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## **Preview of Award 2221230 - Annual Project Report**

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## Cover

Federal Agency and Organization Element to Which Report is Submitted:	4900
Federal Award or Other Identifying Number Assigned by Agency:	2221230
Project Title:	Supporting Degree Completion in Engineering and Engineering Technology Programs through Experiential Learning and Self-Directed Professional Development
PD/PI Name:	Jiayue Shen, Principal Investigator Andrew Cotronea, Co-Principal Investigator Sivapalan Gajan, Co-Principal Investigator Edmond Rusjan, Co-Principal Investigator
Recipient Organization:	SUNY Polytechnic Institute
Project/Grant Period:	02/15/2023 - 01/31/2029
Reporting Period:	02/15/2023 - 01/31/2024
Submitting Official (if other than PD/PI):	Jiayue Shen Principal Investigator
Submission Date:	01/08/2024
Signature of Submitting Official (signature shall be submitted in accordance with agency specific instructions)	Jiayue Shen

## Accomplishments

### \* What are the major goals of the project?

1. Recruitment and Enrollment: Increase enrollment in the College of Engineering and Engineering Technology (CME&ET) by 10% through awarding 20 NSF scholarships to academically talented and financially needy students.
2. First-Year Success and Retention: Enhance the first-year experience and retention rates by implementing support mechanisms like a specialized First-Year Seminar (FYS) course, one-on-one advisement, faculty mentoring, and enhanced mathematical support.
3. Identity Formation and Experiential Learning: Foster an engineering identity among scholarship recipients through the S-STEM Scholar Series, including seminars, workshops, and experiential learning opportunities. Encourage participation in professional societies, academic webinars, and research/internships.
4. Professional Development and Career Readiness: Facilitate professional development with a self-directed fund, FE exam preparation, and collaborations with government/industry for internships/jobs.
5. Retention, Graduation, and Employment: Improve graduation rates (75% in four years, 100% in six years) and ensure employment or graduate studies within a year of graduation.
6. Sustainable Implementation and Dissemination: Establish sustained practices based on program success. Disseminate knowledge through presentations, publications, and sharing best practices to enhance low-income student persistence in engineering.

### \* What was accomplished under these goals and objectives (you must provide information for at least one of the 4 categories below)?

Major Activities: Objective 1: Enhance economic mobility for low-income, academically talented students through enrollment in the SUNY Poly CME&ET programs, preparing them for success

in the workforce.

1. Strengthen collaboration with Admissions and Financial Aid, ensuring a targeted approach for scholar eligibility screening.
2. Conduct focused recruitment during strategic events, including the annual open house and specific outreach initiatives.
3. Develop and maintain an informative and user-friendly S-STEM scholarship section within the existing SUNY Poly website.
4. Prioritize the development of the First-Year Seminar (FYS) course curriculum, emphasizing its relevance to S-STEM goals.
5. Revise and streamline recruitment materials, placing a strong emphasis on clarity and accessibility. Initiate scholarship applications through targeted outreach.
6. Establish early contact with instructors for fundamental engineering (FE) exam review courses, ensuring alignment with S-STEM objectives.
7. Maintain regular but focused meetings with the external evaluator, emphasizing specific feedback on activities related to economic mobility.

Objective 2: Implement literature-supported initiatives to improve retention and engagement of low-income students, particularly during the first year in a CME&ET program.

1. Conduct monthly meetings with the external evaluator, emphasizing discussions on retention strategies and engagement initiatives.
2. Host the 2023 KOBO event, with a heightened focus on collecting data related to student retention and engagement.
3. Plan and initiate the 2024 KOBO event, incorporating insights from previous evaluations for continuous improvement.
4. Conduct pre-interviews with key partners, specifically addressing their perspectives on student retention and engagement.
5. Strengthen connections with Civil Engineering (CE) and Mechanical Engineering (ME) FE exam review course instructors, focusing on collaborative efforts to enhance student engagement.

