to the districts lack of previously providing resources and training on the topic. The researcher looked for areas of overlap between participants when deciding on the presentation format. They wanted to reach as many learning styles as possible while keeping it manageable. The researcher cross referenced learning styles with preferred formats to increase use and decided on the creation of a handbook in the form of a PowerPoint with embedded videos as well as an infographic. This relates to the research question because the question asks if the creation of a teacher survey can support the creation of a handbook on best practices of trauma informed teaching. The survey data led to the conclusion that PowerPoint would be the most widely used handbook style. The survey data also set the foundation for the material used and included in the resource handbook.</p> <p>By using the staff surveys the researcher was able to identify the need for the manual within not only their district but also their school. They were also able to identify the type of information needed by the staff. The researcher was able to record preferred learning styles and create a resource aligned with staff preferences to increase the likelihood of utilization. They were then able to conduct archival research to find literature on research based best practices. They concluded that while there are several research-based practices for working with students with ACEs some reoccurring themes are building relationships and resilience. A third reoccurring theme was the avoidance of punitive discipline. This information was used as the handbook material.</p> <p>The outcome of the research was a resource handbook for educators on research-based trauma informed practices. This handbook would include information about what trauma is, how it manifests in students, as well as research-based strategies and curriculum they can use with students of trauma. After looking at the responses of preferred learning styles from the staff surveys. A PowerPoint presentation with embedded videos was created. The researcher also created a one-page infographic on the subject. This is in line with the survey data in which two people said that a video would increase their use of the resource. Also, two people said that videos would be their preferred learning style. Two additional people said they preferred a hard copy of the information. The researcher also plans to follow up with the teachers periodically after the initial distribution of materials to answer questions and support in implementation per the two people claiming support following information would be most helpful.</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>The benefit to the district would be the creation of a resource manual on trauma informed teaching. This manual will then be share with the principal at Oakridge to be used with the staff at their discretion. While the manual will be personalized for the staff at Oakridge Elementary its overall framework could be used at any school in the district.</p>

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## Research Applications During the 2022-2023 School Year

### Soft skills and educational attainment

Investigator: Yuliya Lynch

Granite administrator or teacher: No

IRB: Granite School District – Data Sharing Agreement

Proposal ID: 2022-004-Lynch

**Status: HOLD Committee Review until 2023-2024 School Year**

Anticipated Start Date: 11/01/2022

Anticipated Completion Date: 04/01/2023

Research classification: Student [Beliefs, attitudes, and dispositions-Self-efficacy]

Requested research results on:

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	As I am preparing a publication on the effect of parental involvement on soft skills (grit, self-esteem, locus of control) and educational attainment (GPA), I would like to look into a broader range of competencies. I would love to utilize the data to be collected by the Granite School District via Panorama on Positive & Challenging Feelings, Self-Efficacy, Self-Management, Supportive Relationships, Sense of Belonging, and Teacher-Student Relationships. Additionally, I would like to access educational attainment (such as GPA or any other scale readily available) and attendance (if available).
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p>I would like to investigate a correlation between competencies (obtained from the Granite School District via Panorama) and educational attainment and attendance. This will complement my findings on how soft skills improve educational attainment (from the field experiment).</p> <p>My current findings could be found here (in PhD Thesis): <a href="https://bridges.monash.edu/articles/thesis/THE_IMPACT_OF_PARENTAL_INVOLVEMENT_ON_CHILDREN_S_SOFT_SKILLS_ACADEMIC_ACHIEVEMENT_AND_INCOME_IN_ZAMBIA_AND_THE_UNITED_STATES_OF_AMERICA_/16651810">https://bridges.monash.edu/articles/thesis/THE_IMPACT_OF_PARENTAL_INVOLVEMENT_ON_CHILDREN_S_SOFT_SKILLS_ACADEMIC_ACHIEVEMENT_AND_INCOME_IN_ZAMBIA_AND_THE_UNITED_STATES_OF_AMERICA_/16651810</a></p> <p><b>Describe your research method(s)</b> Secondary data from the Granite School District will be used. I am asking to be provided with an anonymous data set.</p>
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	<p>Based on the review of literature and field experiments conducted for my PhD, I expect a positive relationship between some competencies and educational attainment and attendance.</p> <p><b>Results:</b> [insert here]</p>
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	I expect to have a publication in a peer-reviewed 'A' rated journal. During the process of publishing, we will be provided with critical evaluation of scales and methods, which could help to improve future surveys. In addition, I will share my findings with the Granite School District on which indicators are most critical for educational attainment and attendance.

### Collaborative tests in the secondary I math classroom

Investigator: Michele Jones

Granite administrator or teacher: Yes

IRB: University of Arizona

Proposal ID: 2022-005-Jones

**Status: Approved**

Anticipated Start Date: 09/20/2022

Anticipated Completion Date: 08/30/2023

Research classification: Teaching Strategies [ Teaching/instructional strategies: Collaborative learning]

Requested research results on:

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<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	I am investigating the effect of cooperative summative assessments on students' sense of belonging, achievement, and self-efficacy in the Secondary I math classroom.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p>I will be implementing two-part tests for all quizzes and unit tests. The first part will be completed in small groups with each student completing an individual test, but with the ability to compare and discuss solutions. The second part is a standard individually completed assessment.</p> <p>Students will also answer a short questionnaire on their attitudes of personal understanding and completing the test. Answers to the test and the questionnaire will be used to evaluate the effectiveness of the collaborative assessments.</p> <p><b>Describe your research method(s)</b>            Students from three sections of Secondary math I that I teach will be given a parent consent form with a description of the research and asking for permission for their child's work to be included in the study. All students will participate regardless of parental permission, but only those students whose parents give permission will be included in the study analysis.</p>
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	<p>I hypothesize that collaborative assessments will increase student achievement and feelings of self-efficacy. There are many research articles detailing the positive benefits of collaborative tests in other academic subjects.</p> <p><b>Results:</b> [insert here]</p>
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	As the students that I teach are in Granite, if my hypothesis is correct then these students will have higher academic achievement. This is also work that I am sharing with my PLC and other math teachers in the District. So it has the potential to improve mathematics instruction in our District.

#### The early childhood longitudinal study, kindergarten class of 2023-24 (ECLS-K:2024)

Investigator: Jill Carle

Granite administrator or teacher: No

IRB: Westat Institutional Review Board

Proposal ID: 2022-006-Carle

**Status: Denied**

Anticipated Start Date: 09/01/2022

Anticipated Completion Date: 06/30/2023

Research classification: School [Other school factors: Pre-school programs]

Requested research results on: Not applicable

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	<p>Over its rich 20-year history, the ECLS program's studies have been important sources of data for researchers and policymakers to address key issues related to children's development and learning including literacy in the home; school support of families; the teaching of reading and mathematics; and the associations between physical exercise, childhood obesity, and well-being. Today's early care and education environment differs from that of the past in numerous ways. In recent years, changes at federal, state, school, family, and societal levels have affected student learning environments. The ECLS-K:2024 will be particularly meaningful, as it will provide important information about the experiences of children whose early lives were shaped by the COVID-19 pandemic. The early elementary school rounds of the ECLS-K:2024 offer an opportunity to learn about how families and schools respond to changes like developments in early education policy, technology &amp; learning, demographic changes, and the pandemic.</p> <p>Research Questions. Data from the ECLS-K:2024 will be used to explore how different factors—at home and at school—relate to children's development and learning over time. The participation of selected districts and schools allows us to answer the following types of questions:</p> <ul style="list-style-type: none"> <li>• What knowledge and skills do children have when they start school?</li> <li>• What educational activities do kindergartners do at home?</li> <li>• How do educators help children transition into kindergarten?</li> </ul>
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	<ul style="list-style-type: none"> <li>• How well can kindergartners pay attention and control their behaviors?</li> <li>• How well do kindergarten programs prepare children for later grades?</li> </ul> <p>Research Components. To understand the factors that influence development and learning, the ECLS-K:2024 includes 1) a child cognitive assessment, and 2) surveys of teachers, school administrators (spring only), and parents beginning in the selected child’s kindergarten year.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>Study Design. To provide a complete picture of children’s learning experiences throughout the elementary school experience, the ECLS-K:2024 includes 1) a child cognitive assessment, and 2) surveys of teachers, school administrators (spring only), and parents beginning in the selected child’s kindergarten year. ECLS-K:2024 begins in kindergarten (Fall 2023/Spring 2024) with follow up data collection in 1st grade (Spring 2025), 3rd grade (Spring 2027), and 5th grade (Spring 2029).</p> <p>Sample Design. The ECLS-K:2024 will collect data on a nationally representative sample of approximately 20,000 children enrolled in about 1,000 kindergarten programs in the 2023-24 school year. The sample of children will be selected using a multi-stage probability design, based on geography, and school type (public and private). Within selected schools, children will be selected randomly with an oversample of students identifying as Asian, Native Hawaiian, or Other Pacific Islander (API). In Granite School District, Eastwood School and John C. Fremont School are selected to participate in the ECLS-K:2024.</p> <p>Research Components.</p> <p>Child Cognitive Assessment. As part of the ECLS-K:2024, children will answer age-appropriate math, reading, and memory-related questions in a one-on-one session with a trained ECLS-K:2024 team member with experience working with children in a school environment (e.g., former teachers and school administrators). Each session is expected to take approximately 60 minutes. The team member will read and show illustrated tasks and questions to the children, who can respond verbally or by pointing to answers. Children can skip any question they do not know or wish to answer.</p> <p>The assessment, designed by Educational Testing Service (ETS) consists of a colorful, pictorial easel with assessment items for the assessor to read to the child and a laptop application where the assessor records the child’s responses. The ECLS direct child assessment has been adapted from several copyrighted assessment batteries. Therefore, individual items from the direct child assessment are not available for review. However, sample items are included for your review. Most of the items to be used in the ECLS-K:2024 were drawn from the ECLS-K and the ECLS-K:2011. For detailed descriptions of those items, which are highly similar in scope and procedures, please see the complete psychometric reports, located at <a href="http://nces.ed.gov/ecls/index.asp">http://nces.ed.gov/ecls/index.asp</a>. These items have been used in previous assessments and have proven to be reliable.</p> <p>Teacher Surveys. Each kindergarten teacher will be asked to complete self-administered web surveys in fall 2023/spring 2024. The teacher-level survey includes questions about the class and teacher, including classroom and student characteristics, class materials, instructional practices, teacher’s background, and attitudes about teaching and school climate. The child-level survey asks questions about each study child to be answered by their primary teacher, including: academic/cognitive abilities, behaviors, social skills, and special services. The teacher-level survey is estimated to take 16 to 27 minutes to complete while the child-level survey is estimated to take 16 minutes to complete per selected child.</p> <p>Special education teachers or related services providers of selected children with an Individual Education Program (IEP) on file at the school will be asked to complete a self-administered web survey in spring 2024. The teacher-level survey includes questions about teacher background, training, and school assignment. The second special education survey (child-level) has questions about the study child who has an IEP, including items about child characteristics, and services received. The teacher-level survey is estimated to take 18 minutes to complete while the child-level survey is estimated to take 7 minutes to complete per selected child.</p> <p>Administrator Surveys. Administrators in participating schools will be asked to complete web-based administrator surveys in spring 2024. The instrument includes questions about the school setting, policies, programs, school and kindergarten practices, and background questions about the administrator/teaching staff. The administrator survey is estimated to take 45 minutes to complete.</p> <p>Parent Surveys. Parents/guardians of study children will be asked to complete a self-administered, web survey in fall 2023/spring 2024. Parent surveys include questions about school/parent involvement, kindergarten selection and choice, early care and education, children’s behaviors, child health, parent’s health, family structure, home environment, social support, food security, parent education, parent employment, welfare and other public transfers, and household income. The parent survey is estimated to take 45 minutes to complete.</p> <p>Describe your research method(s)</p> <p><b>Data Collection Procedures.</b> Upon district and school approval for ECLS-K:2024 participation, in spring 2023, the ECLS-K:2024 team will ask the school administrator to recommend a school coordinator to facilitate ECLS-K:2024 participation. The recommended coordinator will be invited to join an initial call to explain the coordinator role and schedule a fall school visit. In early fall 2023, the ECLS-K:2024 team will request kindergarten roster data from the school coordinator to select students for participation in the ECLS-K:2024. Once students are selected, the ECLS-K:2024 team will confirm school</p>



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	<p>information and send welcome packets to the school coordinator for distribution to teachers/parents of selected students. Through welcome packets and emails from the school coordinator, teachers/parents will be invited to participate in the ECLS-K:2024. The welcome packets include credentials for teachers, parents, and school administrators to complete their surveys online through the secure MyECLS website. Parents can also use the secure MyECLS website to provide consent for their selected kindergarten student(s) to participate in the ECLS-K:2024. The ECLS-K:2024 team can also assist with paper consent forms, if necessary.</p> <p>In fall 2023 (and spring 2024), the ECLS-K:2024 team will visit each school to conduct child cognitive assessments. Each school visit is expected to take 2 to 3 days, depending on the space available in the school and the number of children with consent to participate. ECLS-K:2024 staff will work with school staff to determine the most efficient and least disruptive procedures for the school visit days. ECLS-K:2024 staff have experience working in schools and understand the challenges your staff face on a daily basis. We recognize that these challenges have increased due to the COVID-19 pandemic. Our staff will do everything they can to limit the burden on your teachers and students.</p> <p>To facilitate the school visits, the ECLS-K:2024 team will ask the school coordinator recommended by the administrator to provide logistical support for the school visits (e.g., determine dates and space for the school visits) and to provide information on selected children and their teachers (e.g., accommodations required, classrooms where children will be during the school visits).</p> <p>Beyond the kindergarten year, data collection activities would be conducted exclusively in the spring of the 1st, 3rd, and 5th grade years.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>The ECLS program does not develop explicit hypotheses, but ECLS data are integral to our understanding of how children enter and progress through elementary school. In the past decade, researchers have used ECLS data to identify high-quality early learning experiences that may help close achievement gaps that exist when students start kindergarten (Barnett et al., 2020; Bernstein et al, 2014). Changes linked to ECLS data include increased access to full-day kindergarten, a proliferation of quality rating and improvement systems across states, and increased attention to improving teacher training and professionalism in the early childhood educator workforce. A growing number of schools/districts have implemented school-wide practices for socioemotional learning, an area that research suggests has long-term impacts on positive youth development and educational attainment (Taylor et al. 2017).</p> <p>Current education research suggests that the pandemic has negatively impacted student learning (Kuhfeld, et al. 2022; U.S. Department of Education, 2022). The ECLS-K:2024 is well-poised to help educators and researchers provide insights into the experiences of children whose early lives were shaped by the COVID-19 pandemic. The participation of selected schools is essential for ensuring the data accurately reflect the changing landscape of education for students in the United States.</p> <p>Current education research suggests that the pandemic has negatively impacted student learning (Kuhfeld, et al. 2022; U.S. Department of Education, 2022). The ECLS-K:2024 is well-poised to help educators and researchers provide insights into the experiences of children whose early lives were shaped by the COVID-19 pandemic. The participation of selected schools is essential for ensuring the data accurately reflect the changing landscape of education for students in the United States.</p> <p><b>Results: not applicable   Research Denied</b></p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>The ECLS-K:2024 provides the opportunity to contribute to research that can help your district, school, teachers, and students, as well as the broader educational community. Educators and policymakers can use the results of the ECLS to make informed decisions about how to improve early childhood education for future generations. Using ECLS data collected over the past 20 years, your schools and teachers can learn more about how curriculum, instructional practices, resources, school climate, and other factors relate to children’s math and reading achievement over time. Having a better understanding of children’s skills and abilities can help your teachers improve classroom activities and better meet children’s needs. By completing the web surveys, your school staff help ensure that the ECLS can provide a more complete picture of what our country’s elementary-aged children know and can do as they enter school. Your students’ families can learn more about how family activities and parent involvement in schooling relate to children’s school readiness, social and emotional development, and more.</p> <p>Schools and school staff receive monetary and non-monetary incentives for their participation. Schools will receive \$300 in the form of a check at the conclusion of data collection in spring 2024. Each school is asked to identify a study liaison to serve as the primary contact for ECLS staff; this liaison will receive \$65 in his or her welcome packet in early fall 2023, and \$35 with his or her welcome packet in spring 2024. Kindergarten teachers will receive \$20 in their welcome packet in fall 2023 and spring 2024. Teachers with students selected for ECLS participation will also receive an additional \$7 per child that they teach to complete individual child surveys. The school administrator will receive \$25 in his or her welcome package in spring 2024. Schools and school staff will receive a certificate recognizing their contributions to this research. Participating children will receive a pencil and their parents will receive a pad of sticky notes.</p> <p>Most importantly, children enjoy participating in the ECLS activities. The format of the ECLS child activities is different from other assessments. Rather than just another pencil and paper test, children indicate their responses by talking and pointing</p>



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	to colorful pictures on easels. Children participate individually with a trained ECLS team member and enjoy the opportunity for one-on-one attention.
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 Research Applications During the 2022-2023 School Year

Impact of discussion on science 7 understanding of gravity

Investigator: Emily Wilson

Granite administrator or teacher: Yes

IRB: Western Governors University

Proposal ID: 2022-007-Wilson

**Status: Approved**

Anticipated Start Date: 09/28/2022

Anticipated Completion Date: 10/12/2022

Research classification: Teaching Strategies [Strategies emphasizing feedback: Classroom discussion]

Research results received on: 08/16/2023

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>There is a problem with student's ability to understand factors that affect gravity. Students have been taught that objects in contact exert forces on each other in previous classes, however, they show a lack of proficiency in science 7. Implementing daily interventions of the discussion method, talk moves, may increase my Science 7 students' understanding. In classrooms where talk moves have been implemented on a regular basis, students showed improvement in the content covered. Some research suggests that students who do not verbally respond in discussions may still benefit from this discussion style if the classroom has a culture built on actively participating in class discussions.</p>
<p><b>Describe your research method(s).</b>          Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The action research study will compare science 7 student scores on a pretest and post-test which will be taken before and after the instructional unit on standard 7.1.5 "Engage in argument from evidence to support the claim that gravitational interactions within a system are attractive and dependent upon the masses of interacting objects." The assessment will collect quantitative data and contains eight multiple-choice questions with only one correct answer. The questions used for the pretest and posttest will be kept the same. By keeping the questions consistent, it will be possible to evaluate student understanding of concepts of gravity and which concepts may need remedial instruction.</p> <p><b>Describe your research method(s)</b>          My participants will be my science 7 students. The intervention will be applied to the whole group. The seventh-grade students will be given 30 minutes to complete the pretest before the beginning of the intervention. Responses will be recorded and graded for accuracy. After the eight days of the unit, the whole class will be given 30 minutes to complete the posttest and answers will be graded on accuracy. The researcher will analyze the data from the pretest and posttest. The findings will be analyzed by using statistical analysis.</p> <p>On day one of the intervention, the class will learn about the parts of an argument. On day two, the class will investigate perceptions of mass, weight, and gravity. On day three, the class will compare tools to measure mass and weight. On day four, the class will investigate factors that affect the gravitational force of an object. On day five, the class will use a simulation to change the mass of the sun, moon, and earth and explain how these changes affect the force of gravity in the solar system. On day six, the class will form an argument about the factors that affect gravitational force in a system and gather the evidence needed to support a claim. One day seven, the class will revise their argument. On day eight, the class will review content they have learned during the instructional unit and prepare for the posttest. Time will be provided for students to ask questions about clarifications and discuss small groups and as a class what they have learned. Students will be given 30 minutes to take their pretest, the same amount of time will be given for their posttest.</p> <p>Every day's lesson will begin with a warmup. This may include a multiple-choice problem to solve, a discussion question, or a review of the previous information to prime students for the lesson. The teacher will provide students time to go over the warm-up and then discuss the question in pairs and as a class. The teacher will use a slide deck to present information to the class each day. The students will take notes and complete problems with the teacher as they go through the slides. The intervention will end each day with an exit ticket provided by the teacher that will be collected. This could be in the form of example problems to solve, or as a discussion in pairs or with the class. The exit ticket's purpose is for the student to summarize and reflect on the instructional content from the day.</p> <p>The quantitative data from the action research study will be used to examine the overall difference in scores from pre-test scores to post-test scores. The data will be coded to maintain participant anonymity. Descriptive statistics will be used to analyze the sample population's pretest scores to the post-test scores. This will be done by conducting a two-tailed paired t-test with a 95% confidence level. A p-value will be calculated using the paired t-test formula. If the p-value is less than 0.5, then the instructional unit will be considered to have a positive impact. If the p-value is more than 0.5, then the instructional unit will not be considered to have a positive impact. Overall, the results will help the researcher answer the question regarding the impact of my instructional unit on science 7 students' understanding of gravitational forces.</p>

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>After completing the statistical analysis, I am anticipating an increase in science 7 students' understanding of gravity through the use of daily class discussions. I expect I will see an increase in post-test scores on the assessment.</p> <p><b>Results:</b> The conclusion reached from this study was found that the instructional unit increased science 7 students' understanding of gravitational force. Out of the eight questions on the pre-test, on average, the students answered 4 correctly. Out of the eight questions on the post-test, on average, students answered 6 or more correctly. Students scored on pre-tests averaged 50%, while on the post-test the average was 86%. Overall, student performance improved by an average of 36%. which meant students answered 2 more questions correctly on the 8-question data instrument on average.</p> <p>Furthermore, the t-test indicated that the instructional unit did have a positive impact on student understanding of gravity. Middle school students struggle with the intangible concepts of force. The solution to the problem of science 7 students' lack of conceptual understanding of gravitational force has been identified by providing classroom instruction and appropriate discussion. The proposed solution is to provide students with the researcher's instructional unit. As the data from the study shows, students who are provided with the instructional unit had an increase in understanding of the gravitational force in a system. Students benefited from the learning activities throughout the instructional unit including virtual labs, classroom discussions, and scaffolded instruction.</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>I will be researching the impact of a discussion style on Science 7 students' understanding of gravity, specifically called talk moves. The research is based on driving change in my Science 7 classroom. Students have struggled to meet science standard 7.1.5, "Engage in argument from evidence to support the claim that gravitational interactions within a system are attractive and dependent upon the masses of interacting objects." I will implement an 8-hour intervention plan that utilizes daily classroom discussions. The act of communicating in discussion and verbalizing responses to others' ideas may lead to an increase in critical thinking skills.</p>

#### Explicit sight word instruction for orthographic mapping

Investigator: Jennifer Brewer

Granite administrator or teacher: Yes

IRB: Western Governors University

Proposal ID: 2022-008-Brewer

**Status: Approved**

Anticipated Start Date: 09/28/2022

Anticipated Completion Date: 11/18/2022

Research classification: Teaching Strategies [Teaching/instructional strategies: Explicit teaching strategies]

Requested research results on: 08/14/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>My proposed capstone research study will be an investigation into the problem of students who struggle with fluency. I will be doing explicit and systematic phonics instruction that includes phoneme-grapheme mapping to impact students orthographic lexicon. This will hopefully impact fluency in a positive direction.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>I am a reading interventionist and will be holding small groups where I will teach explicit phonics that includes Heggerty phonological awareness, systematic phonics lessons, and sound mapping of specific phonics skills. I will be comparing DIBELS pre and post assessment data to look for any fluency growth or lack thereof.</p> <p><b>Describe your research method(s)</b> I will be using below benchmark students that have already qualified to be in my intervention groups. After I receive consent, I will do a DIBELS progress monitor to assess fluency. I will then begin 8 hours of explicit and systematic phonics instruction. At the end of the 8 hours, I will do a DIBELS progress monitor for post assessment.</p>

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<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	I hope to improve student fluency with words being added to their orthographic lexicon through phoneme-grapheme mapping, also known as sound mapping.  <b>Results:</b> [insert here]
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	I will be doing the same explicit and systematic phonics instruction with phoneme-grapheme mapping on all of my intervention groups but will only use the data of two groups for my study. 10 students in all: one first grade group and one second grade group. It is hoped this will positively impact all below-benchmark students' fluency.

#### Dancemaking as social learning: Adolescent decision-making during autonomous small-group collaborative choreography

Investigator: Rachel Swenson

Granite administrator or teacher: No

IRB: Teachers College, Columbia University

Proposal ID: 2022-009-Swenson

**Status: Approved**

Anticipated Start Date: 10/24/2022

Anticipated Completion Date: 05/31/2023

Research classification: Teaching Strategies [Teaching/instructional strategies: Collaborative learning]

Requested research results on: 08/14/2023 (Researcher is currently in the process of analyzing the data, check back in 03/2024).

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	The purpose of this research is to understand adolescent decision-making occurring in autonomous, democratic, small-group collaborative dancemaking in a dance classroom at a public secondary school. I am trying to learn about adolescent social-emotional decision-making during small-group collaborative choreography because I want to privilege student voice and experience to inform students and help them be successful dancemaking collaborators while developing civic identity. I am conducting this research in order to provide empirical evidence to inform best practices in secondary dance education choreography and social-emotional learning (SEL) pedagogy, and initiate broader conversations on SEL development, responsible decision-making, and civic identity development in adolescence. This study focuses on behavioral and interactional processes that will provide insight into collaborative learning, interpersonal skills in group work, and contribute new knowledge to embodied cognition, social-emotional learning, and identity development. Three areas inform this study of disciplinary discourse: Social-Emotional Learning (SEL), Socio-Cultural Learning, and K-12 Dancemaking Pedagogy and Curriculum. The theoretical approaches to examining the problem are constructivist and transformative. I use a constructivist lens to better understand adolescent decision-making during the collaborative dancemaking process to unearth multiple participant meanings to construct knowledge. I am open to new discoveries from the child's experience and point of view. I am also using a transformative framework because I am change-oriented. I want to transform education by advocating for dance education and the child's voice in research.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	The design of this study is an explanatory comparative case study approach using qualitative research methods of observation field notes, individual interviews, focus groups, and content analysis.  Research Questions: How do adolescents between the ages of 11 and 18 in public school dance contexts experience decision-making during autonomous small-group collaborative dancemaking?  Research Sub-Questions: <ol style="list-style-type: none"> <li>1. How are civic identity elements (membership, participation, and concern for rights) and psychological influences (trust, civic knowledge, and belonging) enacted during autonomous small-group collaborative dancemaking?</li> <li>2. How do adolescents demonstrate personal, ethical, safety, and civic impact when making decisions during autonomous small-group collaborative dancemaking?</li> </ol> The Implication from the Analysis Question. How do agency and civic identity intersect with social-emotional decision-making manifested during autonomous small-group collaborative dancemaking? I will use NVivo analysis software to analyze qualitative data starting with the first school's interview transcripts about participants' personal histories, small focus group transcriptions, student journal reflections content analysis, whole class

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focus group transcriptions, student second interview reflecting on decision-making. Then, I will triangulate the six databases with observation field notes. Next, I will analyze qualitative data from the second school in the same order. The collected data from the two schools' participants will be reduced, sorted and categorized, coded phenomenologically. Each data set will be cross analyzed with the data from all participants at the same site and then cross-compared and analyzed with the data from the participants at the second site to identify common themes across data sets for similarities, differences, and generalizations. The data will first be coded phenomenologically for emerging themes and patterns. Then coded for group choreographic process roles (e.g., creator, teacher, learner, translator, performer), interactions through contact and communication modes (proximity, posture, gaze, gesture, head position, language, modeling, embodying, music, body sounds, visual, print, objects), and forms of social interactions (exchange, competition, conflict, cooperation, accommodation) demonstrated by participants.

The collected data bases will be sorted, coded phenomenologically, and categorized. I will use an emic approach to determine patterns and themes arising in the data from the participants' viewpoint. Each interview will be coded individually, then cross-compared with other site interviews, and then cross-compared with the other site's data. The data will be categorized for demonstrated skills and knowledge of personal, ethical, safety, and civic impact when making decisions during autonomous small-group collaborative dancemaking using CASEL's SEL Responsible Decision-Making domain competency framework. Next, the data will be categorized with the ArtsEdSEL matrix framework for Responsible Decision-Making during the artistic process of creating. Then, the data will be categorized for civic identity elements (membership, participation, and concern for rights) and psychological influences (trust, civic knowledge, and belonging) enacted during collaborative dancemaking. All databases will be analyzed and compared for relationships, salience, themes, meanings, and explanations.

### **Describe your research method(s)**

The research will take place over one semester in two public schools in Utah and include four to ten visits by the researcher. The study will be implemented directly within the dance classrooms during regularly scheduled class times, with the dance teacher present, at the sites that have been recruited.

The two interviews, lasting under sixty minutes each, will be conducted on the premises of the school during a homeroom, lunch, or study hall period. Interviews will be conducted in a conference room with glass viewing windows or an open door and/or a section of the library. In all cases, other school employees will be in proximity. During the first interview, they will be asked to discuss their personal history as a dancemaker. During the second interview, they will be asked to share their experiences making dances in school with their peers.

All student participants with signed consent and assent forms will be invited to participate in the study. Participants must be English speakers to participate in the study as the researcher is not bilingual and does not have funding for translation/interpretation.

Observations: All student participants will be observed participating in natural and normal educational dancemaking practice. Field notes, photographs, and video footage will be taken during observations to document the dancemaking decision-making process.

Interviews: The researcher will purposefully select up to six participants with signed consent and assent forms for individual interviews. The two participant interviews will be on a volunteer basis, scheduled at school during a time that is convenient for the participant's school schedule. Each interview will last under sixty minutes and be a semi-structured interview based on an initial set of thirteen and nineteen open-ended exploratory questions (attached). All interviewees can review, revise, redact, and approve the interview transcription.

Focus Groups: A total of four small group focus discussions will be conducted. The participant focus group discussions will last under forty minutes during the regular class period. The discussions will be semi-structured and based on an initial set of twelve and fifteen questions for each focus group (attached). The focus groups will be in-person and audio recorded.

Reflection Paper: Participants will be invited to write a reflection about their dancemaking experience during their dance class (attached).

Content Analysis: The dance class content (i.e., teacher-assigned student reflection writings, choreography-related assignments, checklists, and rubrics) will be collected.

The dance teachers in the two site schools will group only the students who volunteer and consent to the study into collaborative dancemaking groups that will be included in the study. As such, non-consenting students will not be included or recorded as a part of the study.

Participants will not be compensated for participation. Deception will not be used. No control group will be used.

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>I theorize there are intersections between collaborative dancemaking learning experiences, civic identity development, and SE decision-making. Dancemaking offers a fertile ground for rich phenomenological discovery on adolescent SEL and civic identity through the living body. This research builds upon the empirical studies that have come before with a new focus that will bring new knowledge to the field of dance education. The research methods will give authentic data demonstrating intense involvement and descriptive evidence of adolescents' lived experiences. Findings from this study will transform education and contribute new knowledge to embodied cognition, social-emotional learning, and identity development.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>There is no direct benefit to Granite School District for participating in this research. Participation may benefit the field of dance teacher education, child development, and collaborative learning to understand teen decision-making during collaborative dancemaking. The researcher could learn something that will help other adolescent dancemakers, dance teachers, or the field of dance and dance education.</p>



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## Research Applications During the 2022-2023 School Year

Social skills video modeling program K-2

Investigator: Shamy Polychronis

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-010-Polychronis

**Status: PENDING – Special Education**

Anticipated Start Date: 01/03/2023

Anticipated Completion Date: 8/31/2023

Research classification: Curricula [Other curricula programs: Social skills programs]

Requested research results on: Not approved as of 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Teaching It Right is an educational technology company founded and located in the state of Utah. Teaching It Right’s mission is to strengthen communities by helping children develop social emotional skills at a young age to help build positive relationships, become future leaders, and prepare them to become self-sustaining adults. In order to achieve this, Teaching It Right developed a computer-based program, We Are Friends that teaches social emotional skills and executive functioning skills, which helps children build a positive self-worth for children developmentally between the ages of 4-8 years old.</p> <p>Teaching It Right’s goal is to expand on this initial research (supported by the National Science Foundation) to include a larger and more diversified sample size across Utah and we are requisition your district be one of these sites. The overall project will include comparing the effectiveness of Teaching It Right’s computer-based program, We Are Friends, to other social emotional skill programs or methods the participating schools are currently using. The intent is to identify the effectiveness of programs used at the various schools across Utah in a pre versus post, intervention versus control design. Teaching It Right will use an independent researcher from the University of Utah to ensure the integrity of the research is not compromised in any way.</p> <p>Teaching It Right is in the process of receiving and IRB from the University of Utah, due to the time crunch of the school year, we are requesting to get preliminary approval and once IRB from the University of Utah is granted, we can send over their documentation.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>We will conduct a pre vs post, intervention vs control design. Teachers in the intervention group are asked to identify whole or small group opportunities to implement the program, fill out 3 surveys, and record personalized messages to the students. Beyond the daily engagement with the 10 minute a day program, additional time commitment for the study is estimated to be an hour and fifteen minutes over the course of the school year. Teachers in the control group will only be asked to fill out the surveys. Parents and students will also be asked to voluntarily complete 3 surveys about use of social skills in the home environment. School personnel will be asked to send out an introduction of the research project in order to identify participants. A member of the research team will help the teachers set up the program and another will be in regular contact with the teachers to monitor progress and answer any questions they may have. The researcher from the University of Utah will gather all data, remove all identifying information, and send it to the statistician at Brigham Young University for analysis. The statistical will then meet with the team and review the results. The researcher will then write up a summary of the result and send it to the LEAs for their review.</p> <p><b>Describe your research method(s)</b></p> <p>Surveys will be conducted electronically. Student initials will be used and sorted by classroom teacher. In the case where there is more than one student with the same initials in a class, a nickname or a third initial will be given. All identifying information, including student initials, will be removed before disseminating any results beyond the research team. The study staff will refer to an electronic spreadsheet of participant’s teachers and parent’s email addresses and who each student is associated with. This spreadsheet will be stored in a password protected computer. All paper documents, including permission forms, will be stored in a coded filing cabinet at Teaching It Right’s office that is locked when not in use. Original source documents will be deleted after 3 years or pending statistical analysis, whichever comes first. Student survey, parent survey, teacher survey. All three surveys were created by using questions from similar social skill research and are available by request. Teachers and administrators will be provided with a letter that will be sent to parents explaining the study and asking for their consent or refusal to participate. Any student not participating in the study will continue to receive the regular ongoing instruction but will not take the surveys. We are seeking up to 3 schools with 2 or 3 classrooms in each of the k-2 grades. Current timeline is contingent on IRB approval from the University of Utah and District approval. It is estimated that research begin Jan 2023-June 2023 with a possible extension to the following 2023-2024 school year.</p>

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>Initial evidence gathered by researchers from the University of Utah and Brigham Young University demonstrates that the We Are Friends curriculum improves several key indicators of social-emotional well-being as much as 33-60%. These indicators being self-confidence, self-love, the ability to make and keep friends, the ability to self-advocate, and the ability to effectively resolve conflict, among several others. We hypothesize we will see these same results again.</p> <p>Results: [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>By allowing this research, we will be able to compare the current social emotional programs in both the general education and special education classrooms and compare them to the We Are Friends program. This will help Granite identify effective tools to benefit their students.</p>

Social and emotional learning combined with literacy instruction

Investigator: Elizabeth Jones

Granite administrator or teacher: Yes

IRB: Western Governors University

Proposal ID: 2022-011-Jones

**Status: Approved**

Anticipated Start Date: 11/28/2022

Anticipated Completion Date: 12/28/2022

Research classification: Teaching Strategies [Strategies emphasizing learning intentions: Setting standards for self-judgement]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	

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Kindergarten progression with nonsense words

Investigator: Katee Garff

Granite administrator or teacher: Yes

IRB: Western Governors University

Proposal ID: 2022-012-Garff

**Status: Approved**

Anticipated Start Date: 11/29/2022

Anticipated Completion Date: 12/16/2022

Research classification: Teaching Strategies [Teaching/instructional strategies: Explicit teaching strategies]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>Students in my kindergarten class struggle with reading Nonsense Words. This is a significant problem because it impacts their ability to read fluently and accurately. The possible cause of this problem is that they have had no experience reading Nonsense Words in the past. A nonsense word is a word where letters make their most common sounds and yet the word has no meaning. Because these words have no meaning, by reading them, a student cannot guess the word. Nonsense Word Fluency measures a student's ability to decode phonemes and blend them together. It is a measure of a student's progress in obtaining early alphabetic principle skills.</p> <p>Instruction of nonsense words has mixed reviews in its efficacy. When Nonsense Word Fluency data is compared to oral reading fluency data, it was found that practicing nonsense words can help students with their reading skills. However, there is a lot of discrepancy between these results and the beliefs of teachers and parents. (Wells, 2013) When interviewed, teachers reported that a Nonsense Word Fluency assessment should not be the only data used to determine success in students' reading growth (Habershaw, 2015). Students are successful as they learn in small groups as long as consistency was present in the instruction. (Rossum, Bosma, 2017) Rossum and Bosma offered, in the conclusion to their study, numerous strategies for teaching nonsense word fluency. Their strategies apply to both whole group, small group and one on one teaching.</p> <p>The purpose of this study is to explore the effectiveness of incorporating practice methods into our classroom routine. This study could benefit learners by providing directed practice to increase their fluency and accuracy in reading Nonsense Words.</p>
<p><b>Describe your research method(s).</b>          Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>I propose that incorporating nonsense word fluency for 20 minutes into our daily routine as well as having additional practice activities will help students to read nonsense words more fluently and accurately. This instruction will have a three-week duration. Progress will be tested using Acadience Reading progress monitoring as pre and post testing which provides a script, when followed, allows for all students to be assessed identically. Students are individually tested, using identical materials and instructions. In a one-minute timing, students read as many sounds or words as possible. Each student is given an 8.5" x 11" sheet of paper with VC and CVC nonsense words (e.g., sig, rav, ov) which are presented randomly. Students are asked to verbally make the individual letter sounds in each word, or to read the whole word. Meanwhile, the assessor, in this case, the teacher, records on the computer which sounds were produced correctly. The data is then collected and recorded electronically by Acadience/Reading and a score is given.</p> <p>During this study I will work with fifteen students in a small group setting for three weeks where we will practice different methods of practicing nonsense words. These activities include power point presentations with nonsense words (bubble gum words (called because of a gum graphic)), nonsense word go fish, real or nonsense word practice activities and more. At the end of each week, I will progress monitor this group to track their progress.</p> <p><b>Describe your research method(s)</b>          Acadience Reading, formerly known as DIBELS Next, was used for the quantitative data gathering tool. Acadience Reading is research based and is the assessment tool adopted by our school district. It provides benchmark assessments three times a year and progress monitoring assessments as needed. Acadience Reading is promoted as the following: standardized, reliable, and valid. Additionally, it is fast to administer and report and it assesses core early literacy skills.</p> <p>The Nonsense Word Fluency (NWF) measure is an individually administered, standardized assessment of the alphabetic principle. It measures the letter to sound relationship where letters represent their most common sound as well as the blending of these sounds. In each one-minute timing students are presented with 128 sounds represented in 50 nonsense words. Fluency is measured as the number of correct sounds provided by the student within one minute. Accuracy is measured as a percentage of correct answers divided by possible correct answers.</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>My expectation is that with more direct instruction and interactive practice with nonsense word and sound fluency will increase which helps students develop into better readers.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Students will have greater practice and exposure to nonsense words thus hopefully increasing their fluency and reading success.</p>

Content retention in mathematics: Multiplication facts 0s to 10s

Investigator: Robyn Anderson

Granite administrator or teacher: Yes

IRB: Southern Utah University

Proposal ID: 2022-013-Anderson

**Status: Approved**

Anticipated Start Date: 01/09/2023

Anticipated Completion Date: 04/30/2023

Research classification: Teaching Strategies [Strategies emphasizing success criteria: Mastery learning]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Multiplication facts from 0-10 are built upon as students' progress through different mathematical standards. It is a consistent problem that students do not retain multiplication facts and they are retaught each year. Due to this reteaching, it takes away valuable time that should be spent on building upon these basic multiplication facts rather than reteaching them all over again. The problem for this study is 4th grade students are not retaining basic multiplication facts from 0 to 10 thus affecting their ability to solve problems in 4th grade math strands.</p> <p>This study will look specifically at if Benjamin Bloom's theory of Learning for Mastery will help improve student retention of multiplication facts from 0s-10s. Students will be playing different multiplication fact games to gain experiences with the facts.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>Students will be taking a pre-test to analyze their current retention of basic multiplication math facts. As they are taking the pre-test the educator will be observing students on how they answer each problem, i.e. repeated addition, counting on fingers, automaticity, etc. This will give a baseline of student understanding on multiplication facts.</p> <p>Students will then participate in a variety of mathematical games that target specific sets of multiplication facts in the following weeks. They will learn anywhere from 2 to 3 facts a week and then be given a time to review those facts before being assessed. As students are working with these facts they will be observed by the educator.</p> <p>At the end of the weeks of learning the basic multiplication facts students will take a post-test to assess their retention and mastery of multiplication facts.</p> <p><b>Describe your research method(s)</b> 26 students in a fourth-grade classroom gave assent to participate in the study. Each of those 26 students parents gave consent for their student to participate in the study.</p> <p>This study will last for a period of 7 weeks. Starting with the pre-test, then mastering foundational multiplication facts, moving to master derived multiplication facts, and finishing with a post-test to monitor student mastery of the basic multiplication facts from 0s to 10s. In the Content Retention of Mathematics Documents, see Appendix J, for a schedule of events.</p>

## Granite School District

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>It is my anticipation that students will gain a deeper understanding of basic multiplication facts through the use of Bloom's Learning for Mastery theory thus leading to higher retention of these multiplication facts. This will be due to the opportunities students are given to manipulate the numbers, have hands on experiences with them, and repeated exposure through constant reteaching and reassessing.</p> <p>Results: [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>A benefit from this study to Granite School District is that students are working on skills in the Graduate of Granite Strategic Plan. Students will be working on academic proficiency that will help them not only in their current grade level but with retention of these basic multiplication facts will help them excel and succeed in future mathematical courses.</p> <p>Through the constant reteaching and exposure of these basic multiplication math facts students will learn hard work and resilience, yet another skill in the Graduate of Granite Strategic Plan. As they work through the different facts and work towards mastery of each set of math facts students will learn and practice that skill of hard work and resilience.</p>

#### Innovate your curriculum and engage your students using digital badges

Investigator: Gina Solano

Granite administrator or teacher: No

IRB: Suny Oneonta

Proposal ID: 2022-014-Solano

**Status: Approved**

Anticipated Start Date: 01/15/2023

Anticipated Completion Date: 04/15/2023

Research classification: Student Learning Strategies [strategy monitoring]

Requested research results on: 08/15/2023 (Research is behind schedule, results should be available 12/2023)

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>The purpose of this study is to discover how the implementation of a digital badge curriculum affects the engagement and learning of middle school students. This research project will be conducted in collaboration with Ms. Sueann Phillips, the drama teacher at Bennion Junior High School. She and I will collaborate to design the curriculum to use digital badges with her drama and stage crew students. This curricular design may be beneficial to provide specific goals and identify skills that students will need to master in order to be able to qualify to use the technical equipment in the auditorium, design sets, costumes, and other aspects of drama and stage production. This project will use a case study design with Ms. Sueann Phillip's classes being the case we will study. Before implementation, Ms. Phillips will explain how students will earn the digital badges and what they will be used for. During implementation, Ms. Phillips will keep a research journal of her notes and observations. After students have begun to earn them, I will interview Ms. Phillips to record her perceptions and experiences. At no time with any student information, grades, or names will be used. The benefits of this study can be applied to other middle and high school teachers who want to promote better engagement in their courses.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The research design for this study will be a qualitative case study approach. We will be describing the experiences and effects of implementing a digital badge curriculum in a middle school drama class to discover how it affects student engagement and learning. This framework for this study is based on engagement theory, which integrates the principles of motivation, learning, achievement, and interest in a particular activity.</p> <p><b>Describe your research method(s)</b> Data for this qualitative case study will be gathered through observation, field notes (journals), and an instructor interview. As the primary researcher, I would like to visit the school to be able to observe and collaborate with Ms. Phillips on this project. The timeline for this project will be from January through April 2023. This project will not be recruiting participants since it will be a case study and data will be gathered without the direct involvement of the students.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>Ms. Phillips and I anticipate that the students will become more engaged and motivated to complete the curriculum projects and earn digital badges for each one. The use of digital badges is a form of gamification, where students can be rewarded and recognized for their accomplishments beyond earning a grade. Students may be more eager to certify to be able to run certain equipment, manage specific projects, and learn to use audio and sound technologies more effectively through badging. Students will be given specific tasks and skills that they will have to demonstrate competency before earning a badge and the privilege that comes with it. We anticipate that her curriculum will set the stage for other secondary teachers at the school, district, and beyond, who are interested in digital badging as a way to innovate their teaching and student learning.</p> <p>Results: [insert here]</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	This study will benefit Granite School District by improving the teaching and learning of those involved. Ms. Phillips will provide the experience, knowledge, and expertise of using digital badges and can collaborate with other teachers at her school and district about how to design and use them. Current research in digital badging is needed to discover new and innovative ways of motivating students to learn, especially post-pandemic when so many students are experiencing low motivation and learning gaps. This project has the potential to provide a model for other teachers who are experiencing similar challenges and are searching for ways to improve motivation and engagement in their classes. This study will also provide positive recognition to Granite School District through publication, conferencing, and sharing our work with the educational community.
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### Barriers to mental health well-being for male pacific islander adolescents

Investigator: Melia Fonoimoana-Garrett

Granite administrator or teacher: No

IRB: Brigham Young University

Proposal ID: 2022-015-Garrett

**Status: Approved**

Anticipated Start Date: 12/15/2022

Anticipated Completion Date: 06/01/2023

Research classification: School [Counseling effects]

Requested research results on: 08/15/2023

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	<p>Pacific Islanders (PI) and other minoritized group utilize mental health services at a lower rate than the majority population. In comparison to the Caucasian population, members of minoritized populations receive about half the mental health services (Lasser et al, 2002). Unfortunately, many PI teenagers and their parents do not know the mental health resources available to them. In a report from a White House interagency task force, called the Asian American and Pacific Islander Bullying Prevention Task Force, researchers found that many AAPI students and their parents are unaware of resources available to them (Thor, 2019). This is especially concerning for male Pacific Islander adolescents who will employ unhealthy behaviors especially when their mental health needs are not met (Irwin &amp; Umemoto, 2012). PI male adolescents often want to show themselves as powerful and deserving of respect which can lead them to employ violent masculinities, in part due to historical colonial oppression of their ethnic group. (Irwin &amp; Umemoto, 2012). This study will focus on barriers that male PI adolescents feel in accessing mental health services.</p> <p>This study is a follow up study to a research project funded by the state of Utah (IRB2021-205). The purpose of this study was to find barriers to mental health services for Pacific Islanders within Utah. This study had participants ages 14-71. Three of the participants were male adolescents. The data found from that research project was interesting in that the participants shared a stigma toward mental health issues and mental health services. They felt that mental health issues are shameful and will hold you back and held more punitive beliefs about mental health concerns and services than the other participants. The findings from the small sample were significant. A larger sample of male adolescents are needed for the findings to be reliable and naturally generalizable. Thus this study seeks to extend the research of the previous study.</p>
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p>This study will be conducted using a qualitative research design. This will be done by completing focus groups with male adolescent Pacific Islanders. Following the focus groups, IPA methodology will be used to analyze the data (Smith, 2011). Alase (2016) explains that IPA data coding is traditionally conducted through three cycles (2016). During the first cycle researchers analyze transcripts and break responses of the participants into meaningful chunks. In the first cycle of this study, researchers will break down participant responses into significant quotes and organize them into four a priori codes: (1) What are the attitudes among Pacific Islanders in Utah regarding mental health? (2) What are the perceptions among Pacific Islanders in Utah regarding mental health services? (3) Are there any barriers to receiving mental health services among Pacific Islanders in Utah? (4) What would help Pacific Islanders receive necessary mental health services? Prior to the data analysis, the research team will meet together to discuss the meanings of the four a priori codes.</p> <p>The second cycle of coding will further condense the initial chunky quotations from the participants. This is meant to help researchers get closer to the “core essence” of the participants’ lived experiences (Alase, 2017). During the second cycle of coding of this study, researchers will take the initial meaningful chunks under each a priori codes and categorize them. Each researcher will individually read through the a priori codes and label and define categories based on the most common key words, phrases, or ideas, found among group members. These categories will be organized on a worksheet separated by the initial a priori codes. They will then be compiled together to show the common themes across the groups.</p> <p>Within qualitative research, high standards of rigor are maintained to ensure credibility and trustworthiness in data collection and interpretation (Brantlinger et al., 2005). Standards of dependability, credibility, transferability, and confirmability techniques were suggested by Lincoln and Guba (1985) including peer debriefing to guarantee trustworthiness. To promote credible research, this project will continue to utilize many aspects of credibility including investigator triangulation, debriefing, member checking, and expert checking. Triangulation strategies help researchers reduce fundamental biases by including multiple locations, researchers, and data collection methods (Noble &amp; Heale, 2019).</p>



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	<p>Peer debriefing will allow the research team to explore different ideas, check for bias, and experience cathartic release during data collection and data review. The research team includee individuals from the PI community and those outside of the PI community which allow for multiple perspectives throughout data collection. To ensure dependability and confirmability, a record is being kept of training, process, and decisions which could be used to audit the findings of the research. The research team will write reflexive notes and used reflexive journaling and had group reflection. Reflexivity is especially important when individuals are used as a research tool. Reflexive tools will allow researchers to express and disclose their positionality.</p> <p><b>Describe your research method(s)</b>          Research question -          How do male PI adolescents in Utah think about mental health supports?</p> <p><b>Objectives</b>          In the current research we seek to understand (1) the attitudes surround mental health services among male PI adolescents (2) the perceptions of mental health services among male PI adolescents (3) the barriers toward seeking mental health services among male PI adolescents and (4) what resources are helpful for male PI adolescents.</p> <p><b>What participants will do:</b>          Participants will participate in a focus group lasting approximately 90 minutes. The focus group will discuss attitudes, perceptions, and barriers to mental health services. Card sort activities will be used to facilitate the discussion. (Please see section 7.4 for more details about the card sort and rationale for inclusion). We will be conducting focus groups of 4-6 male PI adolescents ages 14-18 years old. The focus group will last 90 minutes. First, we will go over all what to expect for the focus group and leave room for questions. Then, we will talk for about 30 minutes. You will then have a break for 10 minutes. After the break we will visit for about 30 more minutes. The time for questions and break total to be 70 minutes, but we are leaving an extra 20 minutes to give room for those that arrive late and to go over procedures which totals to be 90 minutes. We will be discussing how they feel about mental health supports. We are also allowing twenty minutes for questions and any explanation of the study beforehand for a total of 90 minutes.</p> <p><b>Step By Step Description</b>          a. Participants will be recruited via word of mouth and flyers. These flyers will be distributed to community members and posted at public locations such as public libraries. The flyer will have a qr code and link that will send them to a qualtrics pre registration survey. This survey will have eligibility questions along with a consent form for the parents to fill out and an assent form will for the participant. The parent will be instructed to go over the assent form with their child. After the focus groups have been completed, each participant will be given a coded name in the transcripts to ensure confidentiality. The flyer will also have contact information. Hard copies of all information will be given to any individuals who ask for it. The Qualtrics pre registration survey will also include the option to do the focus groups over zoom. Participants will mark their preference on the pre registration survey.          b. Only those that have parental consent forms returned will be allowed to participate unless the participant is 18 or older, in which case a consent form will be collected before the focus group is conducted.</p> <p><b>For in person focus groups:</b>          a. Researchers will set up focus group rooms by putting chairs in a circle around a table. At each seat, there will be notepads, post its, and pens to allow participants to write their thoughts during the focus group. There will also be the two sets of card sorts that will be used during the focus group. If the focus group is being held at a public park, the focus group will be held at a picnic table away from anyone else. If a picnic table is not available, a folding table will be set up in an area where there isn't anyone around at the public park.</p> <p><b>For over zoom focus groups:</b>          a. The researchers will turn on the zoom five minutes prior to the start of the focus group. Participants will be told that they can communicate on the chat or take notes on a paper at home to help them remember what they want to say.</p> <p><b>All other steps will be the same for in person or over zoom groups</b>          b. The participants will be greeted and given information regarding the purpose of the study, confidentiality, and their ability to withdraw at any time. At this time, researchers will double check to be sure that consent and assent forms have all been collected. The participants will also be given time to ask questions regarding the assent form and to withdraw their assent. Participants will be separated into focus groups with 3-6 participants in each group.          c. All facilitators have been trained to create a thoughtful, safe, open, atmosphere and asked pre-determined questions. During responses to these questions, the facilitator will ask follow up prompts when needed to gain greater understanding of what the participants are saying.          d. The recording devices will be started, and after everyone has been settled the focus groups will begin. The facilitator will read interview protocols.          e. Participants will be asked an ice breaker "How did you find out about this focus group?"          f. Participants will be asked "If you were to recommend that your friend/family member within the PI community seek help for mental health issues, where would you recommend that they go?"</p>
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## Granite School District