Objective 3: Implement literature-supported initiatives throughout the curriculum to increase self-identification as an engineer for S-STEM scholars in our CME&ET program.

1. Prioritize the development of the First-Year Seminar (FYS) course curriculum, ensuring its alignment with self-identification goals.
2. Share the FYS curriculum for team review, with a specific focus on self-identification elements and feedback.
3. Collaborate closely with the four program coordinators (CE, ME, CET, MET), emphasizing the infusion of self-identification elements into the curriculum.
4. Analyze transfer students' transfer reasonings for the past three years strategically, focusing on effective methods to bridge the math gap.

5. Obtain IRB approval for pre-survey questions, ensuring a targeted approach to gather insights into self-identification challenges faced by S-STEM cohorts.

Objective 4: Foster self-directed professional development and continuing education in the engineering profession by providing financial support for activities that S-STEM scholars may otherwise not afford.

1. Finalize the selection interview process, emphasizing the identification of candidates with a strong inclination towards self-directed professional development.
2. Review syllabi for critical math courses, ensuring a targeted approach to address math level gaps. Explore innovative events that align with the project's goals.
3. Prepare access to mastery-based Mobius Learning Modules, strategically aligning them with the identified needs and preferences of S-STEM scholars.
4. Explore and identify FE test preparation materials to enhance student awareness of professional development resources.

Specific Objectives:

Objective 1: Enhance economic mobility for low-income, academically talented students through enrollment in the SUNY Poly CME&ET programs, preparing them for success in the workforce.

1. Strengthen collaboration with Admissions and Financial Aid for targeted recruitment.
2. Develop a comprehensive (Adapt, Augment or Supplement) First-Year Seminar (FYS) curriculum tailored to the S-STEM program.
3. Enhance recruitment materials for more effective outreach and engagement.
4. Establish meaningful connections with key staff and faculty members for streamlined processes.
5. Monitor project progress and receive feedback through regular monthly external evaluator meetings.

Objective 2: Implement literature-supported initiatives to improve retention and engagement of low-income students, particularly during the first year in a CME&ET program.

1. Monitor project progress collaboratively with the external evaluator, ensuring a focus on retention strategies.
2. Successfully host the KOBO event, emphasizing data collection for evaluating student engagement.
3. Conduct pre-interviews with key partners within SUNY Poly, addressing retention perspectives.
4. Strengthen connections with CE and ME FE exam review course instructors for improved student engagement.

Objective 3: Implement literature-supported initiatives throughout the curriculum to increase self-identification as an engineer for S-STEM scholars in our CME&ET program.

1. Develop an inclusive FYS curriculum, prioritizing elements for self-identification as engineers.

2. Collaborate with program coordinators for enhanced inclusivity in the overall curriculum.
3. Identify transfer students by analyzing data from the past three years, aiming to provide targeted support in addressing self-identification gaps.
4. Tailor the pre-survey question with external evaluators for a comprehensive assessment.

Objective 4: Foster self-directed professional development and continuing education in the engineering profession by providing financial support for activities that S-STEM scholars may otherwise not afford.

1. Enhance preparation of the selection interview process for identifying self-directed candidates.
2. Collaborate on MAT course content for effective delivery and alignment with project goals.
3. Provide navigation and quotes for online mastery-based Mobius Learning Modules, ensuring accessibility for all S-STEM scholars.

#### Significant Results:

Objective 1: Enhance economic mobility for low-income, academically talented students through enrollment in the SUNY Poly CME&ET programs, preparing them for success in the workforce.

1. The collaboration with Admissions and Financial Aid has proven effective in streamlining applicant identification and selection processes.
2. The First-Year Seminar (FYS) curriculum's development has progressed significantly, aligning with the tailored needs of S-STEM scholars.
3. Recruitment materials have been successfully completed, contributing to a notable influx of 7 scholarship applications.
4. Positive feedback from the FE review course instructors indicates successful connections and engagement.
5. Ongoing monitoring and evaluation demonstrate a commitment to continuous improvement and program effectiveness.