### Research Applications During the 2022-2023 School Year

	<p>g. The participants will be instructed to use a card sort with resources available to address mental health concerns. they will categorize them as definitely helpful, most likely helpful, possibly helpful, not helpful at all, or does not apply to me. The group will then discuss the reasoning for their categorization. For those participating via zoom, the card sort will instead be made via jamboard. Individuals will be able to move around the "cards" on the jamboard rather than using physical cards during a card sort.</p> <p>h. The participants will have a 5-10 minute break to use the bathroom, eat snacks, and informally socialize. The snacks will be individually prepackaged. The snacks will be PI snacks such as li hing mui treats, depending on what is available at International Food Stores at that time. Those that are participating via zoom will not be provided snacks.</p> <p>i. After the group returns, they will be asked "If someone who identifies as being PI seeks out a mental health service or support, how would they be viewed in their community?"</p> <p>j. The participants will be instructed to use a card with barriers toward receive mental health services and asked to rank the barriers from biggest barriers to smallest barriers. The participants will then discuss their ranking. Again, for those that are participating via zoom, they will use a jamboard to complete this card sort.</p> <p>k. The participants will then be asked if there is anything else that they would like to talk about.</p> <p>l. After the focus group, the participants will be thanked and given information about mental health service resources that are available to them.</p> <p>m. After the focus groups, the audio recordings will be transcribed For focus groups conducted over zoom, only members of the research team will participate in the transcription process to protect the privacy of the participants since the video will also be available. The transcriptions will be coded according to IPA methodology.</p> <p>Subject's Experience</p> <p>During the focus group, the participants will be given the opportunity to share their feelings surrounding mental health services. The facilitators will provide a welcoming environment where it is made clear that opposing views are welcome. Afterward, the participants may feel that they need to access mental health services after discussing the topic. The participants will be given information regarding resources for mental health services.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>Our research group expects to find more information about the barriers male adolescents Pacific Islanders that contribute to their lack of accessing mental health resources. Focus groups up to this point have found that members of the Pacific Islander community have stronger feelings of stigma toward mental health resources, and that this is especially true among male adolescents. Initial findings among this group have found that male adolescent Pacific Islanders often have a more punitive idea about mental health resources, believing that admitting they have a mental health concern would ruin any potential for future success. We hope to find ways to help support those from this group and steps that would lead to improved rates of mental health access for male adolescent Pacific Islanders.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Granite School District has a large number of Pacific Islanders. Pacific Islanders have a much lower rate of accessing mental health services in comparison to the ethnic majority. This is due to many factors including perceptions held within the community. These focus groups help start conversations that normalize conversations about mental health services. We hope to learn more about what would help this group access mental health resources and feel less stigma toward this topic. Following completion of this study, we would like to present our findings to relevant members of the school district as well as those within the Pacific Islander community.</p>

**Granite School District**  
**Research Applications During the 2022-2023 School Year**

Teaching adapted PECS to students with visual impairment

Investigator: Sarah Ivy

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-016-Ivy

**Status: Approved**

Anticipated Start Date: 01/09/2023

Anticipated Completion Date: 05/26/2023

Research classification: IDEA [Multiple disabilities]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>The purpose of this study is to see if an adapted form of the Picture Exchange Communication System (PECS) is effective to teach learners with multiple disabilities and sensory impairments to discriminate among tangible symbols to make simple requests. PECS is a common intervention used with children with autism and communication delays. It has 6 phases of intervention. For this study, we will adapt and test the first three phases. Instead of using the visual components of PECS, symbols that can be accessed through touch will be used. Multi-sensory cues (using sound, touch, sight, and smell) will be used to help learners access information about the presence of people and objects in their environment.</p> <p>This research will focus on answering three questions: (1) Is adapted PECS Phase 1 effective to increase requesting among learners with multiple disabilities and visual impairment; (2) Is adapted PECS Phase 2 effective to increase seeking out a communication partner among learners with multiple disabilities and visual impairment; (3) Is adapted PECS Phase 3 effective to increase tangible symbol discrimination among learners with multiple disabilities and visual impairment; (4) do learners with multiple disabilities and visual impairment generalize these communication skills to other communication partners, symbols, or settings; and (4) do learners with multiple disabilities and visual impairment maintain these skills over time?</p>
<p><b>Describe your research method(s).</b>          Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This study uses an experimental single case multiple baseline across participants design with conditions including baseline, intervention (PECS Phase 1, Phase 2, Phase 3A and 3B), generalization, and maintenance. As typical with single case design methodology, data will be analyzed visually to determine a functional relation between child behavior (i.e. symbol exchange, symbol discrimination) and the intervention. Specifically, changes in level, trend, and variability from baseline to intervention and consistency across participants will be used to determine a functional relation. Three or more demonstrations of the effect will be sufficient to determine a functional relation, in which case Tau-U will be calculated as an effect size.</p> <p>To demonstrate experimental control, all participants will start baseline at the same time and begin intervention one at a time in a staggered fashion in random order after consideration of children’s schedules and data trends. Participants will continue intervention until mastery is reached for each phase of intervention. Mastery for each phase is at least 80% correct, independent responses (i.e., symbol exchanges) for three consecutive data sessions. Participants will begin the next phase of intervention immediately following mastery of the previous phase. Generalization data will be collected intermittently (approx. every 3rd session) during baseline and the first two phases of intervention. Maintenance data will be collected 1-, 4-, and 8-weeks post-intervention.</p> <p>Data will be graphed and reviewed daily to make decisions about phase changes for each participant. Procedural fidelity and reliability will be assessed on 100% of sessions to ensure adherence to protocol and reliability of the data.</p> <p><b>Describe your research method(s)</b>          Four to eight children will be enrolled in the study who are: (a) between 3 and 17 years of age, (b) eligible for special education, early intervention, or deafblind services with noted concerns that visual impairment or delay interferes with development, (c) using fewer than 20 expressive conventional words, signs, or symbols, (d) reaching and grasping for objects, (e) able to choose a preferred object from two options, (f) showing intent to communicate, and (g) showing preference for at least six items. Upon approval from the district and a school's principal (such as Hartsvigsen Elementary), we will reach out to the visual impairment teacher to identify students meeting the inclusion criteria. We will ask that teacher to connect us with the classroom teacher and caregivers of potential participants. We will seek the classroom teacher's permission to conduct sessions with the student in their classroom and seek written informed consent from caregivers. No information will be collected about students until written informed consent is obtained.</p> <p>Once we have four students enrolled (i.e., caregivers provide written informed consent), we will conduct preference assessments and review the students' educational records to ensure students meet the inclusion criteria (no personally identifiable information will be collected from student files and all data will be marked with a unique code instead of a student's name to protect confidentiality) and then begin daily experimental sessions. At the end of the study we will ask at least one teacher and a caregiver to complete a survey about the study procedures and student outcomes.</p>

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	<p>Preference assessments will be conducted in accordance with procedures as outlined in the PECS manual, which include a survey completed by teachers and/or caregivers (depending on setting for that child), observation, and direct assessment using single stimulus and paired choice methods.</p> <p>Experimental conditions include baseline, three phases of intervention, generalization, and maintenance sessions. Each session will consist of up to 15 trials but last no longer than 30 minutes, and be carried out in a private area of the student's classroom. In each session, a researcher called a communication partner will sit across from the student holding one or more items (e.g., reinforcers) and show the student a tangible symbol(s) representing the item(s). The communication partner will give the item(s) to the student in exchange for the tangible symbol. In baseline, one symbol and reinforcing item will be available at a time. The child is not expected to pick up or extend the tangible symbol to the communication partner, however, if the child does then the reinforcer and meaningful social praise would be provided immediately. In Phase 1 of intervention, a second researcher called a prompter will be positioned behind the student and physically assist the student to give the tangible symbol to the communication partner in exchange for the reinforcer. In Phase 2, the communication partner will move away from the student in small increments and a communication switch will be provided so that the student can call the communication partner to the student and exchange the symbol for the reinforcer. The prompter will provide physical assistance to teach the student to use the switch. In Phase 3, only a communication partner will work with the student. Two symbols and two items (a reinforcer and distractor item) will be shown to the student. The student will be given the item corresponding to the symbol they exchange. Because the communication partner knows which item is preferred, when the student exchanges the distractor symbol, the communication partner will provide the natural consequence (give the distractor item) and error correction (show the student to select the reinforcer symbol). After the student is consistently discriminating between a reinforcer symbol and a distractor symbol, then two reinforcer symbols and items will be presented. This is the final phase of intervention. To test for generalization, we will ask to observe the student and the teacher acting as a communication partner periodically throughout baseline and the first 2 phases of the intervention. To test for maintenance, we will return 1-, 4-, and 8-weeks post-intervention to see if the student still reliably discriminates among the symbols that were taught during the final phase of intervention.</p> <p>We anticipate that students will require approximately 2-3 months in intervention to achieve mastery.</p> <p>To assess social validity, all study sessions will be video recorded and at least one teacher and one caregiver will view a set of representative videos to see if they think there was improvement in child behavior over the course of the study and to report their perceptions regarding the impact, importance, and usefulness of the intervention.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>We have carefully considered inclusion criteria to select students who would benefit from the intervention and for whom we believe it will be successful. Therefore we anticipate that all enrolled students will quickly begin exchanging the symbols for reinforcing items in phase 1 of intervention but not before. This will allow us to infer a causal relationship between the intervention and requesting using tangible symbols. We further anticipate that all students will reach mastery in all phases of the intervention, demonstrating effectiveness of adapted PECS to teach simple requesting and discrimination using tangible symbols. We further anticipate that students will generalize the skill to request reinforcing items from a familiar teacher and maintain the discrimination skill up to 8 weeks post-intervention.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Student participants may learn to make simple requests and discrimination using tangible symbols. We will share the results with teachers and caregivers of the enrolled participants, the school principal, and the district. We will also work with the educational team of enrolled students to teach them how to use adapted PECS and carry over and expand on the skills students gained during the study in their regular educational program.</p>

**Granite School District**  
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F.E.V.E.R. (Financial Education Validation and Engagement Research) Study

Investigator: Gina Ricker  
 Granite administrator or teacher: No  
 IRB:  
 Proposal ID: 2022-017-Ricker

**Status: Denied**

Anticipated Start Date: 03/01/2023

Anticipated Completion Date: 10/31/2023

Research classification: Curricula [Other curricula programs: Other]

Requested research results on: Not applicable

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>Financial Education has become a hot topic across the United States. As more states and districts recognize the importance of student financial literacy, EVERFI seeks to understand better how its financial education programs are meeting the needs of students and educators. Currently, 23 states have adopted requirements or recommendations regarding financial education, specifically personal finance (Council for Economic Education, 2022). The research on the effectiveness of financial education and how it supports financial knowledge, attitudes, and behaviors are growing (Kaiser, Lusardi, Menkhoff, &amp; Urban, 2022).</p> <p>EVERFI financial education high school student programs, such as High School Financial Literacy, Marketplaces, Money Moves, Grow: Financial Planning for Life, and Build: Credit Fundamentals, were developed using empirical research on how students learn to provide a robust learning experience best suited to convey critical financial concepts and skills. These programs teach students basic financial capabilities such as saving, budgeting, leveraging credit, interest, investments, and navigating financial institutions and associated technologies so that they can be more prepared to make healthy financial decisions for their future financial well-being. The current study is designed to evaluate if these programs engage students in their financial education and if the programs and their embedded auto-graded assessments are aligned with the learning outcomes and financial assessments at the state/district level.</p>
<p><b>Describe your research method(s).</b>          Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The current study aims to:</p> <ol style="list-style-type: none"> <li>(1) Validate EVERFI in-course Financial Literacy Assessments for students who have completed EVERFI High School Financial Literacy, Marketplaces, Money Moves, Grow: Financial Planning for Life, and Build: Credit Fundamentals programs as well as their respective state’s standardized test.</li> <li>(2) Better understand educator implementation and student engagement of EVERFI programs in the classroom to provide context to validation analyses.</li> </ol> <p>To achieve Aim 1, EVERFI will share 2021-22 and 2022-23 EVERFI program data for students who completed any of the aforementioned programs and entered their email and/or First and Last name with the district to receive respective student state financial assessment data. Student School Names will also be included where available. A correlation/regression analysis will be conducted to determine how well EVERFI programs align to or predict state/district learning outcomes related to personal financial literacy.</p> <p>For Aim 2, EVERFI will observe 2-3 high school teachers from the district to measure student learning engagement. These will be teachers already using the programs or interested in using them, in Spring 2023 (or Fall 2023). A researcher certified in using the BROMP (Baker Rodrigo Occompaugh Monitoring Protocol) to quantitatively measure student engagement will unobtrusively measure student learning engagement as they use EVERFI Digital Programs in their classrooms. A descriptive analysis will be done to determine average levels of student affect and behavior.</p> <p><b>Describe your research method(s)</b>          Once district approval is received:          For aim 1, EVERFI will work with the district to conduct a SDFTP (Secure Data File Transfer Protocol) and share student identities who completed any of the mentioned programs and entered their email and/or First and Last name. High School name will also be provided where possible. EVERFI, or the district, will then match student assessment records to gather the general financial literacy object test scores or the performance test scores for those students. EVERFI would like to gather and analyze student assessment data by July 2023 but are flexible given district timelines</p> <p>For aim 2, EVERFI will work with the district, or reach out to high school leaders independently, to gain interest and permission in participating in classroom observations. EVERFI would like to conduct classroom observations by April 2023 but are flexible given school timelines and spring state testing requirements.</p>

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>EVERFI financial education high school student programs have the Digital Promise Research-Based Product Design certification. This means they were developed using empirical research on how students learn to provide a robust learning experience best suited to convey critical financial concepts and skills and positively impact student learning and attitudes. We also have ESSA levels of efficacy evidence that EVERFI programs deliver positive increases in student learning and attitudes that support future wellness and decision-making. Therefore, for the current study, researchers expect our financial education assessments to be aligned to and predictive of eventual student performance on district or state-level finance assessments, further supporting classroom educators using EVERFI programs to identify where students are on critical learning objectives. Lastly, engagement is a critical lever with which to leverage motivations and drive learning. Therefore, researchers also expect students to be engaged in their own learning of financial education while using EVERFI at levels appropriate to complete the learning tasks.</p> <p>Results: [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Granite School District has many high school educators that use EVERFI financial literacy programs. It is the researcher's aim that this research is beneficial to educators in identifying students' performance before they take their state financial assessments. Additionally, the research will deliver key student learning engagement insights that will directly support educator classroom implementation via a well-recognized quantitative measure known as the BROMP.</p>

Exploring influences of aggression, risk, and resilience in justice-involved youth

Investigator: Elisabeth Wilde

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-018-Wilde

**Status: Approved**

Anticipated Start Date: 02/15/2023

Anticipated Completion Date: 12/31/2024

Research classification: IDEA [Traumatic Brain Injury (TBI)]

Requested research results on:

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Despite the abundance of research demonstrating the clear environmental contributions to aggressive and delinquent behavior, few studies have attempted to examine the biological substrate underlying these findings. More specifically, no previous research of which we are aware comprehensively investigates the relationship between traumatic brain injury (TBI) / repetitive concussion and risks for criminogenic behavior in justice-involved (JI) youth. The current project aims to determine the incidence of TBI in a sample of JI youth and, using a subset of youth with TBI, investigate associations between TBI and risks for criminogenic behavior, such as aggression, impulsivity, substance misuse, emotional dysregulation, and executive dysfunction.</p> <p>The use of neuroimaging as a tool to investigate this relationship will allow us to characterize neurological symptoms underlying criminogenic risks factors and describe candidate biological markers with significance for diagnosis and treatment monitoring. These investigations have significant potential to enhance our understanding of the multiple risk factors faced by many JI youth. Further, this gap in our understanding has both theoretical and practical implications for public education, justice, and medical care.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>Researchers will recruit 100 justice-involved youth (non-detained) between 13 and 17 years of age in Salt Lake County, Utah, from the YESS, STEP, or GAPP Programs of Granite School District. Recruitment will be via flyers, referrals, or word-of-mouth on site.</p> <p>All procedures will be conducted in accordance with the American Psychological Association's (2010) Ethical Principles of Psychologists and Code of Conduct and will be approved by the University of Utah Institutional Review Board (IRB). Following IRB approval, participants and their caregiver(s) will be recruited from sites via flyers posted in the facility itself as well as promoted by the SLVYC juvenile probation officers / school staff as a mechanism by which youth may accrue community service hours.</p> <p>Once a caregiver or youth expresses interest in the study by calling or emailing the researcher, visits totaling three and a half hours with a researcher will be scheduled for the earliest convenient time. Testing will occur at the Imaging and Neurosciences Center at the University of Utah. During this visit, informed consent and assent will be obtained from the caregiver and participating adolescent, respectively. The youth will be assessed in a separate room to ensure confidentiality of their responses as well as of the testing materials. Pending approval from Granite School District / SLVYC, participants will</p>



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	<p>be compensated for their time by earning community service hours, school credit, or \$25 compensation. Caregivers will also receive \$25 as compensation.</p> <p><b>Describe your research method(s)</b>  Initial consent and assent will be obtained at either the University of Utah or at the location of recruitment. 100 students will undergo questionnaires regarding basic demographic information, head impact history (Ohio State University TBI ID Method), behavioral and emotional assessment (Behavior Assessment System for Children Third Edition), and history of adverse childhood experiences (Adverse Childhood Experiences Screening Instrument).</p> <p>Some adolescents will be invited to participate in a second assessment session that will take place at the Imaging and Neurosciences at the University of Utah. For the second assessment, additional questionnaires will be administered in one or two testing blocks (depending on participant availability), and the total assessment time will not exceed three and a half hours. Breaks will be offered on a regular basis that will allow the participant to get water or use the restroom.</p> <p>The following measures will be administered via paper and pencil and are caregiver report: Demographics, Behavioral Assessment Symptom for Children Third Edition (BASC-III PRS), Behavioral Rating Inventory of Executive Function (BRIEF-II Parent Report).</p> <p>The following measures will be administered via researcher-administered assessment and are completed by the youth: Wechsler Intelligence Scale for Children Fifth Edition (WISC-V), Delis-Kaplan Executive Function System (D-KEFS), California Verbal Learning Test for Children (CVLT-C).</p> <p>The following measures will be administered via paper and pencil and are youth self-report: BRIEF-2-Self Report, Child Neglect Questionnaire (CNQ), Childhood Trauma Questionnaire (CTQ), Adverse Childhood Experiences Screening Instrument (ACE-Q), Minnesota Multiphasic Personality Inventory-Adolescent-Restructured Form (Teen SR MMPI-A-RF), Rivermead Post Concussion Symptom Questionnaire (RPQ), BASC-III Self Report for Children.</p> <p>The following measures will be administered via researcher-administered interview and are completed by the youth: OSU TBI ID Method, Youth Level of Service / Case Management Inventory (YLS/CMI).</p> <p>The following measures will be administered via iPad and are completed by the youth: National Institute of Health (NIH) Toolbox.</p> <p>Following completion of the surveys, a second visit will be scheduled at the Imaging and Neurosciences Center at the University of Utah, where participants will undergo an MRI protocol not exceeding 90-minutes.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>We expect to find a disproportionately high incidence of TBI history in justice-involved youth. These findings will be substantiated with evidence from neuroimaging indices. We expect correlations between neuroimaging findings and administered neuropsychiatric measures of criminogenic behavior, delinquency, substance misuse, cognitive development, and psychopathology.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Granite School District may not derive a direct benefit from participation. Parents/caregivers may receive feedback from the neuroradiologist in instances of unanticipated abnormal MRI findings. If parents/caregivers express significant concern about their child's emotional or behavioral functioning, we will provide them with local referral options for further assessment or treatment as appropriate. Although the potential benefits of the direct participation are limited, they are reasonable in relation to the minimal risk incurred. This project will significantly improve our understanding of the relationship between childhood TBI and criminogenic risk, as well as the brain systems that may contribute to observable social and adaptive behavior. Findings are likely to also be applicable to children and adolescents with other types of brain insult. Thus, the project will contribute to our understanding of both normal and aberrant brain development and adjustment. The importance of the knowledge gained in this study far outweighs the minimal risks associated with participation.</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

Cross-cultural development and psychometric validation of the beliefs about behavior scale in the U.S. and Taiwan

Investigator: Howard (Chung-Hau) Fan

Granite administrator or teacher: No

IRB: Idaho State University

Proposal ID: 2022-019-Fan

**Status: Approved**

Anticipated Start Date: 02/01/2023

Anticipated Completion Date: 02/28/2023

Research classification: Classroom [Classroom influences: Behavioral intervention programs]

Research results received on: 03/27/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>The literature regarding school-wide positive behavior support (SWPBS) indicated that staff's buy-in as a hidden but influential catalyst is critical for its implementation. Although there are a few tools available for measuring staff buy-in and perceived implementation of SWPBS, these tools do not cover a comprehensive range of the key SWPBS components, nor do they fully measure staff's attitude and beliefs. Rather, the Belief about Behavior Scale (BABS) is originally developed by review of experts in social emotional and behavior multi-tiered systems of support. For the use of this study (i.e., collecting data in the U.S. and in Taiwan), the researchers from USU and ISU selected items from the original BABS to assess staff's beliefs towards the key components of SWPBS (i.e., school responsibility for student social emotional and behavioral development, use of positive reinforcement and prevention rather than punitive punishment). Our first goal is to adopt BABS items most relevant to those key SWPBS components for psychometric validation by examining underlying factor structure and estimates of reliability. Our intention is to promote SWPBS by gaining more understanding of school staff's beliefs, which is a critical step toward reaching full and sustainable implementation.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>For the U.S. data collection, the anonymous survey link will be distributed to the school principals' emails obtained from the public websites. The principals will be asked to complete the survey and can decide whether or not to forward the online survey link to their staff (e.g., general education teachers, special education teachers, counselors, school psychologists). The collected data for survey validation using factor analysis methods may help with future generalization and usage of the present instrument. After two weeks, another wave of follow-up email was sent. It is estimated to recruit 800 participants. The whole data collection process will last for about four weeks.</p> <p>As to what we will be comparing for, with the collected data, we plan to replicate previous research findings about the observation of more philosophical concerns and misunderstandings of SWPBS concepts at the secondary school level. We will use an independent-samples t-test analysis to compare the mean differences in the BABS factors between the elementary and secondary staff's beliefs.</p> <p><b>Describe your research method(s)</b> The anonymous survey link will be distributed to the school principals' emails obtained from the public websites. The principals will be asked to complete the survey and can decide whether or not to forward the online survey link to their staff (e.g., general education teachers, special education teachers, counselors, school psychologists). After two weeks, another wave of follow-up email was sent. The whole data collection process will last for about four weeks.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>We hypothesize that the results of our exploratory and confirmatory factor analyses will show a 4- or 5-factor structure that are generally consistent with the beliefs about those positive behavior support concepts and principles. Additionally, we hypothesize that Welch's t-test analysis results would show that elementary school staff hold significantly higher levels of support on those BABS factors than their secondary counterparts because, according to the literature, SWPBS implementation is less popular or common at the secondary level schools.</p> <p><b>Research Summary Report</b> First of all, we want to thank you for your support and participation in this survey research project. We adopted the Belief about Behavior Scale (BABS) items most relevant to those key school-wide positive behavior support (SWPBS) components for psychometric validation by examining underlying factor structure and estimates of reliability. Our intention is to promote SWPBS by gaining more understanding of school staff's beliefs, which is a critical step toward reaching full and sustainable implementation.</p> <p>There was a total of 480 responders from Utah who attempted this survey in about four weeks. The following inclusionary criteria were applied: (a) a respondent completed the survey in its entirety, and (b) the survey contained no more than one missing response on the BABS items. The final data set from Utah for analysis consisted of 391 respondents. The demographics of respondents are presented in Table 1.</p> <p>In this research project, the Utah data set (N = 391) was used for confirmatory factor analysis (CFA) to measure the construct validity of the selected BABS, which is an important step for a survey's development and to measure school staff beliefs as a psychological construct. The CFA results examining the proposed four-factor model demonstrated an acceptable fit to the data (CFI = 0.93, TLI = 0.92, RMSEA = 0.08, WRMR = 1.3). The factor loadings as well as the inter-factor correlations are presented in Figure 1.</p>

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	<p>All factor loadings were in the expected direction and statistically significant (<math>p &lt; .001</math>), confirming that all items made meaningful contributions to their corresponding latent factor. The correlations among the four factors ranged from .49 to .85, supporting four correlated and distinct constructs. In addition, the internal consistency measured by Cronbach's alpha of the overall BABS was .88. The alpha values of the factors ranged from .69 to .81 and the Omega reliability coefficient of the factors ranged from .70 to .81. Both indices suggested that the current 19 BABS items were consistent in measuring the latent construct.</p> <p><b>Implications for Promoting Supportive Beliefs about SWPBS</b></p> <p>With respect to implementation of SWPBS, a school leadership team has the task of ensuring that its team members are ready to engage in the innovation process. First, the selected BABS items (see Table 2) can be used to assess school staff's supportive beliefs about or resistance to SWPBS. School and district leadership teams can include the BABS items in their initial assessment to better understand the contextual fit of SWPBS (e.g., staff's psychological readiness) and use such baseline data to guide action planning and avoid a "false start," if launched prematurely. The suggested decision criterion is to have at least 80% staff buy-in prior to implementation of SWPBS. Moreover, the BABS items can be used to monitor changes in a certain (sub)group (e.g., general education teachers) of staff's beliefs about SWPBS as their responses to any systems intervention targeting an underachieved survey domain (e.g., Use of Punishment).</p> <p>Continuing education activities can be held using a workshop format for a certain (sub)group based on the district-wide assessment results, especially before formal implementation in order to reach the recommended criterion of 80% buy-in. Instructional approaches in an in-service training workshop can include direct instruction with case samples, modeling, role playing in small groups, and discussion of real vignettes obtained from the participating district to increase the relatedness feeling among the participants. Including staff in the decision-making process based on data (e.g., BABS survey results) and responding to their concerns efficiently may also enhance staff buy-in. For instance, if differences are found between the elementary and secondary staff in their survey responses, arranging separated training for more targeted purposes and goals is recommended.</p> <p>Furthermore, motivational interviewing strategies can be introduced to and practiced by school team leaders (e.g., school psychologists) to facilitate desirable changes in the system. When teachers are motivated, they are much more likely to participate in intervention development and implementation and accept performance feedback from other team members. Finally, because psychological buy-in is an ongoing status, having the BABS items in a decision-based data system can help school leadership teams pay attention to their staff's perception as a critical system variable and utilize the data to obtain and maintain staff buy-in.</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>With respect to implementation of SWPBS, Granite School District's leadership team has the task of ensuring that its team members are ready to engage in the innovation process. First, the validated BABS items can be used to assess school staff's supportive beliefs about or resistance to SWPBS. According to stage-based practice (Fixsen et al., 2005), during the exploration or installation stage school and district leadership teams can include the BABS items in their initial assessment to better understand the contextual fit of SWPBS (e.g., staff's psychological readiness) and use such baseline data to guide action planning and avoid a "false start," if launched prematurely. The suggested decision criterion is to have at least 80% staff buy-in prior to implementation of SWPBS. Moreover, because staff or school buildings in a system may fall into different implementation stages during the innovation process, such as 20% of them serving as pilots in the installation stage while the others remaining in preparation, the BABS items can be used to monitor changes in a certain (sub)group of staff's beliefs about SWPBS as their responses to any systems intervention targeting an underachieved survey domain (e.g., Use of Punishment).</p> <p>Furthermore, continuing education activities can be held using a workshop format for a certain (sub)group based on the district-wide assessment results, especially before formal implementation in order to reach the recommended criterion of 80% buy-in. Motivational interviewing strategies can be introduced to and practiced by school team leaders (e.g., school psychologists) to facilitate desirable changes in the system. When teachers are motivated, they are much more likely to participate in intervention development and implementation and accept performance feedback from other team members. Finally, because psychological buy-in is an ongoing status, having the validated BABS items in a decision-based data system across the implementation stages can help school leadership teams pay attention to their staff's perception as a critical system variable and utilize the data to obtain and maintain staff buy-in.</p>

# Granite School District

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Evaluation of complexity-based morphosyntactic treatment for children with language disorders of mixed etiologies.