Objective 2: Implement literature-supported initiatives to improve retention and engagement of low-income students, particularly during the first year in a CME&ET program.

1. The successful hosting of the KOBO event has provided valuable insights and data, showcasing positive outcomes for participant engagement.
2. Pre-interviews with key partners have yielded positive results, emphasizing effective collaboration and support.
3. Establishing connections with course instructors has strengthened academic ties, fostering a supportive learning environment.
4. Strengthened collaboration across various elements of the initiative has contributed to overall program success.

Objective 3: Implement literature-supported initiatives throughout the curriculum to increase self-identification as an engineer for S-STEM scholars in our CME&ET program.

1. Significant progress in developing an inclusive FYS curriculum
2. Enhanced collaboration with program coordinators highlights a concerted effort to align initiatives with broader program goals.
3. External evaluator insights into interview questions contribute to the ongoing refinement of selection processes.
4. Strengthened inclusivity throughout the curriculum creates a supportive and inclusive learning environment.

Objective 4: Foster self-directed professional development and continuing education in the engineering profession by providing financial support for activities that S-STEM scholars may otherwise not afford.

1. Improved preparation for the selection interview process ensures a thorough and fair evaluation of candidates.
2. Collaborative efforts for effective MAT course delivery create an environment conducive to academic success.
3. Progress in online course navigation and module quotes ensures seamless access to educational resources.

Key outcomes or Other achievements:

Objective 1: Enhance economic mobility for low-income, academically talented students through enrollment in the SUNY Poly CME&ET programs, preparing them for success in the workforce.

1. Successful Collaboration with Admissions and Financial Aid: This aligns with the objective of enhancing economic mobility by ensuring a streamlined process for identifying and selecting eligible applicants.
2. Development of First-Year Seminar (FYS) Curriculum: Progress in developing the FYS curriculum contributes to the academic preparedness of scholars, aligning with the objective of preparing them for success in the workforce.
3. Positive Feedback from Fundamental Engineering (FE) Review Course Instructors: Engaging with FE review course instructors ensures scholars are well-prepared for their academic journey, contributing to their success in the workforce.
4. Completion of Recruitment Materials: The successful completion of recruitment materials supports the goal of enhancing economic mobility by attracting a diverse pool of talented students.

Objective 2: Implement literature-supported initiatives to improve retention and engagement of low-income students, particularly during the first year in a CME&ET program.

1. Successful Know One Be One (KOBO) Event: The positive outcomes from the KOBO event contribute to improving retention and engagement during the critical first year, aligning with this objective.
2. Positive Feedback from Pre-Interviews with Key Partners: Establishing connections and receiving positive feedback from key partners supports initiatives for improving retention and engagement.

Objective 3: Implement literature-supported initiatives throughout the curriculum to increase self-identification as an engineer for S-STEM scholars in our CME&ET program.

1. Progress in Developing an Inclusive FYS Curriculum: The development of an inclusive FYS curriculum directly supports the objective of increasing self-identification as an engineer among S-STEM scholars.
2. Enhanced Collaboration with Program Coordinators: Collaboration with program coordinators contributes to fostering an inclusive environment throughout the curriculum.
3. Successful Identification of Transfer Students: Identifying transfer students for focused support aligns with the objective of enhancing self-identification and inclusivity.

Objective 4: Foster self-directed professional development and continuing education in the engineering profession by providing financial support for activities that S-STEM scholars may otherwise not afford.

1. Progress in Online Course Navigation: Ensuring progress in online course navigation supports the continuous education and accessibility of resources for S-STEM scholars.

**\* What opportunities for training and professional development has the project provided?**

The project has significantly contributed to the training and professional development of the program's future scholars through various initiatives, offering a comprehensive approach to enhance their skills and readiness for the workforce.