Investigator: Kirsten Russell

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-020-Russell

**Status: Pending**

Anticipated Start Date: 01/26/2023

Anticipated Completion Date: 06/30/2023

Research classification: IDEA [Speech-language impairment]

Requested research results on: Not approved as of 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>School-aged children with language disabilities – specifically those who have exceptional difficulty with grammar – experience a barrier in their social interactions and academic attainment. Current approaches to selecting treatment targets to use in school-based therapy for language disability follow a developmental or remedial approach. Both of these approaches help students progress but are unlikely to close the gap in the language learning curve and help them “catch up” to their typically developing peers.</p> <p>This study uses the Complexity Approach to Treatment Efficacy approach, which states that “training complex structures results in generalization to less-complex structures when untreated structures encompass processes relevant to (i.e., are in a subset relation to) treated ones” (Thompson et al., 2003, p.602). This approach inherently supports generalization and has the potential to close the learning gap between children with language disabilities and their peers.</p> <p>The overarching goal of this study is to evaluate the efficacy of a complexity-based approach for the treatment of grammatical deficits in English speaking school-aged children with DLD and with Down syndrome. The primary focus of the intervention will be the impact of targeting auxiliary BE question structure (e.g., “Is the kitty sleeping?”), a central element of tense-marking in the English language using standard therapeutic practices. Neurotypically developing children begin to show mastery of auxiliary BE questions between the ages of 3 and 5 years (Owens Jr et al., 2018; Retherford et al., 2019). In contrast, mastery of this form can take children with DLD an additional three or more years (Rice et al., 1998). Persons with DS also struggle to master this form and mastery may not occur until the age of 7 years with some reports of difficulty extending into adolescence (Fowler et al., 1994; Rondal &amp; Guazzo, 2012; Thordardottir et al., 2002).</p> <p>This research study will recruit 6 school-aged children with developmental language disorder (DLD, or kids receiving language services in the schools) and children with Down syndrome to examine the efficacy of using the CATE to select grammar treatment targets. This is the first step in developing novel and more effective approaches for grammar learning for children with language disabilities. If efficacious, this approach has the potential to increase the rate at which children with language disabilities improve their grammar skills, helping them to close the social and academic learning gap between their language ability and that of their typically developing peers. Specifically, the study will evaluate whether the using the complexity approach to select a treatment target is causal to change noted in school-aged children’s ability to use more complex and related simpler morphosyntactic forms.</p> <p>Additionally, this research study provides an intervention schedule that aligns with the schedules and workloads of school based SLPs. If efficacious, it may provide additional resources for SLPs who provide school-based services for children with IEPs targeting language and learning needs (SLI and SLD designations).</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This study uses a multiple baseline design across 6 participants (3 with language disability and 3 with Down syndrome – which includes language disability) to expand upon the De Anda et al. (2020) results by determining whether the treatment is causal to outcomes for school-aged children with DLD and school-aged children with DS. In single subject design, each participant serves as their own control (McReynolds &amp; Kearns, 1983). There are a variety of designs that allow for determining causality of treatment to outcomes. For this study, a multiple baseline design (MBD) across participants will be used. MBD is appropriate to use in cases where the behavior being treated is not considered reversible or when it is undesirable to reverse the behavior. MBD removes the need for a withdrawal or reversal to demonstrate efficacy of treatment. Rather, MBD begins with an A phase, in which baseline data are taken until stability of the target behavior is established, at which point the B phase, or treatment phase, begins. Treatment continues until the behavior meets criteria established a priori for acquisition or for non-effect of treatment. The treatment phase will last between 4.5 and 10 weeks, depending on the participants’ responses to the intervention.</p> <p>In order to establish causality between treatment provision and the outcome, robust improvements on targets across at least three of the participants upon treatment application need to be observed. Causality of treatment is indicated when systematic replication of behavior change is noted in at least three different participants upon application of treatment in order to suggest internal validity of the treatment approach and to suggest causality of the treatment to observed changes in behavior (Kratochwill et al., 2010). Treatment effect is detected through visual analysis utilizing the Conservative Dual Criterion method (Fisher et al., 2003) of the plotted probe data, collected repeatedly throughout baseline, treatment and follow up phases. Specific observations include the level (i.e., mean baseline performance) and trend (i.e., slope of the baseline performance) compared to participants’ use of targeted forms (correct use of “is” and “are” questions) during the treatment phase and how immediate the change in their use of those forms occurred upon application of treatment. Participants will complete no fewer than five baseline probes to determine stability of behavior prior to application of</p>

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	<p>treatment, as recommended per Conservative Dual Criterion (CDC; Fisher et al., 2003) guidelines. To demonstrate causality across participants, the number of baseline probes will be different per participant and balanced across the DLD and DS etiologies. That is, the first participant with DLD and the first participant with DS will each demonstrate stability across five baseline probes prior to application of treatment. The second participant with DLD and the second participant with DS will each demonstrate stability across seven baseline probes, and the third participant with DLD and the third participant with DS will demonstrate stability across nine baseline probes prior to application of treatment. Upon application of treatment, probes measuring performance on treated forms will be administered at the beginning of each treatment session following the first session.</p> <p>Magnitude of changes in behavior observed will also be reported. These are determined by calculating effect sizes using Tau-U approaches suitable for single-case designs (Brossart et al., 2014, 2018; Fingerhut et al., 2021a, 2021b; Parker, Vannest, &amp; Davis, 2011; Parker, Vannest, Davis, &amp; Sauber, 2011).</p> <p>To evaluate the acceptability of the treatment provided, quantitative data collected from the rating scales from participants and their parents will be reported in tables. Qualitative data from responses will be systematically coded and assessed for relevant themes following reported protocols from the literature (Ayala &amp; Elder, 2011; Graneheim &amp; Lundman, 2004; Gresham &amp; Lopez, 1996; Mazaheri et al., 2013; Morris &amp; Bellon-Harn, 2022; Vaismoradi et al., 2016). Once the interviews have been transcribed, a primary coder will read each interview in its entirety to gain a better understanding of the content. A second reading of the transcript will result in identifying meaning units, in the form of quotes from the interviews, that will be placed within a table. Those meaning units will be condensed into summarized meaning units. Then a code, or a short label, that seems to fit the overall idea in the condensed meaning unit is assigned. Next, the different codes are reflected upon and organized into clusters according to their similarities and differences. Labels are assigned to each of the clusters. Finally, the proposed themes are re-evaluated and verified by other parties to ensure that the interpretation is accurate. This will consist of an independent reader going over the transcripts and verifying the meaning units, condensed meaning units, codes, and themes. Synthesized member checking (Birt et al., 2016) will also occur at this stage, in which the parent(s) will be sent a summary of the themes found within the interview data. Participants will be asked if (1) the summary matches their experience, (2) they would like to change anything, and (3) they would like to add anything. Responses will be collected no later than the 6-week post-treatment visit and added to the qualitative data set.</p> <p><b>Describe your research method(s)</b></p> <p>Initial recruitment of participants relies on the successful distribution of informational flyers that describe the purpose of the project to parents of children who may fit criteria for the study. For this study, it is anticipated that speech-language pathologists who serve within the Granite School District share informational flyers with families of children with whom they work that might fit the parameters of the study (language disability with/without Down syndrome and difficulty with using "is" and "are" in questions or sentences). The parents may then return the flyer with an indication (or not) of interest in the study and provide (or not) permission to be contacted by the investigator. This flyer may be returned to the SLP, who then will forward a picture of that flyer to the investigator. Alternatively, the parents may directly contact the investigator to indicate interest in participating in the study. When the parent of a potential participant indicates interest in participating, a time will be scheduled at their convenience to conduct an informed consent process. If the parent provides informed consent, a verbal interview will be conducted to collect the potential participant's diagnostic and speech/language history. Following the collection of assent by the potential participant, pre-treatment and eligibility assessments will be conducted. These will include: a narrative language sample, a standardized grammatical, vocabulary, and speech ability measure, standardized cognitive ability measure (IQ). During this time, the investigator will also collect baseline data for the potential participant's production of auxiliary and copular BE sentence and question forms. Probe tasks will be conducted repeatedly during the baseline phase of the project for a minimum of 5 times per participant. Once performance stability has been established, treatment will be applied for a minimum of 9 and a maximum of 20 therapy sessions. Therapy will be provided by a certified speech-language pathologist or supervised clinical fellow (M.S. completed).</p> <p>Following treatment, maintenance gains will be measured at a period of 2- and 6-weeks post-treatment. These will include the experimental probes used during baseline and treatment phases, as well as a narrative language sample, standardized grammatical skills task, a parent questionnaire, and a parent and participant semi-structured interview regarding the acceptability of treatment.</p> <p>Each treatment session entails 30 opportunities for the participant to produce an auxiliary BE verb in a question format (e.g., "Is the boy running?"). Treatment utilizes manipulatives (e.g., stuffed animals, toy props) to create a short-story vignette in which the participant is presented with a scenario they may relate to (e.g., making breakfast). Thus, the treatment is presented as a naturalistic conversational/play interaction for participants. The interventionist will elicit the targeted BE question from the participant 30 times during the 15- to 30-minute session, using a cueing hierarchy to support production of the targeted form when the participant (a) does not respond, (b) does not attempt the targeted structure (c) uses the wrong auxiliary verb form (e.g., is for are), or (d) produces a question with an omitted auxiliary BE form (e.g., The mouse eating?).</p> <p>The cueing hierarchy consists of three levels of support: (1) repetition of the prompt (e.g., "Ask if the mouse is eating"); (2) provision of a model (e.g., "I'll ask the puppet: Is the mouse eating? Now you do it"); (3) elicited imitation (e.g., "Say 'Is the mouse eating?'").</p>
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	<p>Repeated probing of performance throughout the investigation is a critical part of the experimental design. Changes in behavior will be monitored via repeated probing. If no changes in the targeted behavior are evident following 9 treatment sessions, treatment will be terminated. If changes in the treated behaviors are evident, the observation of change in the untreated behaviors will support continuation of treatment to the maximum of 20 sessions to observe generalization. If no change in untreated behaviors is noted, treatment will cease.</p> <p>The post-treatment phase will include monitoring of linguistic skills through administration of the experimental probes, a narrative language sample, and a standardized grammar assessment at 2- and 6-weeks after treatment was terminated. Additionally, a parent questionnaire and a semi-structured interview with the parent and the participant will occur at the 2-week post-treatment visit to identify aspects of the treatment that were liked and disliked. An adapted version of the Behavior Intervention Rating Scale (BIRS; Elliott &amp; Treuting, 1991) will serve as the parent questionnaire and guide the semi-structured parent interview. An adapted version of the Children’s Intervention Rating Scale (CIRS; Elliot, 1986) will be utilized to guide the semi-structured interview with participants. During the semi-structured interviews, it is critical that the interviewer does not dominate the conversation (Lyons et al., 2022). Therefore, when there is an opportunity to probe for additional information beyond the pre-determined questions, a three-step response, designed to ensure the information is collected by the interviewer in the most unbiased way possible, will be utilized (Ayala &amp; Elder, 2011). First, the interviewer will ensure the comment by the interviewee was accurate by repeating the response. Second, they will provide verbal affirmation (i.e., approval) for the response to encourage the interviewee to provide additional information. Third, the interviewer will seek additional information by (a) asking for more information directly (e.g., “How so?” or “Can you tell me more?”), (b) asking another open-ended question related to the response of the person being interviewed, or (c) remaining silent and waiting for the person to expand upon their response.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>There are four aims for the project. They, and the associated hypotheses or expectations, are described below.</p> <p>1) The primary aim of this study is to determine whether targeting the use of a present tense auxiliary BE question structure (e.g., Is she walking?; Are they dancing?) during a clinician-directed staged cueing intervention (Paul &amp; Norbury, 2012) is causal to acquisition of that structure (80% accurate use in obligatory contexts) among children with DLD (n =3) and persons with DS (n =3).</p> <p>The intervention consists of the use of stuffed animals and a script the interventionist follows to provide a puppet-show style story vignette. Thirty elicitation prompts targeting auxiliary BE questions will be provided for participants, along with a staged cueing hierarchy, to ensure successful production of the targeted form for each elicitation prompt. Regular measurement of participants’ use of auxiliary BE question structure using experimental probes will occur during the baseline, treatment, and post-treatment phases and will be the basis for evaluating Aim One.</p> <p><b>Hypothesis One</b>  Based on outcomes from De Anda et al. (2020), it is hypothesized that treatment targeting the use of auxiliary BE question structure during intervention activities will result in observable treatment gains across at least three different participants, indicating causality of treatment to acquisition outcomes.</p> <p>2) The secondary aim seeks to determine the extent to which treatment of the targeted complex structure (i.e., auxiliary BE questions) generalizes to simpler but related canonical auxiliary BE declarative (e.g., The girls are dancing) and copula BE declarative structures (e.g., The boy is happy) and non-canonical copula BE question (e.g., Are they happy?) forms. Measurement of the untreated forms auxiliary BE declarative, copula BE question, and copula BE declarative structure using regularly administered experimental probes before, during, and after the treatment phase will be the basis for evaluating Aim Two.</p> <p><b>Hypothesis Two</b>  Based upon the complexity framework, which suggests targeting a more complex form will result in gains for related simpler forms without direct treatment, it is hypothesized that training of auxiliary BE questions will result in observable increases in the use of untreated auxiliary BE declarative, copula BE question, and copula BE declarative forms. It is important to note that this generalization outcome would not be predicted by the developmental approach, as it suggests that language behaviors must be taught in a sequential way in order to ensure there are no gaps in learning linguistic skills or forms. An outcome reflecting the hypothesis that generalization effects will be noted would indicate that the complexity approach is indeed a valid approach for use when targeting auxiliary and copular BE verb forms. In other words, it would indicate causality of the treatment targeting auxiliary BE question forms to generalization effects noted in the related auxiliary and copular BE verb forms.</p> <p>3) A tertiary aim will collect information regarding participants’ use of the auxiliary and copular BE verb forms in naturalistic settings before and after treatment. This aim is not part of the experimental design per se, as the experimental design is setup to evaluate whether those forms can be taught in the context of the intervention and associated probes. As a result, this study is not designed to measure whether the treatment itself resulted in increased use of auxiliary and copular BE verb forms in naturalistic settings. However, collection of narrative language samples before and after intervention can indicate the extent to which acquisition of those forms during treatment, evaluated by Aim One and Aim Two, may have transferred to participants’ use of BE verbs forms in naturalistic settings. In other words, this is a way to measure whether the proximal skill of producing auxiliary and copular BE verb forms during probes may extend to a more distal skill of using those forms in narrative contexts.</p> <p>This aim highlights the overarching goal of all language intervention, which is to have the skills targeted in treatment generalize to naturalistic contexts, thus indicating the long-term acquisition and use of the targeted forms has occurred for those who received treatment. It is well-established that treatments that occur within naturalistic contexts take longer for participants to acquire the targeted form, but generalization of those language skills (demonstrated by spontaneous</p>

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	<p>productions) occurs for participants more quickly overall (Camarata et al., 1994; Camarata &amp; Nelson, 1992; Cleave et al., 2015; Gillum et al., 2003; Hughes &amp; Carpenter, 1989). In contrast, treatments that require imitations of targeted utterances show progress in learning targeted forms more quickly but do not generalize to naturalistic contexts very well (Eisenberg et al., 2020). It is recommended that imitation strategies should be utilized initially, with more naturalistic strategies employed as therapy progresses (Cleave et al., 2015; Eisenberg et al., 2020). Although the proposed treatment for the current study is a clinician-based approach with a cueing hierarchy set up to include possible imitations by participants when needed, the story vignette style in which treatment will be delivered sets up the appearance of a more naturalistic conversational and play interaction for participants. It is anticipated that the combination of the imitation-based approach and the naturalistic presentation of targets during the delivery of story vignettes will result in some transfer of the auxiliary and copular BE verbforms to more naturalistic contexts. Therefore, narrative language samples will be collected and analyzed to explore the extent to which participants' use of auxiliary and copular BE forms in a naturalistic context may have improved following application of the intervention.</p> <p>4) The final aim will collect information on treatment acceptability as reported by participants and families. This aim specifically seeks to determine how the intervention will be received by the participants and their families and how well the aspects of the intervention meet their needs. To achieve this aim, post-treatment information will be collected at 2-weeks post-treatment via questionnaires and semi-structured interview to determine the levels of family burden during application of the treatment, the acceptability of treatment delivery for each participant and their families, and whether the participants and families considered the outcomes to make a difference in the language ability of the person receiving treatment (Ayala &amp; Elder, 2011; Shapiro, 1987; Shelton et al., 2020). Questionnaires addressing these issues will be administered to parents post-treatment and semi-structured interviews will be conducted with study participants and their parent(s) on an individual basis post-treatment. Quantitative ratings provided on the questionnaires will be reported in tables. Qualitative data will be reported following analysis using established qualitative methods (Ayala &amp; Elder, 2011; Graneheim &amp; Lundman, 2004; Gresham &amp; Lopez, 1996; Mazaheri et al., 2013; Morris &amp; Bellon-Harn, 2022; Vaismoradi et al., 2016). Specifically, interviews will be transcribed and coded to identify key themes that reflect the extent to which the participants and their parents felt the intervention was acceptable. Summaries of the themes extrapolated from these interviews will be sent to parents for confirmation prior to the 6-week post-treatment visit. Finalized versions of the qualitative data collected from the interviews will be reported in narrative format as part of the dissertation report.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>This project may not directly or immediately benefit Granite School District. This study is an initial test of using the complexity approach for language intervention. However, I expect the results will eventually lead to decreased time in therapy for children with language disabilities. This is important because most children with language disabilities receive most or all of their treatment through the schools. I've also ensured the treatment design/protocol would fit a school SLPs schedule. If it is demonstrated to be efficacious, I expect to share this protocol with SLPs in the future, thus assisting them in providing more effective therapy in the schools, and hopefully reducing their overall workload.</p>



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## Research Applications During the 2022-2023 School Year

### Instrument development for determining high school students’ epistemological and ontological beliefs regarding photography

Investigator: Stanford Maeser

Granite administrator or teacher: No

IRB: Utah State University

Proposal ID: 2022-021-Maeser

**Status: Approved**

Anticipated Start Date: 03/06/2023

Anticipated Completion Date: 05/05/2023

Research classification: Student Learning Strategies [Strategies emphasizing student meta-cognitive/self-regulated learning: Meta-cognitive strategies]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Research indicates that personal epistemology impacts academic success and that domain specific epistemological beliefs are more influential on academic successes than are generally held beliefs. Still, most self-reporting questionnaires designed to assess personal epistemology are general in nature rather than being designed around a specific domain or subject. Also, these self-reporting questionnaires sometimes have problems with validity and reliability, resulting in findings that are hard to replicate and that don’t align with the model of epistemic beliefs that constitutes the theoretical framework of the studies that use such instruments</p> <p>There is also a gap in current literature regarding personal epistemology in the field of photography. The impact of personal epistemology on editing photographs has been studied to some degree, the impact of editing photographs on personal epistemology has not. This is significant due to the ubiquitous nature of photo editing technologies and the sheer number of individuals, especially those of school age, who regularly edit photos.</p> <p>This research addresses a gap in the literature regarding the impact of photograph manipulation/editing on the personal epistemologies and ontologies of high school photography students. The study will document the process used to establish the reliability and validity of two research instruments; 1) an instrument designed to measure participants’ epistemological beliefs regarding the subject of photography; 2) an instrument designed to measure participants ontological beliefs regarding photography. In establishing the validity of these instruments, it will add to existing literature by demonstrating whether student perceptions of photographic reality (personal ontology) and photographic knowledge (personal epistemology) become conceptually more sophisticated, as they learn how to alter photographs and gain in photographic knowledge</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This study will follow a quantitative research methodology and includes a preparatory stage followed by a pilot test stage and a field test stage to establish the validity and reliability of two research instruments, the Photographic Reality Questionnaire (PRQ) and the Photographic Knowledge Questionnaire (PKQ). These instruments are described in detail in the proposal document submitted to USU IRB which is also included in this application.</p> <p>The model of epistemological dimensions which were used to develop these two instruments is the dimensions of epistemic belief developed in 1997 by Hofer and Pintrich. This model proposes that there are four dimensions of epistemological belief which help define an individual’s personal epistemology. For each dimension, there exists a continuum between two extremes with a person’s beliefs about the nature of knowledge relative to that dimension lying somewhere on that continuum. For example, within the dimension of certainty of knowledge, the proposed continuum ranges between fixed and fluid. A person’s beliefs about the nature of knowledge should lie somewhere between the idea that knowledge is fixed or unchanging and the idea that knowledge is fluid or evolving over time. The dimensions that make up the dimensions of epistemic belief model are certainty of knowledge (fixed vs. fluid), simplicity of knowledge (disconnected vs connected), source of knowledge (external vs internal), and justification of knowing (dualistic vs. multiplistic).</p> <p><b>Describe your research method(s)</b> As mentioned above, this study will be completed in three stages: a preparatory stage, a pilot stage and a field test stage.</p> <p><b>PREPARATORY STAGE</b> In the preparatory stage, the necessary details for the subsequent stages will be worked out including scheduling use of computer labs with the school, preparation for administering the instruments via Canvas, recruiting participants, distributing and collecting informed consent forms and student assent forms. Also in this stage, a panel of eight to ten experts will be recruited to provide feedback regarding the two instruments that have been developed for this study. They will be asked to indicate whether they think each of the instruments' items are "essential", "useful but not essential", or "not essential". The panel's responses will be analyzed using Lawshe's method which should demonstrate the ratio of experts who felt each item was essential. Using this method, each item must receive a score of .62 or higher to remain unaltered in the questionnaire to which it belongs. The purpose of this survey is to begin to establish the content validity of these instruments.</p>

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	<p>This panel will also be asked to offer comments and suggestions about the format of the instruments which will help establish their face validity. The experts for this panel will be recruited from high school and university photography instructors as well as personal epistemology experts. They are being asked to volunteer with no compensation.</p> <p>Also in this phase, both instruments will be analyzed using the FORCAST Readability Formula to establish their level of readability. They should both receive a rating somewhere between a ninth and tenth grade reading level. At the end of this stage, changes will be made to each instrument in accordance with the panel of experts recommendations and the FORCAST Readability Formula.</p> <p><b>PILOT TEST STAGE</b>          At the beginning of the pilot stage, a group of 30 to 40 students will be selected as the test group for this stage. Informed consent will have to be obtained from their parents as well as assent from the students themselves. Once the test group is selected and have the necessary permissions, they will, as a group, take the Photographic Knowledge Questionnaire (PKQ) and it's associated response process survey during one of their lunch periods. On a different day, participants will take the Photographic Reality Questionnaire (PRQ) and it's associated response process survey, again during their lunch period.</p> <p>After these questionnaires and surveys are completed, their results will be analyzed. An exploratory factor analysis followed by a confirmatory factor analysis will be performed to align the participants responses with the model proposed in the study's conceptual framework. These analyses should help establish the construct validity of the PKQ and PRQ. Cronbach's alpha will be used to establish the reliability of the PKQ and PRQ. Finally, the response process surveys will be analyzed using a face validity index to determine the face validity of each item on both the PKQ and PRQ.</p> <p>Once these analyses are performed, the results will be examined to see if any item on either instrument needs to be altered or removed to increase that instrument's overall construct or face validity as well as their reliability. If substantial changes appear to be necessary, those changes will be made and the pilot test stage will be repeated with a new test group.</p> <p><b>FIELD TEST STAGE</b>          The field test will be similar to the pilot test stage except that there will not be changes made to the instruments at the end of it. First, a group of 100 to 150 students will be recruited and asked to obtain signed consent and assent forms to participate in the study. Once those permissions are obtained, participants will take the PKQ and the associated response process survey during one of their lunch periods. A few days later, this group will take the PRQ and it's associated process survey again during their lunch period.</p> <p>Once these questionnaires and surveys have been administered, the same analyses performed during the pilot test stage will be performed on these new data sets. Exploratory and confirmatory factor analyses will again be performed to further establish the construct validity of the instruments in question. And again, a Cronbach's alpha will be used to ascertain the degree to which the PKQ and PRQ can be considered reliable. Finally, the process response survey results will be analyzed to create face validity indexes for each item in both the PKQ and PRQ. After these statistical analyses have been performed, the results will be examined and findings will be determined and conclusions drawn in terms of answering this study's research questions and establishing the validity and reliability of the PKQ and PRQ.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>As mentioned, the main goal of this research is to establish the validity and reliability of the PKQ and PRQ as research instruments. However, there is also the possibility that this study can set the groundwork for potential future research with these instruments in which a connection between more sophisticated personal epistemologies and ontologies and higher academic achievement can be demonstrated.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Again, once the validity and reliability of these instruments (PKQ &amp; PRQ) is established, they might be used in future research to demonstrate that more sophisticated personal epistemologies and ontologies are connected with higher academic achievement. Once that is demonstrated, it is hoped that future research might also demonstrate how students' personal epistemologies and ontologies might be intentionally advanced via instructional practices, thereby positively impacting academic outcomes.</p>

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AIR equity initiative: Scholars and leaders awards finding robust equity solutions: Documenting and addressing the advanced course access inequity issue.

Investigator: Peter Coyne

Granite administrator or teacher: No

IRB: AIR Institutional Review Board

Proposal ID: 2022-022-Coyne

**Status: Approved**

Anticipated Start Date: 02/28/2023

Anticipated Completion Date: 04/01/2023

Research classification: Teacher [Teacher-student interactions: Teachers not labeling students]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>The project aims to bring together currently siloed AIR projects that focus on equity in AC enrollment and conduct new analyses that together will accomplish the following four main objectives:</p> <ol style="list-style-type: none"> <li>1. build a more coherent knowledge base about barriers to equitable enrollment in ACs,</li> <li>2. generate evidence of the effectiveness of strategies for increasing equitable enrollment,</li> <li>3. identify Equal Opportunity Schools' (EOS's) promising practices of intervention framework for circumventing or removing barriers to equitable access and success, and</li> <li>4. lay the foundation for a partnership with EOS and a research agenda in this area</li> </ol> <p>AIR has a growing portfolio of projects that examine interventions designed to increase equitable enrollment into ACs in high school. These projects include an Institute of Education Sciences (IES) grant examining the effects of automatically nudging students into ACs and a short-term partnership with Equal Opportunity Schools (EOS) examining its more hands-on district partnerships that identify underrepresented students for ACs and provide schoolwide supports over a three-year period. The proposed project will bring together these complementary but currently siloed projects and conduct new analyses that together will accomplish four main objectives: (1) build a more coherent knowledge base about barriers to equitable enrollment in ACs; (2) generate evidence of the effectiveness of strategies for increasing equitable enrollment; (3) identify EOS's promising practices of intervention framework for circumventing or removing barriers to equitable access and success; and (4) lay the foundation for a partnership with EOS and research agenda in this area.</p> <p>Specifically, to address objectives 1 and 2, the proposed project will use an equity framework to explore access to, enrollment in, and completion of high school ACs using a combination of data from the Civil Rights Data Collection (CRDC) and data collected by EOS and already shared with AIR. To address objectives 3 and 4, the proposed project will examine the impacts and core components of EOS's intervention framework, which is designed to (a) reduce relational barriers to AC enrollment and success that disproportionately exclude minority students and students from low-income families, including teacher and student attitudes, students' sense of belonging, and students' relationships with trusted adults in their school (Erickson et al., 2009; Stanton-Salazar, 2011), and (b) support student success in ACs through culturally responsive instruction.</p> <p>The research is designed to engage Osher, Pittman Young, Smith, Moroney, and Irby's (2020) synthesis of research on adolescents, learning and development, and institutionalized inequities by considering what equity means in relation to thriving and human learning. Specifically, we use Osher and Boyd-Brown's (2021) framework for conceptualizing equity. This framework views equity, thriving, and human learning through individual and collective lenses and situates these terms within phenomenological ecological conditions. Using this framework, the research will explore school-level inequities in access to, enrollment in, and completion of high school ACs using a combination of data from the Civil Rights Data Collection (CRDC) and data collected by EOS to build upon the existing knowledge base of barriers while identifying promising practices to address these barriers. The CRDC is the U.S. Department of Education, Office of Civil Rights' mandatory data collection from all public schools and school districts on key education and civil rights issues. This dataset includes information on school and district characteristics and AC enrollment and completion. EOS developed the Action For Equity (A4E) framework to address barriers to participation and success in ACs among low-income students and students of color. EOS's intervention engages in hands-on district partnerships and schoolwide supports over a 3-year period and takes a multidimensional approach to addressing how factors including students' sense of belonging and teacher bias impact AC course enrollment and outcomes. EOS data includes student-level data on student assets and learning experiences, AC enrollment and performance data, and staff data on teacher perceptions and teaching approaches from over 700 schools in 30 states.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was</p>	<p>The proposed project is designed to engage Osher and Boyd-Brown's (2021) framework for conceptualizing equity by considering what it means in relation to thriving and human learning. This framework views equity, thriving, and human learning through individual and collective lenses and situates these terms within ecological conditions. Equity specifically is reconceptualized as robust equity, which includes inclusiveness, wholeness, sufficiency, high success standards, opportunity, agency, thriving as a measure of success, and multidimensional measurement (Osher &amp; Boyd-Brown, 2021). The proposed research applies robust equity to the domain of education in looking at district factors, school factors, and the</p>

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<p>done, and the data that was collected.</p>	<p>contexts in which students are situated in—namely, course availability within the school and district and other district and school factors (such as a percentage of low-income student enrollment). The research also is designed to consider how people who support the ecological system within which these students are situated may either support or challenge the system, which creates a sense of bias or sense of belonging, and how these factors affect student opportunities in terms of AC enrollment and success.</p> <p>Completion of ACs—such as AP, IB, or dual enrollment—has been associated with better preparation of high school students for college success and greater likelihood of enrolling in and completing a college degree (Gurantz, 2021; Jackson, 2014; Klopfenstein &amp; Taylor, 2009; Klugman, 2013). However, disparities in access to ACs exist between districts, while further inequities in enrollment endure within schools (Price, 2021). Combined, these inequities contribute to a system in which fewer Black, Latino, Native American, low-income, and rural students have access to, enroll in, and complete ACs (U.S. Department of Education, 2016; Davis et al., 2017; Gagnon &amp; Mattingly, 2016; Klugman, 2013).</p> <p>Drivers of inequities in access to and enrollment in advanced coursework differ. Rural districts and schools with low enrollment continue to struggle to provide access to ACs, particularly in districts with high proportions of Native American or low-income students (Gagnon &amp; Mattingly, 2016; Price, 2021), even as access has increased across the country over the past few decades (Kolluri, 2018). Lack of access can be due to a lack of school district partnerships with local colleges that offer ACs, lack of teachers qualified to teach ACs (Price, 2021), or the cost of participation and access to transportation to local colleges (Roach et al., 2015). These challenges may be exacerbated by the distance between the school district and the college.</p> <p>Increased access does not necessarily increase equitable enrollment and may even increase gaps between advantaged and disadvantaged students (Rodriguez &amp; McGuire, 2019). Inequitable enrollment is driven in part by the processes by which students are identified for participation in ACs. Student identification is determined by teacher and counselor recommendations that disproportionately select students from White and higher-income families (Francis et al., 2019; Hamilton et al., 2018; Lewis &amp; Diamond, 2015; McBee, 2006; Peters et al., 2019; Ruiz de Castilla &amp; August, 2018). This disproportionate selection is often driven by teacher perceptions of high school students that directly contribute to inequitable enrollment of underrepresented students (Mickelson &amp; Nkomo, 2012; Tyson, 2011). Further, when teachers possess biases in their perceptions of students from different groups, this disposition can be a factor in cultivating and reinforcing a sense among students and teachers that underrepresented students are not qualified for and cannot succeed in ACs, which also indirectly influences enrollments into ACs (Campbell-Cunefare, 2020; Keller, 2008; Steele &amp; Aronson, 1998). Without a strong, supportive adult-student relationship, students from underrepresented backgrounds may be less likely to be aware of and have access to information about ACs. Culturally responsive instruction and the development of supportive, trusted adult-student relationships have the potential to encourage student feelings of belonging, empower students to self-advocate, and provide valuable access to information on ACs, all of which can increase enrollment of underrepresented students in ACs (Allen et al., 2018; Erickson et al., 2009; Stanton-Salazar, 2011).</p> <p>EOS’s A4E framework is designed to address these barriers to student success in ACs and increase student participation in the ACs that lead to college and career readiness and success (EOS, n.d.) by acknowledging and addressing issues of teacher bias, student belonging, and adult/student relationships in its intervention. The proposed project will generate rigorous research that will both document inequities and use EOS data to provide evidence on strategies to reduce inequities in AC enrollment in high school. The project will build on and extend existing studies with similar goals and will encourage future work for AIR focused on increasing equity in ACs and, in turn, equity of opportunities for which ACs provide advantages, such as enrollment in and success during college.</p> <p>Using a combination of secondary data from the CRDC and EOS and primary data from EOS, the proposed project will answer the following research questions (RQs):</p> <p>RQ1: What school and district factors are related to school-level differences in AC enrollment?</p> <p>RQ2: What are the school-level changes in student AC enrollment and achievement between EOS schools and non-EOS schools?</p> <p>RQ3: How much of a role do teacher bias, sense of belonging, and having a trusted adult play in AC enrollment and achievement among underrepresented students?</p> <p>RQ4a To what extent is the EOS program implemented with fidelity across a sample of schools?</p> <p>b. Has the EOS program led to changes in teaching practices in AP classes?</p> <p>c. What are the facilitators of and challenges and barriers to the implementation of the EOS program?</p> <p>The overall analytical approach for each RQ is summarized in this section, and a detailed description is provided in the 3.5. analysis plan section. To address RQ1, we will use CRDC data from the 2015–16 and 2017–18 data collection cycles to examine school-level differences in AC enrollment. The CRDC is the U.S. Department of Education, Office of Civil Rights’ mandatory data collection on key education and civil rights issues in the nation’s public schools and districts. We will use</p>
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# Granite School District

## Research Applications During the 2022-2023 School Year

CRDC data to examine the school and district characteristics associated with different levels of AC enrollment using a multiple regression analysis. We will conduct the analysis first using the 2017–18 data and then repeat the analysis for 2015–16 data. Even though values may change for individual schools and districts from year to year, we expect that the relationship of these variables to the AC enrollment for high school students nationwide will be stable. Therefore, we anticipate that repeating the analyses with multiple years will enhance the generalizability of inferences.

To address RQ2, we will use multiple waves of CRDC data and EOS data to examine the impacts of EOS’s framework on AC enrollment and achievement. We will measure enrollment as CRDC counts of students taking at least one AP course. We will measure achievement as CRDC counts of students taking (and, when available in the dataset, passing) one or more AP exams. To examine AC enrollment, we will use three waves of CRDC data (2013–14, 2015–16, and 2017–18) for identifying AC enrollment 1 year before schools partner with EOS and corresponding waves of EOS data (2014–15, 2015–16, 2016–17, and 2017–18) for measures 1 year after partnering with EOS. For example, for a school that partnered with EOS in the 2016–17 school year, we will extract AC enrollment from the CRDC data collected in 2015–16 (representing enrollment before partnering with EOS) and from the EOS 2016–17 data (representing enrollment after joining EOS). To examine student achievement in AP courses, which is operationalized as the percentage of students taking the AP exam and receiving a passing score before partnering with EOS, we will use the corresponding EOS data for achievement measures after partnering. For comparing AC enrollment and AP achievement 1 year before and after joining EOS, we will use a Difference in Difference (DID) model, which compares pre- and post-intervention means at a single time point. We will also use propensity score methods to yield a sample of EOS and non-EOS schools that are comparable prior to EOS’s intervention and repeat the analyses for EOS and non-EOS schools.

To address RQ3, we will analyze EOS data using structural equation modeling to examine how core components of the EOS framework (e.g., teacher bias, students’ access to trusted adults and their sense of belonging) contribute to changes in AC enrollment and achievement. Teacher bias is conceptualized as a high scores on teacher equity mindset measures on the EOS teachers’ survey.<sup>2</sup> Access to trusted adults is conceptualized as students naming one or more adults on the EOS fall student survey that they trust for advice.<sup>3</sup> Sense of belonging is conceptualized as three constructs from the fall student survey: culturally relevant curriculum; expectations, feedback, and assessment; and classroom community.<sup>4</sup> We will run the analysis for the majority group in the student sample (e.g., White students) and repeat specifically for underrepresented students (e.g., students of color) to evaluate whether any factors play a significant role, particularly for underrepresented students, taking into account factors such as income status. We will repeat the analysis for each wave of EOS data we have to inspect whether the predictors have similar effects across years.

To address RQ4, we will collect primary data, including teacher attendance logs, surveys, and interview data from a sample of schools that do not have prior experience with EOS’s professional development services. We will collect interview data from AP teachers who participate in the professional development sessions at the beginning and end of the 2022–23 academic year. We will use professional development attendance records to analyze the extent to which the EOS program is implemented with fidelity (RQ4a). We will use teacher responses to the CECB survey to analyze whether the EOS program led to changes in teaching practices in AP classes (RQ4b). We will use interview data to identify supports and barriers to increasing equitable enrollment, students’ sense of belonging, and success in ACs.

**Describe your research method(s)**

**Descriptive Analyses.** Prior to implementing analytic models to address RQs 1–4, we will conduct descriptive analyses to ensure data quality and address the feasibility of subsequent analyses. To address RQs 1 and 2, we will summarize the range of AC enrollment, school characteristics, and district characteristics from the CRDC data. Similarly, to address RQs 2–4, we will summarize the range of AC enrollment and course grades, AP exam taking and scores, as well as school characteristics and district characteristics found in the EOS data.

**Multiple Regression Analyses.** To address RQ1, we will conduct multiple regression analyses using the CRDC data where the outcome of interest will be school-level student enrollment outcomes. School-level covariates will be school characteristics, including school type (e.g., traditional public, charter, special ed), average school expenditures; and school-level aggregates of student-level variables, including percent of female students, percent students of color, percent of students with disabilities as indicated by having an Individual Education Plan (IEP), percent of EL students, and percent of students enrolled year to year as a measure of retention. District-level covariates will also include district characteristics, such as district size. In addition to district-level and school-level predictors, we will add interaction between district and school-level predictors to the model to analyze the contextual effect of schools (e.g., small schools in large school districts). We will also account for residual within-district similarity of school-level AC enrollment, given the nested nature of schools within districts.

**DID Analyses.** To address RQ2, we will use a DID model to compare schools 1 year before and after partnering with EOS. DID analyses compare the outcomes of the EOS group after participation begins with the outcomes of the EOS group before participation and the outcomes of the non-EOS group before and after participation begins. The DID method is suitable because it requires one preintervention mean and one postintervention mean. DID is a useful quasi-experimental design for assessing impacts of an intervention when nonrandomized data prevent the use of randomized controlled trials where any abrupt shift in level at the point of the intervention can be attributed to the intervention. DID designs control for many threats to validity, except for selection bias unrelated to the preintervention outcomes. We will, however, balance this limitation by sampling schools using a propensity score matched control group for student, school, and district covariates.

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SEM Analyses. To address RQ3, we will use structural equation modeling (SEM) to model the effects that teacher bias (as measured by teachers' mindset on equity), having a trusted adult, and student sense of belonging have on AC enrollment and student achievement. The theory of change suggests that EOS strategies will be helpful in increasing student success via changes to teachers' mindset on equity, having a trusted adult, and student sense of belonging. It is unknown, however, how much these factors play a role in student AC enrollment and achievement. We will model the direct effects of student belonging and having a trusted adult on AC enrollment and achievement using SEM, where all three predictors affect the two outcome variables. We will estimate the effects and test them by constructing asymmetric confidence intervals using a bias-corrected bootstrapping procedure (MacKinnon, 2008). We will also evaluate the overall fit of the model using model fit statistics (including RMSEA, CFI, and TLI) and information criteria (including Akaike information criterion [AIC] and Bayesian information criterion [BIC]).

We will conduct a multigroup analysis to examine the comparability of the model estimates for underrepresented students (e.g., students of color). First, we will estimate parameters separately for students of color and White students. Then, we will apply equality constraints to key effects to determine whether the estimates differ significantly across groups. Specifically, we will test equality constraints for the effects of each predictor on AC enrollment and success. We will test the constraints using model comparisons, where we will compare the model fit of the full model (i.e., all parameters freely estimated across groups) to the fit of the constrained model (i.e., equality constraints applied to parameters) using both the likelihood ratio test (significant test indicates constrained parameters differ across groups) and AIC and BIC (smaller values indicate better model fit). We will repeat the analyses using different years of EOS data and compare them across years, similar to the way we compare models for student groups.

Implementation Study Analyses. To address RQ4 regarding experiences implementing the EOS program and fidelity of implementation, we will analyze the data sources shown in Exhibit 3.1, including AP teacher interviews, attendance logs for professional development events, and teacher responses to the CECB survey. We will administer the CECB survey to all AP instructors at 10 sampled schools in fall 2022. We will also conduct 30-minute virtual interviews with a subsample of AP teachers (approximately two) in fall 2022 and spring 2023. Additionally, we will document EOS processes, including its administration of the CECB survey, to provide an overview of each participating school's services, supports, and strategies for creating equitable AP learning environments prior to program implementation. Interview questions will ask about AP enrollment policies and practices, as well as the experiences of individuals participating in the program at school sites. Interview data will supplement the findings of baseline CECB survey data to understand the facilitators of and challenges and barriers to implementation, as well as the resources schools need to sustain the EOS program.

We will qualitatively analyze the interview data to examine the similarities and differences across participating schools; participants' perceptions of the professional development; whether they view the sessions as relevant, useful, and of high quality; and the extent to which the EOS program is implemented with fidelity across schools. This analysis will provide information related to the ways in which the program is implemented across schools. We will analyze attendance logs to determine whether thresholds of acceptable implementation were met. These thresholds will include the number of attendees, types of participants, and activities accomplished, such as developing goals and an action plan for achieving goals.

AIR team members with expertise in qualitative methodology will analyze all implementation study data sources by implementing a rigorous qualitative coding process and content analysis. We will identify an a priori coding structure that will guide subsequent analysis and use NVivo, a qualitative analytical program, to house data files and allow for systematic and consistent coding and reliability checks across analysts. We will produce a set of themes that reflect the range of perspectives and experiences of school staff. We will then create a summary report that highlights the most salient themes and most frequently occurring patterns in the data, as well as diversions from the salient themes within and across schools. These rich descriptions and interpretations of the data will provide feedback to EOS for optimizing program implementation to create more equitable access to and experiences in AP courses.

The research team will work closely with the AIR senior advisor, David Osher, on a robust dissemination strategy that targets practitioners and academicians and creates opportunities to amplify the voices of practitioners. Throughout the 2-year study, AIR will meet with EOS and provide regular updates on progress, data issues, and findings, including our analysis of the CRDC data and implementation study. At the end of Year 1, AIR will present the findings from the CRDC data analysis to EOS at a virtual meeting and in a written brief. At the end of Year 2, AIR will present the impact and implementation study findings to EOS at a virtual meeting and in a written report. These meetings will provide EOS with actionable findings it can apply to its national strategy and programs. Additionally, the meetings will allow AIR to have a deeper understanding of the EOS program and resolve questions that may arise during the study.

During the final quarters of Year 1 of the study, AIR will present the findings from the CRDC analyses at a conference for AP teachers and school and district leaders. The presentation will focus on findings that are actionable and relevant to practitioners. To disseminate and share findings with the educational research field, at the end of Year 2, the team will submit an article to a peer-reviewed journal, such as Educational Researcher or Educational Evaluation and Policy Analysis. We will collaborate with AIR's Communications division to broadly disseminate the findings through AIR's email, website, and social media channels. To further reach key stakeholders, including district and state leaders and policymakers, in the last two quarters of Year 2, AIR will engage in targeted dissemination efforts. We will host a webinar summarizing the findings across sites and leverage EOS's relationship with districts around the country to invite staff to the webinar.

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### Research Applications During the 2022-2023 School Year

	<p>Additionally, EOS and AIR staff will co-present the study findings at the EOS National Symposium, regional convenings, and at EOS-hosted webinars.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>The research team creates opportunities to amplify the voices of practitioners on the ground and will focus on findings that are actionable and relevant to practitioners. Throughout the study, AIR will meet with EOS to provide updates on progress and findings. AIR will also disseminate findings at a conference for AP teachers and school and district leaders; submit an article to a peer-reviewed journal; collaborate with AIR's Communications division to share findings through AIR's website, and social media; and, at the end of the project, host a webinar for key stakeholders, including EOS and school staff and district and state leaders and policymakers.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>The proposed project will examine school and district factors that are related to AC enrollment, comparing schools partnered with EOS to schools that are not. We will investigate the degree to which the A4E framework is a promising approach to reducing teacher bias, improving teacher practices, increasing students' access to trusted adults, and helping create a sense of belonging among underrepresented students. We will also evaluate the degree to which the EOS intervention is consistently implemented and the facilitators of and barriers to its implementation.</p> <p>As a district operating a partner of EOS, insight gained from this research will be used to better the EOS program and, ultimately, the AC enrollment and outcomes of students throughout the Granite School District.</p>



# Granite School District

## Research Applications During the 2022-2023 School Year

### An Exploration of the Process of Implementing Change in Schools.

Investigator: Audrea Neibaur

Granite administrator or teacher: No

IRB: Westminster College

Proposal ID: 2022-023-Neibaur

**Status: Approved**

Anticipated Start Date: 01/01/2023

Anticipated Completion Date: 05/01/2023

Research classification: School [Leadership: Principals/school leaders]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>I am exploring the process of change in public schools. I am looking to find who drives the process of change, and if there are any inhibitors or accelerators in implementing change. I will be observing school board meetings and conducting interviews with persons of interest such as school administrators and the superintendent.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>I am engaging the use of qualitative research in the form of a case study “in-depth description and analysis of a bounded system” (Merriam &amp; Tisdale, 2016 p. 37) of the Legacy School District (Granite School District). I will explore the perspectives of those I believe are people who can have an impact on education: The district superintendent, the members of the school board, and a selected sample of administrators. I have chosen to take a purposeful sampling as I aim to “discover, understand, and gain insight and therefore must select a sample from which the most can be learned” (Merriam &amp; Tisdell, 2016 p. 96). In exploring their perspectives, I want to better understand the process of making change, and if concerns are what guide the making of changes. I want to know how concerns are shared and processed. I am taking a qualitative approach in order to gain the perspective of those viewed to be the enactors of change in education. The information I can get from an individual or group of individuals who are directly involved, will help me to start from the ground up in analyzing the process instead of taking the direction of looking at a problem and dissecting it for solutions. I am looking at the process because it is what drives change or the lack of. Thus, my research question is:</p> <p style="padding-left: 20px;">What are drivers in the process of change in a large, urban school district in the United States?</p> <p><b>Describe your research method(s)</b></p> <p>Participants will be those I believe to have an impact on school change. This includes school board members, the superintendent, an a select sampling of school administrators in the Legacy School District ( Granite School District - the name is changed for the privacy of those I hope to collect data from). I will reach out to them through publicly available contact information to invite them to participate. An estimate of 16-40 adults of ages 25+ will be interviewed. The Legacy School District has been chosen for two primary reasons. Its enrollment population is in the top 60 in the United States (Niche, 2022b). Further, the demographics of those in the district make it the second most diverse district in the state, and in the top 300 for diversity in the country (Niche, 2022a). This choice was made in order to solicit a range of opinions, which I hope will allow the data I collect to be applicable to a larger portion of school districts in the United States: this is referred to as Maximum Variation Sampling (Merriam &amp; Tisdell, 2016). In attempt to get the most variation, the school administrators I have selected to contact were chosen to have a sampling of individuals at non-title one, and title one schools with at least one of each from the three different grade groupings of Elementary, Junior High School, and Highschool. I have also selected at least one male identifying administrator and one female identifying administrator for each grade grouping, and one administrator holding a doctorate from each grade grouping in my sampling for maximum variation (Merriam &amp; Tisdell, 2016).</p> <p><u>Process of Gathering Participants and Interviewing</u></p> <p>I’ll recruit potential participants by contacting them through their work phone (which is publicly available contact information) for the chosen education professionals and set up a date, time, and place to meet that is convenient for parties involved in the interviewing process. If this is unavailable, I will send an e-mail. I will then invite interested participants to interview in a convenient location and enact the interview protocol based on their role in the school district.</p> <p><u>Consent Form:</u></p> <p>The consent form will be sent over email or given in person to the interviewee prior to the scheduling of the interview. If the interviewee is contacted over e-mail to start with, the consent form will be included with the other documents detailing my research outline as in my chapters one, two, and three.</p> <p><u>Research protocol for data collection and analysis</u></p> <p><u>Detailed (when, where, how) data collection protocol:</u></p> <p>Data collection will be done at a convenient time and place as determined by the interviewer and interviewee, for an in-person interview, or an online interview through Microsoft Teams or Zoom.</p>

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## Research Applications During the 2022-2023 School Year

	<p>Data will be recorded and collected through audio recording on a recording device, a back-up audio recorder via the interviewer’s cellular device on a recording application and note taking during the interview with permission from the interviewee. When meeting online either over Zoom or Teams, the interviewer will take notes and record video, audio, and a transcription with permission from the interviewee with options to exclude any individual method, combination of methods, or all recording methods. Both the Teams and Zoom platforms will be available at the convenience of the interviewee as the interviewer has access to and is well versed in both platforms.</p> <p>After the interview, the interviewer will apply the method of jotting down everything they can remember after the interview is complete for a wholistic collection of data. The jottings will help to highlight pieces of information from the interviews and record observations of things like language patterns and possibly the feelings of the interviewee as they were answering questions. Jottings may compare the interviewees responses to the responses from other interviews as many of the questions that are planned to be asked will be the same for all interviewees with little variation in addition to some questions specific to particular interviewees.</p> <p>Data collection will also occur through the observation of six to 10 school board meetings of which the co-researcher will take notes on. Notes will be separated into categories that follow proceedings to organize the process across the different meetings. These categories may be:  Introduction of board members and important guests or helpers  Acknowledgements of achievement  Board member approval for official process requiring approval  Discussions around change  Community member questions and or concerns  Teacher questions and or concerns</p> <p><u>Data analysis:</u>  All interviews will be transcribed immediately following the interview through notes taken by the interviewer. I will begin analysis by first going through the notes and other information collection methods such as the after-interview transcription and developing a potential list of codes through a process known as emergent coding (Saldaña, 2009). With each subsequent interview, I will continue to revise this list of codes until all data is gathered. Once data collection is finalized, I will code the data with the finalized coding framework, which will consist of process codes, descriptive codes, and in vivo codes that capture the essence of participants’ iterations. Through this process of coding, I will be able to identify patterns and themes that arise from the data and ensure that the assertions I make are fully warranted.</p> <p><u>Data Storage: how to maintain confidentiality</u>  All typed material will be stored on a password-protected computer, in a file on that computer that will be backed up on the One Drive. I will have a flash drive with a copy of all typed material and online collected data to provide backup in the event that the computer is lost, stolen or damaged, or I lose access to One Drive. The flash drive, hand-written field notes, voice recorders, consent forms, and any participant information will be kept in a locked box in my personal residence.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>I am expecting to uncover the roles individuals in the system take in making changes in schools, whether this be adding or taking something away. I am anticipating the finding of something that inhibits or accelerates the abilities of individuals to make change. I anticipate finding somewhere in the process of change where we can better support the individuals involved.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>My research could provide some much-needed insight into the process of making changes and how the system operates. Insight that could help us see where the system needs to be re-oriented or improved on so that education professionals can begin to make needed changes. This is why the research will be examining the process, and how individuals are involved in making changes. In this I will be contributing to and building on the current body of knowledge and research in an attempt to improve our public school systems in a way that benefits students and education staff. The specific benefits I predict include making the system more efficient, collaborative; in a way that will better inform others about how they can support each other in their roles, and more conducive to a positive work environment for staff and a positive learning environment for students.</p>

**Granite School District**  
 Research Applications During the 2022-2023 School Year

Teaching function-based assessment and intervention skills to behavior support staff using an interactive computer training.