One key avenue for training is the S-STEM Training via FYS Seminar Course. The objective of this initiative is to introduce scholars to the core principles and expectations of the S-STEM program, fostering a thorough understanding of their roles and responsibilities. This is achieved through the integration of S-STEM-specific content within the First-Year Seminar (FYS) curriculum, including modules covering program goals, scholarship requirements, and available resources for scholars. The outcomes include scholars gaining a foundational understanding of the S-STEM program, increased awareness of program expectations and opportunities, and the development of a sense of community among scholars.

Another significant opportunity for professional development is the Online Access to Mastery-Based Mobius Learning Modules for S-STEM Scholars. The primary objective here is to provide scholars with self-directed, online modules aimed at enhancing their mathematical skills and preparing them for success in the math placement test and subsequent engineering coursework. The activities involve the preparation and provision of access to Mobius Learning Modules covering critical math courses. The outcomes encompass scholars having flexible, online resources for mastering essential mathematical concepts, improved self-directed learning skills, and enhanced preparedness for the math placement test.

These initiatives collectively contribute to a holistic approach to training and professional development, aligning with the overarching goals of the S-STEM project. By addressing both foundational program understanding and academic preparedness, the project ensures that scholars are well-equipped for success in their academic and professional journeys.

**\* Have the results been disseminated to communities of interest? If so, please provide details.**

Yes, the results of the S-STEM Scholarship program at SUNY Poly have been disseminated to communities of interest. The year 1 external evaluator report has been posted on the S-STEM scholarship website at SUNY Poly. This allows key audiences, including the academic community, potential applicants, and other interested parties, to access and review the outcomes, progress, and insights gained during the program's initial implementation phase. Posting the report online ensures transparency and accessibility, fostering engagement and awareness among the target audience and the broader community interested in the program's development and impact.

**\* What do you plan to do during the next reporting period to accomplish the goals?**

1. Recruitment and Enrollment:

- Continue collaboration with Admissions and Financial Aid for effective recruitment and scholar eligibility screening.

- Enhance the recruitment strategy during the annual open house event and KOBO recruitment event, emphasizing the unique opportunities provided by the S-STEM Scholarship program.
- Maintain and update the S-STEM scholarship program website, ensuring it remains a comprehensive and accessible resource.
- Recruit initial 10 scholar cohort from the first-year students.
- Support transfer student recruitment activities by visiting colleges with high transfer rates.

#### 2. First-Year Success and Retention:

- Finalize the First-Year Seminar (FYS) course curriculum for the incoming cohort.
- Implement the specialized First-Year Seminar (FYS) course, incorporating feedback and improvements from ongoing evaluation.
- Give the new S-STEM cohort access to Mobius Learning Modules covering critical math courses and continue providing enhanced mathematical support to students, addressing any emerging challenges.
- Monitor and assess the effectiveness of one-on-one advisement and faculty mentoring, making adjustments as needed.
- Collect and analyze data on first-year success and retention rates for continuous improvement.
- Strengthen connections with instructors for fundamental engineering courses, ensuring alignment with program goals.

#### 3. Identity Formation and Experiential Learning:

- Organize and conduct the S-STEM Scholar Series, including seminars, workshops, and experiential learning opportunities.
- Encourage active participation in professional societies, academic webinars, and research/internship opportunities.
- Collect feedback from scholarship recipients on their experiences and identity formation within the engineering field.

#### 4. Professional Development and Career Readiness:

- Facilitate the self-directed fund for S-STEM scholars, ensuring accessibility and effective use of resources.
- Provide support and resources for FE exam preparation.
- Strengthen collaborations with government and industry partners for internship/job opportunities.
- Monitor and assess the impact of professional development initiatives on the career readiness of scholars.

#### 5. Retention, Graduation, and Employment:

- Implement strategies to improve graduation rates, with a focus on the four-year target.
- Begin tracking the post-graduation pathways of scholars, ensuring a high rate of employment or successful enrollment in graduate studies.
- Address any identified challenges in the retention and graduation process.

#### 6. Sustainable Implementation and Dissemination:

- Identify sustainable practices based on the successes and lessons learned during the program.
- Prepare presentations and publications to disseminate knowledge and best practices.
- Share insights and experiences through various channels to enhance low-income student persistence in engineering beyond the program's duration.