Investigator: Megan Graul  
 Granite administrator or teacher: Yes  
 IRB: Utah State University  
 Proposal ID: 2022-024-Graul

**Status: Approved**

Anticipated Start Date: 03/10/2023  
 Anticipated Completion Date: 08/01/2023

Research classification: IDEA [Emotional Disturbance]

Requested research results on:

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>Behavior support staff (BSS), including paraprofessionals, behavior technicians, and other entry-level school staff that support students with challenging behavior, play an essential role in public education settings, especially in special education classrooms. With the increasing number of students requiring intensive behavioral supports, it is imperative to identify cost-efficient strategies to provide adequate training to expand the behavioral skills of these individuals. For instance, training BSS to implement empirically supported behavioral strategies, such as functional behavior assessment and function-based intervention selection, may have benefits for both staff and students alike. Therefore, in the proposed study, we will evaluate the effects of an interactive computer training (ICT) that includes slides with recorded narration, video modeling, embedded skill practice opportunities, and periodic assessments. To do so, we will train three to five entry-level BSS working in a public school district in function-based assessment and intervention-selection skills. We will use a multiple baseline across participants design to assess the effects of the ICT on BSS's accurate collection of descriptive (antecedent-behavior-consequence, ABC) data from brief video scenarios, analyze descriptive data from completed ABC data charts, and select appropriate function-based interventions to address problem behavior. Prior to baseline sessions and following mastery-level performances in post-training assessment sessions, we will also conduct generalization probes to assess whether the skills trained in the ICT generalize to longer videos with multiple instances of student problem behavior, that more closely mimic natural classroom settings where skills would be used. At the end of the study, participants will complete a modified social validity questionnaire to assess the general acceptability of the training procedure as well as the utility of the skills targeted.</p> <p>The purpose of the proposed study is to examine the effectiveness of an ICT on functional behavior assessment and intervention selection skills for entry-level employees supporting students with high-intensity behavior support needs in public education settings. This study seeks to replicate and extend previous ICT research designed for general education teachers (Griffith et al.) to teach entry-level school staff (e.g., paraprofessionals, behavior technicians, and other school employees that provide direct support to students with challenging behavior) to collect ABC data, identify functions of behavior, and select an appropriate function-matched intervention. Thus, the research questions in the present study are:</p> <ol style="list-style-type: none"> <li>1. To what extent does the ICT increase participants' accuracy collecting ABC data from brief video scenarios, identifying functions of problem behavior from completed ABC charts, and selecting appropriate function-based interventions, as measured by a percentage correct composite score per assessment session?</li> <li>2. To what extent will the functional assessment and intervention skills generalize to longer videos that more closely mimic real-world assessment conditions, as measured by a percentage correct composite score per generalization probe session?</li> <li>3. What are participants' perceptions of the acceptability and applied utility of the ICT used in this study, as measured by a modified social validity questionnaire?</li> </ol>
<p><b>Describe your research method(s).</b>          Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The effects of the training protocol will be evaluated using a single-case research design (i.e., small-n experimental design), specifically, a multiple baseline across participants design (Cooper et al., 2007; Kazdin, 2011). Use of a single-case experimental design where participants serve as their own control (i.e., baseline condition) eliminates the need for a larger sample size as is typically required in group design research. Instead of examining the performance of many participants, repeated measures of performance are collected prior to and following training (Cooper et al., 2007; Kazdin, 2011) for each participant. In accordance with the multiple baseline design logic, each participant will experience a different number of baseline assessment sessions before completing the interactive computer training and the first participant's post-training performance will be assessed before the training is implemented with subsequent participants. Experimental control will be demonstrated if each participants' performance only improves once the training is introduced and not before. Staggering the introduction of the training intervention in this manner will also help to control for the effects of repeated exposure to experimental procedures and stimuli.</p> <p><b>Describe your research method(s)</b>          We will recruit participants via electronic flyer. In an introductory email, we will send the flyer and the informed consent document to administrative representatives of the district (e.g., special education department directors and principals). In this initial email, we will request that district and school administrators distribute the recruitment flier to newly hired</p>

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	<p>employees whose primary role is to support students in special education settings. Administrative representatives will be emailed up to three times, one week apart, through publicly available email addresses. Email communications with potential participants will only be sent to individual recipients to prevent replies to anyone other than the research team.</p> <p>A printed version of the recruitment flier with tear-off contact information slips will also be posted on bulletin boards at the district office and in school building faculty rooms. Recruitment may also occur via word-of-mouth, amongst individuals in the community. The research team will also send the electronic flyer to colleagues in the educational community who are regularly in contact with entry-level behavior support staff.</p> <p>Upon initially hearing of the study via one of the channels described above, behavior support staff will contact the PI or lead student researcher by phone, text (student only), or email to express their interest in participating. Upon this contact, the researcher will provide a brief overview of the study requirements and the anticipated duration of participation as well as the informed consent materials. Questions about prospective participation in the study will be answered via email, phone, or in person, in a private setting. Prospective participants recruited from Granite School District will be offered the option to complete a portion of their initial new-hire training by participating in the study or by participating in the standard, in-person, multi-day training currently provided to all new entry-level district behavior support staff. Again, we will inform all potential participants that participation is voluntary and will have no impact on evaluations of their job performance.</p> <p>Up to \$100 in Amazon gift cards will be provided as an incentive for participation, with half of compensation (\$50) contingent on completion of all phases of the study. Participation may be terminated prior to completing all experimental phases if a participant voluntarily elects to end their participation early, if they score 70% or above during the baseline generalization probes, or if they score 70% or above across two or more of the final three consecutive baseline assessment sessions prior to training.</p> <p>If participation is terminated prior to completing all experimental phases, the participant will be eligible to receive partial compensation (\$50). Participants who are terminated before completing all study phases will receive their compensation upon termination. The remaining incentive (\$50) is contingent on completion of all phases of the study. Therefore, participants who complete all phases of the study will receive \$100 gift card in a lump sum, after participation is complete.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>We expect that during the baseline condition, all participants will demonstrate low to moderate levels of performance, with varying degrees of variability. Such a result would align with prior research suggesting that most people without formal training in function-based assessment cannot accurately collect ABC data, analyze those data, or select function-based interventions. Following the training, we expect participants will demonstrate increased accuracy in collecting ABC data, identifying functions of behavior from completed ABC charts, and selecting appropriate function-based interventions. We also anticipate that participants will effectively generalize these skills to the longer generalization videos that more closely mimic real-world assessment conditions by describing the problem behavior in the video in an ABC format, correctly identifying the function depicted, and selecting three appropriate interventions following completion of the ICT.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Behavior Support Staff (BSS), play an essential role in public education settings, especially in special education classrooms. Unfortunately, the percentage of students with disabilities served under IDEA is increasing at a greater rate than the number of support staff being hired and sufficiently trained (U.S. Department of Education, 2021). BSS typically undergo less formal education compared to the teachers they support and are rarely provided the necessary training to effectively implement the expected evidence-based practices (Riggs &amp; Mueller, 2001; Pindiprolu et al., 2007; Walker, 2017). Past research suggests a lack of training regarding job responsibilities, especially when supporting students with complex needs, often leads to increased rates of burnout and high turnover in these entry-level positions (Garwood et al., 2017; Mason et al., 2020). With the increasing number of students requiring intensive behavior support (McCulloch &amp; Noonan, 2013; Walker &amp; Snell, 2017), it is imperative to identify cost-efficient solutions to provide adequate training to these individuals so that, in turn, they can more effectively address student needs. Therefore, participation in this study may directly benefit BSS by providing access to training they may have not otherwise received. This study may also help researchers learn more about how to effectively and efficiently train behavior support staff in additional behavior analytic strategies.</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

Supporting the development of a data-driven student to improve reading growth.

Investigator: Emily Gerdes

Granite administrator or teacher: Yes

IRB: Southern Utah University

Proposal ID: 2022-025-Gerdes

**Status: Approved**

Anticipated Start Date: 01/15/2024

Anticipated Completion Date: 03/15/2024

Research classification: Teaching Strategies [Strategies emphasizing feedback: Feedback]

Requested research results on:

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	The problem that I will address in this study is that my second-grade students are unaware of how their reading data represents grade level proficiency and adequate growth. The purpose of this study is to equip students with the skills necessary for them to use their own data to evaluate their own progress. Each week I will progress monitor my students' reading and allow them to track their own data using visual, numerical, picture graphs. I plan to answer the question: What effect would there be to having students track their own data? The hopes in providing my students with the skills necessary to become a data-driven student is to improve their reading proficiency.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	I will be using my students' reading data and end of the year reading goal. Each week I will progress monitor my students. After assessing them on their fluency, accuracy, and comprehension, each student will track their own data. After each time they are progress monitored, my students will answer questions that will measure their understanding of how their data represents grade level proficiency. At the end of the eight-week study, each student will answer two qualitative reflection questions. I will use all data sets to analyze which students are on track to reach their goal. Additionally, I will analyze my students' confidence in their ability to reach their end of the year reading goals.  <b>Describe your research method(s)</b> Before conducting my research, I will send home permission slips with each child. Parents must sign and return these papers to school if they would like their child to participate in the study. This research study will be conducted in an eight-week time period.
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	I am anticipating that the majority of my students will be on track to meet their end of the year reading goal by the end of this eight-week study. Additionally, I anticipate that my students' overall confidence in reading will improve due to understanding their reading data.  <b>Results: [insert here]</b>
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	Supporting the development of a data-driven student to improve reading proficiency will be a benefit to Granite School District. If my anticipated results are accurate, more students will reach their reading goals, and become more confident readers. The result of this will not only benefit elementary schools and their testing data, but secondary schools too, as these data-driven students advance throughout their education in the Granite School District.

# Granite School District

## Research Applications During the 2022-2023 School Year

### Sun protection knowledge and habits in elementary school students

Investigator: Hailey Graviet

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-026-Graviet

**Status: Denied**

Anticipated Start Date: 05/20/2023

Anticipated Completion Date: 06/01/2023

Research classification: Not applicable

Requested research results on: Not applicable

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>We are trying to gauge students' understanding of sun protection before and after a lesson on skin protection as well as their behavioral changes in protecting their skin from the sun. We will be initiating a program that consists of small group activities to teach about sun protection. We want to investigate whether or not these activities help students retain information about how to protect their skin and if they start wearing sunscreen and protective clothing more often.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>We will be visiting classrooms at various elementary schools to teach students about how to protect their skin from the sun. We will have the students complete a pre-survey and then have them participate in various small group activities to teach them basic sun protection principles. We will then have the students complete a post-survey about one week after the presentation. The main questions that we are looking to answer are:</p> <ol style="list-style-type: none"> <li>1. Do students wear sunscreen often? Do they know that they are supposed to wear sunscreen often?</li> <li>2. Do students wear hats or long sleeve shirts to protect themselves from the sun?</li> <li>3. Do students know that they need to monitor their skin for changing moles/new spots?</li> <li>4. Are students more likely to wear sunscreen and protective clothing after being taught about it?</li> </ol> <p>We will upload the data from the pre- and post-presentation surveys and analyze it through Excel to look for any trends/changes in knowledge and behavior.</p> <p><b>Describe your research method(s)</b> We will recruit participants by reaching out to teachers at <u>Morningside Elementary</u>. Classes will participate in the activities and surveys if the teachers agree to have us visit. There have been 4 teachers at Morningside Elementary that have already expressed their interest in having their students participate. The data collection will be on a voluntary basis as each student will be able to decide if they want to fill out the pre- and post-presentation surveys.</p> <p>We will start these school visits/activities towards the end of May. The pre-survey will be given right before the activities and the post-survey will be given about one week after the activities but before the students start their summer breaks.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>We are anticipating that very few students will know how often they should be wearing sunscreen and protective clothing. We are also anticipating that very few students will already be in the habit of wearing sunscreen often. After our activities, we anticipate that the majority of students will be able to remember how often they should be wearing sunscreen/protective clothing and checking for new/changing moles/spots on their skin. We also anticipate that more students will wear sunscreen/protective clothing after participating in the activities.</p> <p><b>Results: [insert here]</b></p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Our research will benefit Granite School District by helping students, parents, and teachers become more aware of the importance of protecting children's skin from the sun. Our research will also help students develop healthy habits that will help prevent them from getting sun burns while on their summer breaks as well as skin cancer in the future.</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

A focus on statewide school breakfast

Investigator: Lori Spruance

Granite administrator or teacher: No

IRB: Brigham Young University

Proposal ID: 2022-027-Spruance

**Status: Approved**

Anticipated Start Date: 04/01/2023

Anticipated Completion Date: 05/30/2024

Research classification: Home [Family resources: Socio-economic status]

Requested research results on:

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	The aim of this project is to empirically examine the contributors of an evidence-based policy-driven practice to implementation and improved outcomes for children, who participate in school breakfast programs. Specifically, this study aims to identify the adoption rates, stages of implementation of a new statewide breakfast alternative policy, and the determinants (supports and barriers) to adoption of this new policy. This study will use a unique series of validated implementation-focused measures and processes for understanding. This study anticipates identifying scores of feasibility, acceptability, and appropriateness of the school breakfast programs gathered from key stakeholders including leaders (principals and food service directors) as well as teachers.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p>A sequential mixed methods design, of a quantitative study followed by qualitative study, will be used to answer the research questions and will include triangulation of the different data sources to increase understanding of the phenomena and added validity, which are noted rationale for using mixed methods research, particularly when addressing implementation-related issues.</p> <p>The sample for the interrupted time series will be all schools within the state of Utah that qualify for school nutrition programs according to federal guidelines. The first step of the research design involves examining existing state data sources of the alternative school breakfast programs to gather an overall picture of demographic characteristics, program participation, and baseline adoption rates of the alternative breakfast program through descriptive statistics. Once preliminary findings on trends and impact of the policy are identified, follow-up qualitative data will be gathered via semi-structured interviews through intentionally developed interview questions that gather both inductive and deductive data on potential determinants (supports or barriers) related to the adoption of the alternative breakfast program. Qualitative content analysis will be utilized to analyze the data as part of a rapid review process. Coding will occur using Atlas TI software for increased accuracy with coding and reliability processes. Member checking (checking with field experts/research partners), audit trail with memos about code development by all reviewers, and triangulation of methods (mixed methods) and data sources in the study will be used to strengthen the validity of findings.</p> <p><b>Describe your research method(s)</b></p> <ul style="list-style-type: none"> <li>A) Participants will complete a Qualtrics survey prior to a qualitative interview. The Qualtrics survey will be used to indicate demographics within the study sample.</li> <li>B) We are asking participants to participate in a qualitative interview.</li> <li>C) Qualitative interviews will take place from January 2022-May 2024.</li> <li>D) Participants will be asked to complete one interview that will take approximately 45 minutes.</li> </ul>
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	<p>Hypotheses include: 1) Adoption rates prior to the policy implementation will be low based on previous research identifying the barriers to implementation from prior efforts to scale up the alternative breakfast program. We also hypothesize that the adoption rates will increase to moderate levels after the implementation of the state policy. In addition, adoption rates will be lower in rural versus urban school districts due to differences in resources and supports. Last, adoption rates will be highest in the Y1 first wave of schools due to the highest level of need and lowest in the Y3 last wave of schools due to lowest level of financial need. 2) Schools will have, on average, low proportion scores for number of implementation stages completed and that feasibility will be rated as low to moderate on average by schools. Qualitative semi-structured interviews will reveal a variety of determinants (barriers and supports) to implementation of the alternative school breakfast program. 3) We hypothesize that there will be a positive relationship between school leaders (reports of feasibility, acceptability, and appropriateness) and the proportion scores of stages of implementation completion with school leaders who view the program as more feasible being related to higher proportion scores for implementation completion.</p> <p><b>Results: [insert here]</b></p>
<b>Benefit to Granite School District.</b> Describe how your research will benefit	This study will utilize the information found to inform and result in a tailored Stages of Implementation Completion (SIC) tool, specific to the implementation of alternative school breakfast programs. The tailored SIC would be used in a future randomized trial aimed to improve adoption and implementation related to school breakfast programs. SIC adaptations have been utilized in a variety of settings to improve both levels of implementation completion (e.g. improved quality and



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## Research Applications During the 2022-2023 School Year

Granite School District.	levels of use of the evidence-based practice) as well as improved sustainability. Granite School district will be able to utilize this tool in the future implementation of school breakfast programs.
Schools requested	Academy Park School, David Gourley School, Granger School, Granite Park Jr High, Hillsdale, Arcadia School, Beehive School, Bennion Jr High, Bennion School, Bonneville Jr High, Copper Hills School, Cottonwood High, Cyprus High, Douglas T. Orchard School, Eisenhower Jr High, Elk Run Elementary, Granger High, Granite Connection High, Granite Connection High, Hartvigsen School, Hillside School, Hunter Jr High, Hunter School, Jim Bridger School, John C. Fremont School, John F. Kennedy Jr High, Kearns High, Lake Ridge School, Lincoln School, Mill Creek School, Pleasant Green School, Robert Frost School, Rolling Meadows School, Scott M Matheson Jr High, Silver Hills School, Thomas W. Bacchus School, Twin Peaks School, Valley Jr High, Whittier School, Jackling School, James E. Moss School, Kearns Jr High, Lake Ridge School, Lincoln School, Magna School, Monroe School, Philo T. Farnsworth School, Pioneer School, Plymouth School, Redwood School, South Kearns School, Stansbury School, Taylorsville School, West Kearns School, West Lake Jr High, Western Hills School, Woodrow Wilson School

What will my friends think? Exploring factors preventing the use of non-campus teen center

Investigator: Steven Thomsen

Granite administrator or teacher: No

IRB: Brigham Young University

Proposal ID: 2022-028-Thomsen

**Status: Approved**

Anticipated Start Date: 03/30/2023

Anticipated Completion Date: 04/07/2023

Research classification: Home [Family resources: Socio-economic status]

Requested research results on: Not applicable; selected schools declined their participation.

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>This survey research study is being conducted by undergraduate students enrolled in a research and measurement course at Brigham Young University in behalf of The Policy Project, a 501c3 (nonprofit) that focuses on finding systemic solutions to problems faced by the growing number of economically disadvantaged and unhoused students in Utah’s high schools. Data indicate that more than 15,000 Utah students are unhoused and nearly 1 in 3 students qualify to receive free and reduced lunches. In response, The Policy Project has worked with the recent Utah Legislature session to appropriate funds from the state’s budget surplus (that would be combined with funds from private donors, foundations and grants) to assist in the development and conversion of space in Utah high schools to create Teen/Wellness centers that might include food pantries, laundry facilities, and shower facilities.</p> <p>The goal is to help students who might not otherwise have access to these resources in their homes, or who may be homeless, as well as all other students attending the school. The Policy Project is currently meeting with superintendents around the state to help support and foster these programs. Of concern is the possibility that the students who are most likely to need and benefit from these facilities might fail to use them due to embarrassment and stigmatization. As a result, the current study seeks to understand general student attitudes toward these types of resources, to identify the factors that might be the most predictive of their use, or non-use, and to understand the best approach to creating a campus-wide conversation and culture of support. The first stage of this study involved conducting several student focus groups at three Utah high schools, including Cottonwood High School. These focus groups were insightful and were used to shape the second stage of the study—a Qualtrics survey for a broader section of high school students. Our hope is to have at least 400 high school students complete the survey during March or April. Partnering with the Granite School District to administer this survey would be impactful because of the diversity of your student body and the strong culture of self-advocacy already established within many of its schools.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This would be a one-time cross-sectional survey that would explore student opinions and attitudes toward the use of Teen Centers which would include food pantries, laundry facilities, private showers, and study/tutoring/mental health assistance resources. We will measure key predictive variables that include school culture/acceptance, normative beliefs, outcome expectancies associated with use of the resources, potential barriers of use, behavioral (use) intentions, and possible stigmatization associated with use.</p> <p><b>Describe your research method(s)</b> The survey would be administered during March or April 2023. Time to complete the survey is estimated at approximately 15 minutes. The survey will be taken online via a link to Qualtrics (students can complete the survey using a personal computer or cell phone). Home room teachers will be asked to send a message to the students' guardians (on paper or via email) that will be drafted by the researcher. This message will include the link to the online consent form. The researcher will compile the digitally signed online consent forms. We are asking that the teachers allow 15-20 minutes during home room time for the students to go online (via phone, tablet or computer) to complete the survey. All respondents will remain anonymous, and the analysis and results will be reported in aggregate only. Our goal is to collect data in late March or early April, to compile the summary data immediately, and report our findings (the final use of the data) to the Policy Project in mid-April.</p>

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>Our questions were designed using the Theory of Planned Behavior, which posits that behavior (in this case, use of a Teen Center) is best predicted by behavioral intentions, which in turn, is predicted by a combination of normative beliefs (based on school culture and students beliefs about the acceptability of such a center), outcome expectancies (both negative and positive opinions associated with the actual behavior), and constraints (real and perceived psychological and physical barriers that would prevent the behavior, i.e., use of the facility). Our goal is to help the Policy Center and school officials understand how students are likely to respond to a Teen Center at their school. We want to help them best understand how to maximize the use of these resources, particularly for those with the greatest need.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>As noted in the previous response, our goal is to help the Policy Center and school officials understand how students are likely to respond to a Teen Center at their school. We believe that the Granite School District, as well as all other school districts in the state, will benefit from the findings of this study by discovering appropriate ways to better discern and respond to student needs and, in turn, by providing resources that will help improve student physical and emotional well-being. Study results will help guide districts that have invested significant resources in Teen Centers to ensure the maximum utilization of offered services by students in need.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Home room teachers will be asked to send a message to the students' guardians (on paper or via email) that will be drafted by the researcher. This message will include the link to the online consent form. The researcher will compile the digitally signed online consent forms. We successfully used this system to obtain parental/guardian permission for the focus groups conducted in the first stage of this study.</p> <p>Please note (this is in reference to the required documents) that because this is a class project (BYU, Communications 318) that will not be published (internal use by the Policy Project), it was consider "exempt" and does not require BYU IRB approval.</p>
<p><b>Schools requested</b></p>	<p>First choice: Cottonwood HS (has already expressed interest in participating). Hunter, Granger, and Kearns, if possible.</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

### School leadership and secondary student science outcomes

Investigator: Erin Gillies

Granite administrator or teacher: Yes

IRB: University of Utah

Proposal ID: 2022-029-Gillies

**Status: Approved**

Anticipated Start Date: 04/01/2023

Anticipated Completion Date: 05/31/2023

Research classification: School [Leadership: Principals/school leaders]

Requested research results on: 08/15/2023

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>The study aims to identify what administrative teams can do to best support their science teachers in creating an environment for student growth. I will be focusing how, if at all, school administrators are supporting their science faculty members in demonstrating student growth as measured by the Utah Aspire Plus and implementing SEEd standards. Data collection includes interviews with administrative teams and teacher focus groups to gather perspectives of leadership and support in regard to science education.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>I will be comparing historical Utah Aspire Plus science outcomes, teacher MGP on the science portion of the Utah Aspire Plus, and perspectives of administrative teams and science faculty. Utah Aspire plus data is used as a descriptive aspect of the research. Perspectives will be gathered during 45-60-minute semi-structured interviews with members of the administrative team that work with the science faculty. 60-minute focus groups will be held with science faculty to discuss leadership support and implementation of SEEd standards. Data gathered during interviews and focus groups will be transcribed and analyzed for emerging themes through ongoing coding using NVIVO.</p> <p><b>Describe your research method(s)</b> High schools that have had the same administrator for 3 or more years will be invited to participate in the study, with the goal of including 3-4 schools. Science teachers of 9th and 10th-grade students, the grades tested by the Utah Aspire Plus, will be invited to participate in focus groups with the goal of including a minimum of 3 teachers per school site. Focus groups and interviews will be semi-structured with an established list of questions to guide the conversation. Follow up interviews or conversations may take place to clarify information. Interviews will be recorded, transcribed, and coded using NVIVO.</p> <p>Timeline: April- Conduct Interviews and Focus Groups. Begin coding May- Conclude data collection (i.e., initial interviews/focus groups and follow up conversations) and data analysis</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>I am hoping to identify leadership characteristics and/or strategies that provide science faculty with the needed support to improve the science identity formation of students and thus, demonstrate of growth in the science portion of the Utah Aspire Plus.</p> <p><b>Results: [insert here]</b></p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>If I am able to identify characteristics and moves of school leaders that increase the science growth of secondary students, then we may be able to generalize effective practices to other high school leaders. Science-specific training and support could be provided to replicate successful science outcomes in additional schools.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Not applicable</p>
<p><b>Schools requested</b></p>	<p>Cyprus High School, Taylorsville High School, Skyline High School, Hunter High School, Olympus High School</p>

# Granite School District

## Research Applications During the 2022-2023 School Year

### Creating a formal mentoring program for veteran teachers: A qualitative descriptive study

Investigator: Amy Johnson

Granite administrator or teacher: Yes

IRB: Grand Canyon University

Proposal ID: 2022-030-Johnson

**Status: Approved**

Anticipated Start Date: 09/01/2023

Anticipated Completion Date: 11/30/2023

Research classification: School [Leadership: Collective teacher efficacy]

Requested research results on:

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	The purpose of this qualitative descriptive study is to explore how elementary school veteran teachers in Utah school districts would describe a formal mentoring program as it influences their teaching and school climate. New teachers are mentored for their first three years in formal mentoring programs, but then support lessens. This study seeks to find how veteran teachers feel how their teaching and school climate would change if there was a formal mentoring program in place. Interviews and focus groups will be used to collect data.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p>This study will have two main research questions.</p> <p>RQ1: How do veteran elementary school teachers describe the career function of mentoring, through peer coaching and professional exposure, as it influences their teaching and school climate?</p> <p>RQ2: How do veteran elementary school teachers describe the psychosocial function of mentoring, through building relationships and counseling, as it influences their teaching and school climate?</p> <p>The researcher will use interviews and focus groups in order to obtain this information. After the interviews and focus groups are completed, the researcher will use thematic analysis to find common themes.</p> <p><b>Describe your research method(s)</b></p> <p>After permission from the district and Grand Canyon University is granted, the researcher will be emailing principals with information about the study. Grand Canyon University first wants district site approval before going through their IRB process. The information will be in a flyer. On the flyer, it will give instructions to those interested on how to participate. The participants must be elementary school teachers who have taught for more than 5 years. Those interested in participating will reach out to the researcher and will get scheduled with either an interview or focus group and sign consent forms. Once consent has been given, the interviews and focus groups will take place via Zoom off contract time at the participant's convenience. The interview or focus group will last no longer than an hour. The researcher hopes to complete these in September or October 2023.</p>
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	<p>I am anticipating that veteran teachers will have mixed feelings about having a formal mentoring program in place. Some will want it as to have a wider network of support in place. Others will probably view it as a hassle and another thing to add to their to-do list.</p> <p><b>Results: [insert here]</b></p>
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	Based on research findings, this could eventually change current professional development. If formal mentoring programs were in place for veteran teachers, professional development could become more individualized. It also has the potential to create better relationships and a more positive school climate.
<b>How will parental permission be obtained?</b>	Not applicable
<b>Schools requested</b>	All elementary schools except in Hunter network because that is the network in which I work.

# Granite School District

## Research Applications During the 2022-2023 School Year

### The impact of a dual immersion program on Spanish-speaking students in the United States

Investigator: Albert Ferrarons Font

Granite administrator or teacher: Yes

IRB: Universidad Camilo Jose Cela

Proposal ID: 2022-031-Font

**Status: Approved**

Anticipated Start Date: 05/01/2023

Anticipated Completion Date: 06/06/2023

Research classification: Curricula [Other curricular programs: Bilingual programs]

Requested research results on: 08/15/2023

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	This is a follow-up and update on my master's degree thesis conducted in 2019. In July 2019, I presented with honors my paper "The Impact of a Dual Immersion Program on Spanish-speaking Students in the United States" after research in our school at the first stages of implementing the Dual Immersion program. Four years later, I intend to update and compare the results of my research after a wide and solid implementation of the Spanish Dual Immersion program in our school and community. When the research is finished, by the end of the year, I intend to publish it in an academic journal about languages and education.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	<p>My research is a qualitative analysis of the impact of the DLI program in the usage, perceptions and attitudes towards their native language, Spanish, of a Spanish-speaking community. The methodology is not testing students' language proficiency, but collecting data through surveys about these areas of interest:</p> <ul style="list-style-type: none"> <li>• Language proficiency (How would you define your level of...): Oral language / Written language / Reading skills / What difficulties do you find in speaking Spanish.</li> <li>• Use of Spanish: With parents / With siblings / With extended family / With friends / With teachers / With other school staff / Other relationships.</li> <li>• Language preference in media: Reading / Music / TV / Games / Internet / Other.</li> <li>• Language attitudes &amp; preferences: What would you say is your first language? Why? / Language choice in public / How comfortable do you feel speaking Spanish in public / Do you prefer to speak Spanish or English? Why? / If someone you don't talk to you in Spanish, how do you feel and how do you respond / What language would you choose to speak to your children if you have kids / What languages do your friends speak? What do they speak at home? / Do you ever travel to your parents' home country? How do you feel when you go there?</li> <li>• Language perception: Advantages and disadvantages of being bilingual / Advantages and disadvantages of knowing Spanish in your everyday life / Advantages and disadvantages of knowing Spanish language for your future.</li> </ul> <p><b>Describe your research method(s)</b> I will ask about 100 7th and 8th grade students who have been in the DLI program for at least 3 years to complete surveys about the above-mentioned areas of interest. I will also give the survey to other Spanish speaking students in our school that have not been in the Dual Immersion program. The results will be graphed, analyzed, and compared with the results collected 4 years ago.</p>
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	<p>My hypothesis is that Spanish speaking students develop a safer and more comfortable relationship with their native language, the more academic language they acquire and the better they study it. Comparing my previous research with this one, I anticipate finding interesting results in their attitudes and perceptions towards their first language once the DLI program is widely implemented in the community.</p> <p><b>Results: [insert here]</b></p>
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	When published, this research will prove the benefits of the Dual immersion program not only to learn a second language, but to guarantee a better foundation of the first language. Research shows that a solid foundation in the native language is beneficial for second language learning. This research also proves the socio-emotional, cultural, and identity assets of Dual Immersion programs in our students. Granite School District has pushed for a well-grounded implementation of DLI programs, providing a perfect field of study for any academic researcher like myself.
<b>How will parental permission be obtained?</b>	Signed permission forms.
<b>Schools requested</b>	West Lake STEM Junior High

# Granite School District

## Research Applications During the 2022-2023 School Year

The write to succeed

Investigator: Jason Snipes

Granite administrator or teacher: No

IRB: WestEd

Proposal ID: 2022-032-Snipes

**Status: Approved**

Anticipated Start Date: 08/14/2023

Anticipated Completion Date: 11/30/2024

Research classification: Student [Beliefs, attitudes, and dispositions: Positive ethnic self-identity]

Requested research results on:

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Stereotype threat is the fear of confirming negative racial stereotypes, and the self-affirmation (SA) intervention is unique in addressing equity issues by buffering marginalized students against these threats to a path of success. Studies have shown SA can have significant positive effects on academic engagement and success, and that these effects not only persist but grow over time (Cohen et al., 2006; Cohen et al., 2009). This study seeks to replicate successful outcomes from previous SA studies, including improved grades, test scores, and high school graduation rates; and reductions in suspensions and the achievement gap for marginalized students. The SA intervention is a relatively simple and costless intervention whereby grade 7 students complete four 15-minute writing exercises throughout the course of one school year where they reflect on and write about meaningful personal values. The opportunity for students to affirm something positive about themselves or their values may shift how they view themselves and their relationship to their environment (Wilson, 2011; Borman, 2017). By affirming other personally important values beyond academics, vulnerable students acquire resources that buffer them against the negative consequences of identity threats within the academic domain.</p> <p>The exercises are designed to reduce stereotype threat and promote academic performance among marginalized students, which has been shown to account for as much as 25% of national "achievement gaps." Because SA mitigates or eliminates this threat, the project can have a substantial positive impact on existing opportunity and outcome gaps. The study will also examine several factors that mediate and moderate the effects of SA, in order to contribute to the understanding of the circumstances under which the intervention is most effective in the national study and for Granite School District specifically.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The research design utilizes concurrent randomized control trials that replicate the procedures of a previous study (Borman et al., 2016) at scale in nationally representative samples of schools drawn from four school strata based on racial composition. Within each stratum, we will randomize two successive cohorts of 7th graders to the SA intervention writing exercise or to a comparison exercise that appears similar, utilizing a randomized block design in equal proportion to each group. We will execute a double-blind administration of the SA intervention—meaning both teachers and students will be blinded to the student group assignment.</p> <p>In each cohort of 7th grade students, students will be administered writing exercises with a cover sheet that has pre-printed students' names, ELA teacher, ELA class period, and school name. Students will tear off and discard the cover sheet and only return the completed exercise that will contain an alternative study ID. Students, teachers, and administrators will not be able to link students to specific writing prompts. Students will not be assented prior to the participation in the SA intervention, nor will there be any mention of "research" or "it's good for you" when teachers introduce the activities. This is because signaling to students that the intervention is part of research or is an externally imposed task has been shown to diminish the effectiveness of affirmation (Sherman et al., 2009; Silverman, Logel, &amp; Cohen, 2013). The exercises are intended to be implemented as an everyday instructional activity or free writing exercise and has been found to be most beneficial when presented as normal classroom activities delivered by teachers who may care to know more about their students' most important values (Cohen et al., 2006; Cohen &amp; Sherman, 2014; Purdie-Vaughns et al., 2009).</p> <p>Students will also complete one 20-minute survey that examines self-affirmation and sense of self-efficacy constructs that impact academic achievement after the completion of the fourth writing exercise but prior to state assessments.</p> <p>We prefer to utilize passive consents as parents may discuss with their children that they will be participating in research activities. We are happy to further discuss the consent process with Granite School District.</p> <p>Teachers are not research participants as we will not be collecting data about them. They will be supporting the administration of study activities with students and providing information on the implementation of the student writing exercises and survey. Any teacher data requested as part of the secondary data request will be at the aggregate level.</p> <p>Prior to estimating intervention impacts, researchers will examine data for completeness, outliers, and errors. Errors will be corrected if possible or coded as missing if not. Models will then be estimated to ensure baseline equivalence. Hierarchical linear models will be used to estimate effects for each of the academic, disciplinary, and socio-emotional outcomes. The evaluation is a block cluster randomized controlled trial and will use three-level models, with students nested within schools nested within districts. These models account for the effect of clustering. A multilevel structural equation model will be</p>

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	<p>used to examine the mediating effects of student attitudes and beliefs on the impact of the SA intervention. The structural equation model will test whether the self-affirmation exercises improve student measures of social-psychological well-being, which in turn impacts academic and behavioral outcomes.</p> <p><b>Describe your research method(s)</b></p> <p>Two cohorts of all 7th grade students from 14 schools, identified in partnership with the district, from the 2023–24 and 2024–25 school years in general education ELA or homeroom classrooms would be included in the study. Students with disabilities will be included in the sample insofar as they are attending general education classrooms. English learners will also be included to the extent that they can participate in the writing activities. Spanish translations of the writing assignments are available.</p> <p>Year 1 (2022–23)</p> <ul style="list-style-type: none"> <li>- Execute MOU/data sharing agreements</li> <li>- Identify site liaisons (either school staff or local WestEd staff)</li> </ul> <p>Year 2 (2023–24)</p> <ul style="list-style-type: none"> <li>- Obtain student level baseline (from 6th grade) and initial enrollment/roster data for 7th grade (Cohort 1)</li> <li>- Send home parent opt-out forms in the district ‘welcome packet’ at beginning of the school year (Cohort 1)</li> <li>- Conduct 20-minute webinar at the beginning of the school year for teachers identified to administer the writing assignments in their classrooms (Cohort 1)</li> <li>- Distribute writing assignments to identified teachers who will administer the writing assignments four times: 1) 2nd week of school, 2) late fall/early winter, 3) late winter/early spring, 4) spring, about one or two weeks prior to state assessments (Cohort 1)</li> <li>- Teachers administer a student survey after final writing assignment (Cohort 1)</li> </ul> <p>Year 3 (2024–25)</p> <ul style="list-style-type: none"> <li>- Obtain student administrative/enrollment data for 7th grade (Cohort 2)</li> <li>- Send home parent opt-out forms in the district ‘welcome packet’ at beginning of the school year (Cohort 2)</li> <li>- Conduct 20-minute virtual orientation at the beginning of the school year for teachers identified to administer the writing assignments in their classrooms (Cohort 2)</li> <li>- Distribute writing assignments to identified teachers who will administer the writing assignments four times: 1) 2nd week of school, 2) late fall/early winter, 3) late winter/early spring, 4) spring, about one or two weeks prior to state assessments (Cohort 2)</li> <li>- Teachers administer a student survey after final writing assignment (Cohort 2)</li> <li>- Obtain Cohort 1 student data (baseline, outcomes, behavioral)</li> </ul> <p>Year 4 (2025–26): Study formally ends for Granite School District</p> <ul style="list-style-type: none"> <li>- Obtain Cohort 1 &amp; 2 student data (baseline, outcomes, behavioral)</li> <li>- Present preliminary findings to the district (Granite specific and overall national study)</li> </ul> <p>Year 5 (2026–27)</p> <p>Publish and present findings in accordance with IES grant requirements</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>The study seeks to understand the effects of SA on marginalized students in schools with different racial compositions. Because SA is theorized to disrupt or buffer stereotype threat processes, settings in which threats are more likely to be experienced may provide the greatest opportunity for benefits.</p> <p>Research Questions:</p> <ol style="list-style-type: none"> <li>1. What is the impact of the SA intervention on the academic, socio-emotional, and behavioral outcomes of 7th grade marginalized students’ (as a group) in a nationally representative sample of schools with different racial compositions?</li> <li>2. Within each racial density stratum, what is the impact of the SA intervention on academic and socio-emotional outcomes among 7th grade Black students? Among Latinx students?</li> <li>3. Within each racial density stratum, what is the impact of SA on suspensions?</li> <li>4. Within each racial density stratum, what is the impact of the SA intervention on academic, and socio-emotion outcomes among 7th grade White students? Among Asian students?</li> <li>5. To what extent do school-level factors, such as the instructional quality available to each student, as measured by the “average prior value added” (measured by standardized assessments) among their specific teachers, moderate the effects of SA on student outcomes?</li> <li>6. To what extent do student characteristics (e.g., prior discipline, baseline achievement, and gender) moderate the impacts of SA on marginalized students’ academic and behavioral outcomes?</li> <li>7. What are the impacts of the SA intervention specifically for Granite School District students?</li> </ol> <p>Results: [insert here]</p>
<p><b>Benefit to Granite School District.</b></p>	<p>The benefit of participation in this research study is that students may positively affirm their identities and thereby mitigate the negative effects of stereotype threat, thereby improving their academic and disciplinary outcomes. This is a replication</p>



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<p>Describe how your research will benefit Granite School District.</p>	<p>study of previous research, which have shown significant impacts such as increased attendance, decreased behavioral referrals, fewer D's and F's, higher test scores, and improved student attitudes toward school. Benefits have been shown to sustain beyond 7th grade and into high school. Further, this study will help Granite School District decision makers understand the school settings in which SA ought to be scaled and implemented and how it might be used to complement other available supports to bolster the success of marginalized students. Findings may illuminate some of the social-psychological constructs that may be important mediators to how SA produces its short- and long-term impacts and provide the field with evidence-based practices for reducing discipline disparities for marginalized students.</p> <p>The WestEd team has the support of Dr. Noelle Converse, Director of Curriculum &amp; Instruction; Dave Gomez, Director of Educational Equity; and Judy Peterson, Director of College &amp; Career Readiness, having discussed how the Write to Succeed project aligns with the district's goals and initiatives.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>We will send home a study informational letter/opt-out form. If the district deems it must be an active consent, the form will reflect as such (both versions are included in the application). Ideally, the form would be sent to parents/caregivers electronically. The forms would be returned to teachers, which then the site liaisons would collect/return to WestEd with other study materials.</p>
<p><b>Schools requested</b></p>	<p>Olympus Junior High, Evergreen Junior High, Churchill Junior High, Bonneville Junior High, Bennion Junior, High, Scott M Matheson Junior High, Hunter Junior High, Thomas Jefferson Junior High, Eisenhower Junior, High, John F. Kennedy Junior High, Valley Junior High, Kearns Junior High, West Lake STEM Junior High, Granite Park Junior High, Wasatch Junior High</p>

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## Research Applications During the 2022-2023 School Year

### Analysis of individual education program goals and alternate assessment achievement outcomes for students with extensive support needs

Investigator: Michael Farrell

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-033-Farrell

**Status: Denied**

Anticipated Start Date: 05/01/2023

Anticipated Completion Date: 06/01/2023

Research classification: Technology, School, and Out-of-School Strategies [Implementation that emphasizes school-wide teaching strategies: Interventions for students with learning needs]

Requested research results on: Not applicable

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>This proposed study will examine relationships between IEP goal content and quality for students in Utah with ESN in grades third through eleventh and their impact on AA-AAS end-of-year results. Specifically, this study will investigate whether the academic alternate standard alignment and the written quality of IEP goals influence the overall DLM achievement results reported in the district-reported performance profiles. The following research questions will guide the study:</p> <p><u>Research Question 1:</u> Does the presence of alternate state standards-aligned core academic IEP goals lead to higher DLM achievement scores in ELA, mathematics, and science content areas?</p> <p><u>Research Question 2:</u> Do high-quality ratings of SMART indicators in alternate state standards-aligned IEP goals lead to increased DLM achievement scores in ELA, mathematics, and science?</p> <p>De-identified IEP data includes goals, objectives, and demographic information. Demographic information will include students' grade level, gender, ethnicity/race, and primary disability classification. DLM performance profiles, which include overall academic area content scores of proficiencies on a four-point scale including 1-Emerging, 2-Approaching the target, 3-At target, and 4-Advanced for each content area, will be collected. IEP goals will be evaluated for SMART characteristics of quality and alignment with EE standards. Academic goals will be identified as goals that address grade-level ELA, mathematics, or science content areas.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The research study aims to examine the relationship between the content and quality of Individualized Education Program (IEP) goals and the academic outcomes of students with ESN in grades third through eleventh in Utah. The study will investigate whether the presence of alternate state standards-aligned core academic IEP goals and the written quality of IEP goals influence the overall DLM achievement results reported in the district-reported performance profiles.</p> <p><b>Describe your research method(s)</b> The study will collect IEP goals, objectives, and demographic information, including students' grade level, gender, ethnicity/race, and primary disability classification. The DLM performance profiles, including overall academic area content scores of proficiencies on a four-point scale, will also be collected. The study will evaluate IEP goals for SMART characteristics of quality and alignment with EE standards. An analysis will be performed to determine if the presence of alternate state standards-aligned core academic IEP goals and their quality ratings positively impact DLM achievement scores in ELA, mathematics, and science content areas. The study will employ regression analysis to examine the relationship between the presence of alternate state standards-aligned IEP goals and SMART quality ratings and DLM content area achievement scores. The study will also investigate whether higher quality ratings of SMART indicators in alternate state standards-aligned IEP goals are associated with increased DLM scores in each academic content area. Separate analyses will be conducted per academic content area, allowing for a more detailed understanding of how the independent variables may impact achievement in specific subject areas.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>The hypothesis of the study is that the presence and quality of academic IEP goals aligned to Essential Element alternate standards impact the outcomes of the DLM alternate assessments.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>Overall, the study's findings can help schools make informed decisions about teaching and learning strategies that promote student success and enhance the school's overall academic environment.</p>

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How will parental permission be obtained?	Not applicable
Schools requested	All schools serving 3-11 within Granite School District

Integrating math language within high-frequency word reading instruction

Investigator: Christy Austin

Granite administrator or teacher: No

IRB: University of Utah

Proposal ID: 2022-034-Austin

**Status: Approved**

Anticipated Start Date: 09/01/2023

Anticipated Completion Date: 11/01/2023

Research classification: Curricula [Other curricula programs: Integrated curricula programs]

Requested research results on:

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>High-frequency words, such as the, more, and each, are words that appear frequently in texts for both emergent and skilled readers. The top 25 most frequent words make up approximately one-third of the words emerging readers encounter in print, while the top 100 most frequent words make up approximately half the words readers encounter in print (Fry et al., 2000). Due to the frequency with which these words occur in print, it is critical that young readers learn to recognize high-frequency words with automaticity. Automatic recognition of high-frequency words frees up cognitive resources to attend to decoding the remainder of the text and to focus on understanding the meaning of what is read. Additionally, being able to spell high-frequency words accurately and efficiently supports students in their writing development.</p> <p>However, helping students develop accurate and efficient reading and spelling of high-frequency words is challenging for two reasons. First, many of these words are either permanently irregularly, or cannot be sounded out due to being spelled differently than they sound (e.g. once), or are temporarily irregular, containing letter-sound patterns that a student has not yet been explicitly taught (e.g. a kindergarten students has not yet been taught the sounds made by the letters ea to sound out the word each). Approximately 25% of the 100 most frequent words are spelled irregularly, with an even larger number of high-frequency words including letter patterns a teacher would not expect kindergarten students to have mastered. Second, most high-frequency words have rather abstract meanings, making it challenging to explain the meanings of these words to young children.</p> <p>In addition to supporting high-frequency word recognition and spelling, math language instruction supports students in acquiring mathematical language and concepts. Proficiency in early mathematics in kindergarten is a strong predictor of a child's later mathematics trajectory (Bodovsky &amp; Farkas, 2007; Sarama &amp; Clements, 2009; Watts et al., 2014). Many young children, however, begin kindergarten without the early mathematics skills needed to be successful (Berch, 2005; Jordan et al., 2006; Klinbanoff et al., 2006), and this is especially true for children from lower socioeconomic backgrounds, English learners, and students with disabilities (Hair et al., 2006; Sanborn et al., 2016; Valle et al., 2013). Language influences how children think about and make meaning of mathematical concepts; therefore, growth in mathematics-related language is essential for ongoing mathematical development (Schlepppegrell, 2007; Vukovic &amp; Lesaux, 2013).</p> <p>A large percentage of the top 100 most frequent words have meaning in math that differs from the way the words are used in everyday contexts. For instance, consider the high-frequency words 'a,' 'an,' and 'the.' Each of these articles infers a mathematical meaning of one; however, 'a' can also be used to reference special numbers (e.g. a dozen), and 'the' adds specificity to the meaning (e.g. pick a flower versus pick the red flower). Although these articles clearly refer to a single item, we seldom translate the words into the number one unless we encounter them within a mathematical context (e.g. Every child needs a snack, so how many snacks will I need?). As another example, the word 'about' carries a very different meaning in the sentence, "What is this book about?" than in "Each of you should take about 5 crayons." In the first sentence, about refers to the subject of the story, while the second use refers to an approximate quantity. This change in meaning may not be apparent to children not familiar with the structure and application of mathematical language. Using math talk to explicitly teach the meaning of these words in a mathematical context can support students development of math concepts and can support students recognition of these high-frequency words in the future.</p> <p>Integrating math language instruction within high-frequency word reading instruction is an instructional approach supported by reading theory. Connectionist models of reading (e.g. Foorman, 1994; Harm &amp; Seidenberg, 2004; Seidenberg, 2005, 2017; Seidenberg &amp; McClelland, 1989) hypothesize that information from three overlapping domains – phonological (pronunciation), orthographic (spelling), and semantic (meaning) – make word reading accuracy and proficiency possible. Machine learning studies demonstrated that the system could be trained to accurately connect spelling to pronunciation for many monosyllabic words without any semantic information; however, additional semantic information further improved</p>
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## Research Applications During the 2022-2023 School Year

	<p>word learning for multisyllabic words and irregularly spelled words. Integrating word meaning instruction within word reading instruction may have particular relevance for kindergarten students, as research demonstrates that novice readers rely more heavily on associating printed words with their meaning given their inexperience mapping sounds to letters and letter patterns to decode unfamiliar words.</p> <p>Given the importance of students learning to read and spell high-frequency words and the importance of students acquiring strong mathematical language skills, the purpose of the proposed study is to examine the relative effects of integrating math language instruction within high-frequency word reading instruction compared to high-frequency word reading instruction alone on the high-frequency word reading accuracy, high-frequency word spelling accuracy, math language knowledge, and math concepts of kindergarten students.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>I will be comparing kindergarten students' high frequency word reading accuracy, high-frequency word spelling, and knowledge of math language for words taught with instruction integrating math language within high-frequency word reading instruction compared to words taught with high-frequency word reading instruction alone.</p> <p>To conduct this research, I would identify kindergarten teachers interested in participating in the proposed study. After obtaining parental consent for children to participate in the study, I will conduct a within-subjects experimental design in which all participants receive instruction across both conditions (high frequency word reading instruction alone; integrating math language instruction within high-frequency word reading instruction). Instruction would be provided to students in small groups of 3-6 students, 5x/week, for 6 weeks. Two high-frequency words would be taught each day, for a total of 10 words taught each week and 60 words taught across the duration of the study. Half the words will be taught with high frequency word reading instruction alone and half the words will be taught by integrating math language instruction within high-frequency word reading instruction. I will measure high frequency word reading accuracy, high-frequency word spelling, and knowledge of math language at pretest, after each week of instruction, and at the conclusion of the study to determine whether students more accurately read and spell words taught with instruction integrating math language and high-frequency word reading.</p> <p>Data will be analyzed using a repeated measures analysis of variance (ANOVA) to assess if type of intervention (A - Integrating math language instruction within high-frequency word reading instruction; B - High-frequency word reading instruction alone) resulted in differences in high-frequency word reading accuracy, high-frequency word spelling, and math language knowledge immediately following each week of instruction and at posttest. The F-test of significance will be used to assess the relative effect of integrating math language instruction within high-frequency word reading instruction compared to high-frequency word reading instruction alone. Partial eta squared will be used to estimate the magnitude of the relative effect. Post-hoc paired-sample t-tests will be used to determine if significant differences existed between conditions at each time point (immediate, posttest) for each dependent variable (high-frequency word reading accuracy, high-frequency word spelling, and math language knowledge). Standardized mean differences will be calculated for each dependent variable at each time point by creating a new variable of the differences between each condition (Integrating math language instruction within high-frequency word reading instruction minus high-frequency word reading instruction alone), calculating the mean across participants for this new variable, and dividing the mean difference by the standard deviation of the raw scores at that time-point, pooled across conditions (Cumming, 2012; Morris &amp; DeShon, 2002).</p> <p><b>Describe your research method(s)</b></p> <ol style="list-style-type: none"> <li>1) After obtaining district approval, I will contact school principals to identify schools and kindergarten teachers interested in participating in the proposed study.</li> <li>2) Once kindergarten classrooms are identified, I will send home parental consent forms with all potential kindergarten participants. No potential participants will be excluded from the study unless the school/teacher does not feel the instruction would be appropriate or beneficial for a particular student.</li> <li>3) Instruction will be provided in small groups 5x/week, 15 minutes per session, for 6 weeks. In small groups, students will be briefly pretested prior to instruction beginning to measure high-frequency word reading accuracy, high-frequency word spelling, and knowledge of math language.</li> <li>4) At the conclusion of each week, students' high-frequency word reading accuracy, high-frequency word spelling, and knowledge of math language will be measured for the words targeted instructionally that week.</li> <li>5) At the conclusion of the study, high-frequency word reading accuracy, high-frequency word spelling, and knowledge of math language will be measured for all words taught. (Although this appears to be a lot of assessment, the assessment is informal, simply having each student read and spell the words they have been taught. This type of distributed practice and cumulative review of previously taught words is how high-frequency words are mastered by emerging readers. This repetitive practice reading and spelling the words is likely to be beneficial to student learning and will be conducted informally so it feels like fun, additional practice, rather than assessment)</li> <li>6) Data will be analyzed to determine whether significant differences exist in high-frequency word reading accuracy, high-frequency word spelling, and knowledge of math language across instructional conditions (A. high-frequency word reading instruction alone; B. instruction integrating math language within high-frequency word reading instruction) at each timepoint (at the end of each week of instruction and at posttest).</li> <li>7) Data will be shared with each kindergarten teacher and principal at the conclusion of the study and instructional materials and training will be made available to kindergarten teachers free of charge to assist teachers in carrying out similar instruction in the future.</li> </ol>

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<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>I hypothesize that students will: (a) read and spell high-frequency words with significantly greater accuracy when the words are taught through integrating math language instruction within high-frequency word reading instruction than when words are taught with high-frequency word reading instruction alone; and (b) acquire significantly greater math language skills and math concepts when words are taught through integrating math language instruction within high-frequency word reading instruction than when words are taught with high-frequency word reading instruction alone.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>1) Kindergarten students will learn many of the top 100 most frequent words from the Fry High-Frequency word list, which will assist students in reading and spelling these words accurately and efficiently in the future. By recognizing a large number of words with automaticity, students will be able to devote more cognitive resources to understanding text or to generating high-quality written compositions.</p> <p>2) Kindergarten students will develop strong math language skills related to: (a) numbers and quantity, (b) time and sequencing, (c) location and direction, (d) distinguishing or comparing, (e) mathematical operations, and (f) reasoning.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Parental consent forms will be provided to kindergarten teachers to be sent home with each kindergarten student using whatever system each teacher uses to communicate with parents/guardians.</p>
<p><b>Schools requested</b></p>	<p>I would be open to any school interested in participating.</p>

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## Research Applications During the 2022-2023 School Year

### Understanding barriers and supports for post-secondary education

Investigator: Envision Utah

Granite administrator or teacher: No

IRB: Granite School District

Proposal ID: 2022-035-Envision

**Status: Approved**

Anticipated Start Date: 09/01/2023

Anticipated Completion Date: 11/01/2023

Research classification: Technology, School, and out-of-School Strategies [Implementations that emphasize school-wide teaching strategies: Student support programs- college]

Requested research results on:

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Envision Utah is trying to better understand barriers and supports for post-secondary education by talking to high school students in the Granite School District. Our goal is to increase enrollment in post-secondary education for students who are underrepresented. We will be doing this through a series of in-person focus groups in which we will talk to students about their experience and understanding of post-secondary education.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The participants in this study will include 40 high schoolers. These focus groups are a continuation of work started through a 7,000 + participant survey in 2021. These focus groups will endeavor to better understand the stories and experiences of underrepresented high school students through small focus groups of 6-8 students. The students' personal information will remain confidential. The study is designed so none of the identifying information will appear in recorded data. The focus groups conversations will be transcribed and thematized. What we learn from these conversations will be used to create a report to inform and educate the general public and decision makers on our findings.</p> <p><b>Describe your research method(s)</b> Participants will be recruited through flier and email outreach and every student that participates will receive a \$50 gift card for participating in a 90 min focus group conversation. Focus groups will begin in May and a report will be prepared by July.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>This research is a follow up to a survey that was conducted in 2021 in which students identified costs and student loans as the biggest barriers to college for Utah students. We expect to better understand other barriers as well as supports for education for post-secondary education.</p> <p>Results: [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>This research will help us better understand barriers and solutions for post-secondary education for underrepresented students.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Permission will be obtained through a signed opt-in form.</p>
<p><b>Schools requested</b></p>	<p>None specified.</p>

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## Research Applications During the 2022-2023 School Year

Statewide online high school survey

Investigator: Envision Utah

Granite administrator or teacher: No

IRB: Granite School District

Proposal ID: 2022-036-Envision

**Status: Approved**

Anticipated Start Date: 04/27/2023

Anticipated Completion Date: 07/15/2023

Research classification: Technology, School, and out-of-School Strategies [Implementations that emphasize school-wide teaching strategies: Student support programs- college]

Requested research results on:

<b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?	Envision Utah is trying to better understand barriers and supports for post-secondary education by surveying middle school and high school students in Utah. Our goal is to first more fully understand barriers in order to then increase enrollment in post-secondary education.
<b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.	We are taking what we learned from high school student focus groups and our previous 7,000 + participant survey in 2021. The students' personal information will remain confidential. What we learn from the survey results will be used to create a disaggregated summary report to inform and educate the general public and decision makers on our findings.  <b>Describe your research method(s)</b> Participants will have access to the survey link through flier and email outreach and every student that participates will have the chance to win various raffle prizes.
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	This research is a follow up to a survey that was conducted in 2021 in which students identified costs and student loans as the biggest barriers to college for Utah students. We expect to better understand other barriers as well as supports for education for post-secondary education.  Results: [insert here]
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	This research will help us better understand barriers and solutions for post-secondary education for underrepresented students.
<b>How will parental permission be obtained?</b>	
<b>Schools requested</b>	All Senior High Schools



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## Research Applications During the 2022-2023 School Year

2023-24 School Pulse Panel

Investigator: National Center for Educational Statistics (NCES), Institute of Education Sciences (IES), U.S. Department of Education (USDE).