**Supporting Files**

Filename	Description	Uploaded By	Uploaded On
12-23-2023 SUNY Poly S-STEM Scholars Year 1 Annual Evaluation Report.pdf	This is the Year 1 Annual Evaluation Report provided by the external evaluator.	Jiayue Shen	01/08/2024

**Products****Books****Book Chapters****Inventions****Journals or Juried Conference Papers**

View all journal publications currently available in the [NSF Public Access Repository](#) for this award.

The results in the NSF Public Access Repository will include a comprehensive listing of all journal publications recorded to date that are associated with this award.

**Licenses****Other Conference Presentations / Papers****Other Products****Other Publications****Patent Applications****Technologies or Techniques****Thesis/Dissertations****Websites or Other Internet Sites**

*SSTEM scholarship advertisement website*

<https://sunypoly.edu/admissions/financial-aid/scholarships.html>

We initially created an advisement website to offer prospective students detailed information about this opportunity. You can also find this information on the College of Engineering's website. A more comprehensive website will be developed as the S-STEM scholarship program expands, providing enhanced information and resources for prospective students.

**Participants/Organizations****What individuals have worked on the project?**

Name	Most Senior Project Role	Nearest Person Month Worked
Shen, Jiayue	PD/PI	1
Cotronea, Andrew	Co PD/PI	0
Gajan, Sivapalan	Co PD/PI	0

Name	Most Senior Project Role	Nearest Person Month Worked
Rusjan, Edmond	Co PD/PI	0

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**Full details of individuals who have worked on the project:**
**Jiayue Shen****Email:** shenj@sunypoly.edu**Most Senior Project Role:** PD/PI**Nearest Person Month Worked:** 1

**Contribution to the Project:** overseeing the program administration and management including serving as the program's liaison to the NSF and completing reporting requirements, chairing the S-STEM selection committee, maintaining S-STEM scholar records, serving as instructor of record for the S-STEM FYS course, serving as the dedicated 1st year and transfer S-STEM Engineering academic advisor, serving as a potential mentor, organizing retention and identity events in the S-STEM Scholar series, and serving as the primary point of contact for faculty mentors, institutional research initiatives, and the external evaluator.

**Funding Support:** NA**Change in active other support:** No**International Collaboration:** No**International Travel:** No

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**Andrew Cotronea****Email:** cotrona@sunypoly.edu**Most Senior Project Role:** Co PD/PI**Nearest Person Month Worked:** 0

**Contribution to the Project:** Mr. Cotronea is responsible for will serving on the S-STEM Scholar selection committee, collaborating where appropriate on STEM activities, and organizing the S-STEM Scholar Seminar series experiential learning track events in collaboration with CSTEP as appropriate. He is also responsible collecting the SSTEM scholarship applications.

**Funding Support:** NA**Change in active other support:** No**International Collaboration:** No**International Travel:** No

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**Sivapalan Gajan****Email:** gajans@sunypoly.edu**Most Senior Project Role:** Co PD/PI**Nearest Person Month Worked:** 0

**Contribution to the Project:** Dr. Gajan is responsible for serving on the S-STEM selection committee, serving as academic adviser to the engineering technology students during their first year and to incoming transfer students, serving as a potential mentor, collecting and coordinating NCEES FE Examination records, organizing the S-STEM Scholar series Professional Development Events, and serving as the point of contact for requests for professional development funds. He is also responsible for data management of this project.

**Funding Support:** NA**Change in active other support:** No

**International Collaboration:** No

**International Travel:** No

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**Edmond Rusjan**

**Email:** edmond@sunyit.edu

**Most Senior Project Role:** Co PD/PI

**Nearest Person Month Worked:** 0

**Contribution to the Project:** Professor Rusjan will be responsible for serving on the S-STEM selection committee in year 1, ensuring coordination of summer mathematics initiatives, and advising the S-STEM team on student performance in core mathematics and physics courses.