Granite administrator or teacher: No

IRB: Westat

Proposal ID: 2022-037-Beilamowicz

**Status: Approved**

Anticipated Start Date: 07/10/2023

Anticipated Completion Date: 06/25/2024

Research classification: School [Leadership: School climate]

Requested research results on:

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Federal policy makers need timely information on the condition of education in the U.S. to allocate funding efficiently and to develop effective policies in response to rapidly changing conditions brought about by the COVID-19 pandemic. The School Pulse Panel (SPP) addresses this need and reduces burden on schools by collecting data regularly from a small sample of K-12 public schools. The study is conducted by the National Center for Education Statistics (NCES), part of the Institute of Education Sciences (IES), within the United States Department of Education. The SPP collects extensive data on a rotating collection of high-priority, education-related topics. U.S. public K-12 schools will be surveyed each month. NCES is authorized to conduct the 2023-24 SPP by the Education Sciences Reform Act of 2002 (ESRA 2002; 20 U.S.C. §9543), and the U.S. Census Bureau will conduct the data collection on behalf of the Department of Education.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>The resulting data will provide aggregate estimates for public schools across the nation. A stratified sample design was used to select approximately 4,000 U.S. public schools. An additional reserve sample of replacement schools (4,000) was selected to boost response rates if any schools from the initial sample do not respond. The sample is designed to provide national estimates of public primary, middle, and high schools, taking into account the type of locale (urbanicity) and racial/ethnic student enrollment.</p> <p>The sampling frame for the School Pulse Panel is derived from the Common Core of Data (CCD), the universe of public schools supplied annually by state educational agencies to NCES. Only public schools in the 50 states and the District of Columbia will be included in the sampling frame. A universe collection from the Outlying Areas (Guam, Northern Marianas, U.S. Virgin Islands, American Samoa) will be administered as well. Certain types of schools are excluded, including newly closed schools, home schools, and schools with high grades of kindergarten or lower. Regular public schools, charter schools, alternative schools, special education schools, vocational schools, and schools that have partial or total magnet programs are included in the frame. For sample allocation purposes, strata are defined by instructional level, type of locale (urbanicity), and percent minority enrollment.</p> <p>Using data from the Common Core of Data, NCES will present results by school characteristics like school racial composition, school neighborhood poverty levels, and other appropriate indicators. Student’s t-tests will be used to make formal comparisons between estimates, where applicable.</p> <p><b>Describe your research method(s)</b> The U.S. Census Bureau will collect the SPP data on behalf of NCES. Data collection will be a self- administered, online survey. It is estimated for the survey to require roughly 30 minutes of school staff time each month the survey is administered. Surveys will be administered monthly. The sampled schools are welcome to share the invitation link with other school or district staff to help respond to the survey. Sampled schools in Granite School District that choose to participate will be offered a reimbursement of \$200 for each survey submitted through the 2023-24 school year from August 2023 to June 2024. The reimbursement will be paid out monthly.</p> <p>If Granite School District does not permit its schools to receive any form of payment, the reimbursement will be sent to a point of contact in Granite School District or the reimbursement will be withheld. Principals, and other staff most knowledgeable about the school environment and program offerings, can complete the survey. School points of contact will be collected on the screener that will be sent over the summer of 2023. No classroom time is involved in the completion of this survey.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>The purpose of this study is to collect descriptive data on the current condition of education in the U.S. The monthly survey will encompass broad content domains, each with a series of measurement items addressing a specific research question. Content areas for the 2023-24 SPP were developed by meeting with program offices in the U.S. Department of Education and with other federal agencies and stakeholders, including the U.S. Department of Agriculture, the Centers for Disease Control, the Bureau of Justice Statistics, and the White House Domestic Policy Council, and asking them to provide NCES with more information on what education-related topics they lacked timely data on. Each content domain is briefly stated below in terms of the issues in need of measurement, as well as examples of research questions we are seeking to answer. NCES does not have any formal expectations or hypotheses that we are looking to test with these questions. Below are examples of the types of content domains that will likely be covered in the 2023-24 SPP:</p> <p>I. Instructional program offerings to address learning recovery</p>

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	<p>a. What types of school offerings did your school offer during the summer to help with learning recovery? b. During the school year, will the school day be extended? Number of school days increased? Additional before-school or after-school programs? c. What are the types of strategies that will be used to help accelerate learning? How effective have these strategies been? d. What types of tutoring, if any, are your school offering during the 2023-24 school year? e. Are there any barriers that your school is facing in implementing learning recovery strategies and/or tutoring?</p> <p>II. Use of technology, computer devices, and Internet access a. Are laptops or tablets offered and available to all students in the school to assist with virtual learning? b. Was Internet access provided to students? c. Has your school provided IT or technical support? d. Was professional development on digital learning provided to educators? Or trainings on digital learning provided to students? e. Does your school have high-speed Internet that is accessible throughout the school?</p> <p>III. Mental health and services provided a. What are the types of mental health services offered at your school? b. Has your school hired new staff to focus on social/emotional/mental wellbeing? c. Has your school offered professional development to train teachers on helping students with their social/emotional/mental wellbeing? d. Have there been changes in the number of school psychologists, counselors, and nurses at your school since the beginning of the school year?</p> <p>IV. Staffing Shortages a. As of the start of the school year, do you have any administrative staff, teacher, or support staff vacancies? b. How difficult was it to fill staff vacancies? c. Has teacher and staff burnout become a more pressing issue at your school during the 2023-2024 school year? d. How have federal funds been used to fill vacancies or create new positions? e. Have you increased teachers' salaries to counteract inflation? If yes, has this been a successful retention strategy? If no, have you implemented other non-financial incentives to retain teachers?</p> <p>V. Supply chain issues and school meals a. What are the types of challenges your school is experiencing with obtaining food, beverages, or meal supplies for students participating in school meal programs?</p> <p>VI. Concerns expressed by parents, staff, and students a. What are the types and levels of concerns, if any, being expressed regarding how education and other programs are being provided at your school?</p> <p>VII. Absenteeism a. Has chronic student absenteeism changed since the start of the pandemic? b. How easy or difficult is it get substitute teachers to fill teacher absences? c. Has your school needed to use long-term substitutes in the 2023-24 school year? If yes, how many and how many times? How does this compare to last year?</p> <p>VIII. School Climate and Safety a. How has the pandemic affected classroom management in your school? b. Have you experienced more behavioral or social emotional issues in the classroom? c. How have new, remote, or hybrid students been welcomed back into the school setting? d. Does your school have a written plan that describes procedures to be performed in various emergency scenarios?</p> <p>IX. Community Partnerships a. Does your school use a "community school" or "wraparound services" model? b. Were services that are available through community partnerships added to address challenges related to the COVID-19 pandemic?</p> <p>X. Facilities Management a. Has your school taken any steps to increase ventilation or filter/clean air in school? b. Does your school employ an Indoor Air Quality Coordinator? c. Are carbon dioxide sensors installed in classrooms? d. How many permanent and non-permanent buildings are in use at your school? How many, if any, have received third-party green building certification?</p> <p>XI. Federal Fund Usage a. How are federal funds being used for learning recovery?</p>
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	<p>b. How much does it cost your school to implement learning recovery strategies like high-dosage tutoring?</p> <p>Results: [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>The School Pulse Panel is an opportunity for Granite School District to provide real-time input to key policy makers in the White House, Congress, the Department of Education, and other federal agencies as critical decisions are being made that will impact the future of federal education policies. Specifically, the 2021-22 SPP results were used by the White House Domestic Policy Council and senior policy advisors within the Department of Education’s Office of the Secretary to inform guidance, technical assistance, and support on using American Rescue Plan funds geared toward effective learning recovery strategies. Data on the National School Meals Program helped inform the USDA’s Food and Nutrition Service to better understand the impacts of the removal of the free lunch waiver, as well as supply chain disruptions. Resources cannot be effectively disbursed to support schools if there is a lack of data to inform these decisions. If your district chooses not to participate, the voices of your students and staff will not be used to inform key decisions that are being made. Because Granite School District and its sampled schools represent themselves and many others like them, the schools’ participation is vital for producing high-quality information. By participating in this panel, you will ensure that information about Granite School District is included in those important decisions.</p> <p>The timely, nationally representative estimates that will be made available on the interactive SPP dashboard and in the publicly available data files within six weeks of data collection measure concepts that are closely aligned with Granite School District’s Strategic Plan. The SPP has and will continue to measure many concepts related to the district’s Academic Priority and Talent Development Priority, and Granite School District can use the SPP data as a national benchmark to assess how well the district is meeting its goals. For example, Granite School District’s goal of increasing graduation rates can be benchmarked against the SPP. In the 2021-22 SPP, 70 percent of public schools offered school- or district-run learning and enrichment programs over the summer of 2022.</p> <p>Finally, the 2023-24 SPP provides an excellent opportunity for each sampled school in SCPS to earn up to \$2,200 for completing the monthly surveys. These funds can be used by the school however they see fit.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Not applicable</p>
<p><b>Schools requested</b></p>	<p>Diamond Ridge School, Western Hills School, Olympus Jr High School and Taylorsville High School</p>

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## Research Applications During the 2022-2023 School Year

### How assistant principals promote a sense of belonging for students?

Investigator: Elivs Fonguh

Granite administrator or teacher: Yes

IRB: University of Utah

Proposal ID: 2022-038-Fonguh

**Status: Approved**

Anticipated Start Date: 06/15/2023

Anticipated Completion Date: 12/18/2023

Research classification: School [Leadership: School climate]

Requested research results on:

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>This study investigates how APs enact their leadership to promote a sense of belonging among students in secondary schools. It is well documented in the research that students' sense of belonging predicts motivation, engagement, and achievement (Goodenow, 1993; Cemalcilar, 2010; Renick &amp; Reich, 2021; Sánchez et al., 2005). Despite these promising results, nearly a third of students' lack of belonging at school remains a significant educational challenge (OECD, 2019; Allen et al., 2022). Because assistant principals work directly with students, teachers, and families, they can play a critical role in improving students' sense of belonging and academic, emotional, and behavioral outcomes (Goldring et al., 2021).</p> <p>While research has overwhelmingly portrayed the assistant principalship as a steppingstone to the principalship, many APs will never become principals for obvious reasons. The question then is, how can this position be leveraged for school improvement, particularly when it comes to enhancing achievement through a positive school climate and sense of belonging? Assistant principals can contribute greatly to creating conditions that support a greater sense of belonging and student engagement. However, this will require a fundamental shift in the traditional roles and responsibilities previously held by assistant principals.</p> <p>Because of its commitment to making schools places of belonging for all students and families, Granite School District (GSD) launched a program in the 2022-2023 school year to collect students' feedback about their experiences to help the district adapt to current needs. GSD set a goal that by the end of the 2022-2023 academic year, at least 85% of students in grades 3-12 will report a measure for sense of belonging as a baseline for future review (GSD Strategic Plan). To accomplish this goal, GSD schools will implement tier-one social skills and disposition instruction and administer the Panorama Student Success Survey to monitor student wellbeing. Schools will utilize the Panorama system to access disaggregated critical indicators to inform decisions regarding building-level systems of support.</p> <p>Based on the survey results, this study will identify schools where students are reporting a high sense of belonging and investigate the contributions of assistant principals in creating the conditions for students to feel connected to the school, the challenges they encounter, and what strategies they employ to overcome them.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This study examines the leadership role of secondary assistant principals in creating a positive school climate that fosters students' sense of belonging. The following questions will guide this study: 1) How do APs enact their leadership to create a sense of belonging among students in secondary schools? 2) What challenges do APs face in creating a sense of belonging, and what leadership strategies do they employ to overcome them?</p> <p>To answer these questions, this study will utilize a qualitative case study design (Denzin &amp; Lincoln, 2011) to investigate AP leadership practices that foster students' sense of belonging in a natural setting. A qualitative design is selected because of its potential to "answer questions about experience, meaning, and perspective, most often from the participant's standpoint" (Hammarberg et al., 2016, p. 2).</p> <p>As is recommended when conducting qualitative research (Merriam, 1998), the data collection and analysis will co-occur. As part of my data analysis, I will analyze the interview data for promising insights, patterns, and/or concepts (Creswell, 2013; Merriam, 1998; Yin, 2014). I will utilize different coding cycles, from descriptive coding by summarizing the essential topics of the interview transcript in words and short phrases to second-cycle coding to establish a more meaningful construction of categories and themes reflecting the purpose of the study (Saldaña, 2013).</p> <p>By carefully reviewing the data and the formal process of coding them, I will notice themes or patterns and note them in my analytic memos. I will take the emerging categories apart through memoing, comparing, and identifying relationships (Charmaz, 2014) to assemble similar codes and create themes that run through the data (Saldaña, 2009). Also, memo writing will allow me to elaborate on these codes and refine my ideas by member checking and doing the necessary revisions that may constitute the first draft.</p> <p><b>Describe your research method(s)</b> The inclusion criteria for this study are (1) secondary schools where students report a high sense of belonging and (2) schools with an assistant principal who has served in that position for at least two years. I will send an email invitation to APs who meet the above criteria to participate in the study. I will follow up with those who respond favorably to the invitation</p>

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	<p>and secure their consent to participate in the study. Once they sign their return consent letter, I will contact them to set up interview appointments. I plan on selecting five assistant principals for this study. In addition to the five APs, I will also interview their principals since I am interested in getting their perspectives on how they empowered their APs to promote a positive school climate and a stronger sense of belonging for students.</p> <p>The data for this study will be collected through semi-structured interviews. Interviews lend crucial insight into human actions and affairs and are a critical source of case study evidence (Yin, 2014). I plan to conduct three in-depth semi-structured interviews with each of the APs to better understand their practices (Barbour, 2014; Creswell, 2013) and one interview with the principals. The first interview will focus on AP role in the school, their leadership philosophy related to students, and their need for belongingness. The second interview will focus on the role of the assistant principal in creating a sense of belonging. The third interview will examine the opportunities, challenges, and strategies APs employ to create belongingness. Interviews will be audio-recorded and transcribed for analysis.</p> <p>I plan to conduct these interviews during the summer of 2023, specifically between June and August. This will allow enough time for data analysis, writing/editing, and capstone defense in the fall (from September to December)</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.</p>	<p>Assistant principals perform multiple roles, yet limited evidence exists about whether and how APs contribute to school improvement, particularly when it comes to creating a positive school climate or creating conditions to enhance students' connection with the school (Goldring et al., 2021). By refocusing attention on APs, I hope this study will yield valuable insight into how APs directly impact students' schooling experiences and, ultimately, their learning. Students with a stronger sense of belonging at school are more likely to attend regularly, engage in prosocial behaviors, have higher motivation, and achieve at higher rates. I hope to find direct evidence of AP leadership that connects to the above variables.</p> <p><b>Results:</b> [insert here]</p>
<p><b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.</p>	<p>The results of this study will be presented in aggregate form to the district and could be used to inform district-wide priorities, professional learning, and leadership support. Also, this study will contribute to the broader field by refocusing attention on the role of assistant principals and their leadership practices that contribute to a positive school climate. Further understanding of the challenges APs face in enacting leadership that fosters students' sense of belonging and the strategies they employ to overcome them will inform future preparation and practice of APs.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Not applicable</p>
<p><b>Schools requested</b></p>	<p>5 schools to be determined by student reports of sense of belonging on the Panorama Survey</p>

**Granite School District**  
 Research Applications During the 2022-2023 School Year

High School Data Science Curricula in Utah: Understanding Implementation

Investigator: Joanna Schiffman

Granite administrator or teacher: No

IRB: University of Chicago

Proposal ID: 2022-039-Schiffman

**Status: Approved**

Anticipated Start Date: 08/01/2023

Anticipated Completion Date: 06/01/2024

Research classification: Curricula [Math and sciences: Science programs]

Requested research results on:

<p><b>Describe the purpose of your research.</b>          What concern, problem, or curiosity did your research investigate?</p>	<p>The Utah data science pilot presents a rare opportunity to ask consequential questions about data science education in practice. Utah is one of only a few states to offer a data science course in high school. This study will be one of the first research projects to systematically examine the curricula being used in high school data science classrooms and how the data science courses are implemented by teachers and experienced by students.</p> <p>The purpose of this study is to contribute to the understanding of (a) high school data science curricula, (b) teachers' experiences selecting and using the curricula (c) key supports and barriers affecting the implementation of the curricula, and (d) students' experiences with data science.</p> <p>This research project is funded by the Valhalla Foundation.</p>
<p><b>Describe your research method(s).</b>          Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>This study will explore the following research questions:</p> <ol style="list-style-type: none"> <li>1. What are the core components of each curriculum being used in Utah data science classes? To what extent are the curricula similar and different?</li> <li>2. To what extent are the curricula implemented?</li> <li>3. What factors support and inhibit the implementation of high school data science curricula implementation?</li> <li>4. What influenced students' decisions to enroll in a data science course and what can we learn from them about prerequisite preparation and support for learning data science?</li> </ol> <p>This qualitative study will focus on the implementation of high school data science courses. We will not measure student or teacher outcomes. We will use a component-based approach to doing research that focuses on identifying the key parts of curricula, the extent to which the parts are implemented, and the contexts and conditions that affect their implementation.</p> <p><b>Describe your research method(s)</b>          All teachers participating in the Utah data science pilot will be invited to participate in the research study. Data science teachers will be interviewed four times throughout the school year. Interviews will take place over Zoom. During the interviews, the researcher will use a semi-structured interview protocol to ask the teachers about their experiences implementing the curricula and about supports and barriers that are impacting implementation. In addition, during some interviews, the researcher will ask the teachers about their motivation for teaching the course and selecting the specific curriculum they selected.</p> <p>The teachers will also be invited to participate in a focus group with other teachers from the state who are using the same data science curriculum. The focus groups will take place over Zoom. Teachers will be asked to reflect on their experience using the curriculum, questions they have about the curriculum, and supports and barriers that impact implementation.</p> <p>If the district, school administration, and teacher give their approval, students from the data science course might be invited to participate in two focus groups. Focus groups will take place either during the school day or immediately after school, in the students' school. Focus groups will include between 4 and 8 students. During the focus groups, students will be asked to reflect on why they enrolled in data science, what their experience in the course has been, how prepared they felt coming into the course, and what types of support they are receiving or lacking. The first focus group will occur during the first quarter of the school year and the second focus group will occur during the last quarter of the school year.</p> <p>All interviews and focus groups will be audio recorded.</p> <p>If the district, school administration, and teacher give their permission, researchers might ask to observe a data science class. During the observations, researchers will take written notes. Researchers will not take note of any identifiable information about students.</p> <p>Teachers will be compensated with \$1000 (\$500 at the start of the year and \$500 at the end of the year) for their participation.</p>

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	Pending district and school approval, students will be compensated with a \$15 Amazon store card for each focus group in which they participate.
<b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to what you were anticipating.	As this is an implementation study, we do not have specific hypotheses about what we expect to find. The goal of the study is to identify components of existing data science curricula and to describe how data science courses are implemented. We also intend to identify supports and barriers that impact the implementation of the course.  Results: [insert here]
<b>Benefit to Granite School District.</b> Describe how your research will benefit Granite School District.	This study is designed to help the field learn more about data science curriculum implementation and the factors that contribute to and inhibit that implementation during a pilot. The study results can be used to help teachers, administrators, and policymakers in Granite School District, the state of Utah, and throughout the country select curricula as well as teach and support data science education in the future.  Data science is a quickly growing field and understanding how to best prepare high school students to succeed in higher ed data science courses and in data science careers is becoming more and more essential.  Researchers have been working closely with Lindsey Henderson, the Secondary Math Specialist for the state of Utah, on this project.
<b>How will parental permission be obtained?</b>	The teacher will be asked to distribute an information letter and an electronic consent form to students' parents/legal guardians. Only students who have parental consent will be invited to participate in focus groups. Printed permission forms can be provided if needed.
<b>Schools requested</b>	High Schools: Kearns, Cottonwood, Granger, Taylorsville, Olympus



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## Research Applications During the 2022-2023 School Year

### Differentiation in middle school for Microsoft Office applications

Investigator: Ben Boeve

Granite administrator or teacher: Yes

IRB: Western Governors University

Proposal ID: 2022-040-Boeve

**Status: Approved**

Anticipated Start Date: 08/21/2023

Anticipated Completion Date: 09/29/2023

Research classification: Technology, School, and Out-of-School Strategies [Implementation using technologies: Technology with high school students]

Requested research results on:

<p><b>Describe the purpose of your research.</b> What concern, problem, or curiosity did your research investigate?</p>	<p>Seventh grade students come into my digital literacy classes having little experience with word processing, spreadsheet, or presentation software applications. These are applications that they will still use well after their time in middle school has been completed. Students will continue to use these application programs for the four years they are in high school. If they chose to continue to college, they will also use in college. Professionally too, many students will still use programs such as Word, Excel and PowerPoint in their various careers. Different students come to my classes with different levels of background knowledge in these applications. These differences in prior knowledge, ability level and language skills make for a very challenging learning environment, trying to meet the needs of all the students. As a potential solution, the intervention applied will be a variant of differentiation utilizing our district LMS and its tools. The element of differentiation that would be applied would be personalized, self-paced, self-directed, mastery-based instruction and learning. There are features in Canvas that help facilitate this.</p>
<p><b>Describe your research method(s).</b> Provide a brief description of the participants, the timeline of what was done, and the data that was collected.</p>	<p>Data will be collected through three primary instruments. The three primary instruments will be a series of common formative assessments (CFAs). There will be three CFAs and each will pertain to a specific Microsoft Office Application. For instance, one will cover Word, another Excel and the final CFA will encompass PowerPoint. There will be a pre and post assessment for each CFA. Which will result in a total of six CFAs that will be completed by students. The pre and post will be identical to help determine if any student growth occurred after students had finished working through the instructional content in the modules. Each CFA will consist of 15 questions, all selected response. All CFAs will be administered through our district formative assessment platform, School City.</p> <p>This study will employ quantitative methods to gather data and the analysis will involve descriptive statistics. The formative assessment platform that students will use for the pre and post assessments offers several data analysis tools. Test results that can be reported include the number of students tested and the average percentage correct (mean) for both their pre and post assessments. This will help to determine what impact the self-paced instruction had on students. An item analysis will also be run for all items in the assessments. The item analysis will report the type of question, the percentage of students who got the answer correct and will breakdown by percent what students selected as an incorrect response. For example, if on a multiple-choice item, if the correct response were A, the report would not only show what percent of students selected A, but also what percent selected B, C, and D as their responses. The item analysis results would be compared for both pre and post assessments to ascertain the effect of personalized learning on students ability to perform basic tasks using Microsoft Office applications.</p> <p><b>Describe your research method(s)</b> Participants will be recruited on a voluntary basis, in the classroom. Probably verbally. Participants will also need to obtain written consent from their parent(s) or guardian(s). Each portion of the Microsoft Office Application unit will occur for one week of instructional time. Each week includes 230 instructional minutes or approximately four hours of instructional time per week. One week for Word, one week for Excel and one week for PowerPoint for a total of three weeks, approximately 15 instructional days. This will include students taking the pre and post assessments for each component of Office. All the pre and post assessments will be administered through the formative assessment platform our school district uses, School City. Students will access on their Chromebooks. Each pre assessment will be placed at the beginning of each module, prior to the Office application for the given module. For instance, before students begin the Word module they will take the pre assessment for Word. Before they begin the Excel module, they will take the pre assessment for Excel. Similarly, the post assessment will be the final item to be completed in each module. There is some additional time built into the timeframe to accommodate students being absent, shortened schedules on Fridays, school wide events causing potential disruptions etc.</p>
<p><b>Summarize your expectations and the results.</b> Provide a brief description of your findings and compare those to</p>	<p>What is the effect of self-directed, personalized instruction within a mastery-based learning framework, on seventh grade digital literacy students and their ability to perform basic tasks using Microsoft Office applications such as Word, Excel, and PowerPoint? I will be investigating if any growth occurred as a result of the self-directed, self-paced personalized differentiated instruction.</p> <p><b>Results:</b> [insert here]</p>

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<p>what you were anticipating.</p>	
<p><b>Benefit to Granite School District.</b>          Describe how your research will benefit Granite School District.</p>	<p>The course that is being used for the study, Digital Literacy, is a mandated course for all middle school students in the state of Utah. Which means all junior highs in Granite School District have students taking the course. Therefore any potential benefit students derive from the intervention may also be applicable at other school sites outside of Valley.</p>
<p><b>How will parental permission be obtained?</b></p>	<p>Parental permission forms.</p>
<p><b>Schools requested</b></p>	<p>Valley Junior High School</p>