**Funding Support:** NA

**Change in active other support:** No

**International Collaboration:** No

**International Travel:** No

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**What other organizations have been involved as partners?**

Nothing to report.

**Were other collaborators or contacts involved? If so, please provide details.**

Nothing to report

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## Impacts

**What is the impact on the development of the principal discipline(s) of the project?**

In the first year of the S-STEM project, while still in its initial implementation phase, there are indications that the project has made an impact or has the potential to impact the base of knowledge, theory, research, and pedagogical methods in the principal disciplinary field(s).

Knowledge and Theory:

1. Expanded Collaboration for Enrollment and Funding: The collaboration with Admissions and Financial Aid has expanded pathways for providing funding and enrollment support to low-income, academically talented students, contributing empirical data and a theoretical foundation to enrollment and funding strategies in the field.
2. Design of the First-Year Seminar Curriculum: The development and implementation of the first-year seminar curriculum have provided a practical and targeted course design model for the field of engineering and engineering technology, potentially becoming a theoretical framework for similar projects.
3. Literature-Supported Retention Initiatives: The literature-supported initiatives have promoted the participation and retention of low-income students in the first year of engineering and engineering technology programs, offering practical experience to support theories of student retention in the field.

Research Methods and Pedagogical Approaches:

1. External Evaluation and Project Monitoring: Utilizing external evaluation and project monitoring, a feedback and improvement mechanism has been established, offering an innovative paradigm for research methods, emphasizing the importance of real-time data collection aligned with project goals.
2. Professional Development and Continuing Education: Improvements in the selection interview process, exploration of innovative events, and collaborative efforts for effective course content delivery contribute to new research methods and

pedagogical approaches in engineering professional development and education.

3. Online Course Navigation and Module Design: The provision of Mastery-Based Mobius Learning Modules has pioneered discussions on online course navigation and module design, presenting an effective online learning platform for future similar projects.

Overall, the initial outcomes of the S-STEM project demonstrate potential impacts on the knowledge, theory, and pedagogical methods in the principal disciplinary field(s). Through empirical research on the enrollment, funding, and support of low-income students, the project is poised to provide valuable insights and guidance for practices and policy-making in the field.

### **What is the impact on other disciplines?**

The findings, results, and techniques developed through the S-STEM program at SUNY Poly have demonstrated a multifaceted impact extending beyond the engineering discipline, influencing various fields in academia and potentially shaping broader educational practices. The external evaluator's report indicates several key areas of impact:

1. Innovative Recruitment and Collaboration Models: The collaborative model established with the Admissions and Financial Aid departments showcases an approach to recruiting and screening eligible applicants. This model, focused on supporting economically disadvantaged students, presents a transferable framework that other disciplines can adopt to enhance diversity and inclusion within their programs.
2. First-Year Seminar (FYS) Curriculum Design: The innovative design of the First-Year Seminar (FYS) curriculum, aimed at promoting self-identification and engagement in engineering, carries transferable principles. The emphasis on inclusivity and tailored support during the crucial first year can serve as a model for other disciplines seeking to improve student retention and foster a sense of belonging.
3. Exploration of Mastery-Based Online Learning: The exploration of mastery-based Mobius Learning Modules for S-STEM scholars introduces an innovative approach to addressing subject-specific challenges, especially in foundational mathematics courses. This method of online learning has the potential to influence diverse academic domains, providing a personalized and effective learning experience for students facing similar challenges in various subjects.
4. Collaborative Insights: The collaborative nature of the project, evident in collaborations with key partners and instructors from different engineering courses, provides a valuable model for collaborative engagement. This collaborative approach can inspire other disciplines to seek partnerships that enhance the overall educational experience for students.
5. Focus on Diversity and Inclusivity: The overarching emphasis on diversity, inclusivity, and the success of scholars beyond the program's duration sets a noteworthy standard. This focus on holistic student development is transferable to other disciplines striving for comprehensive educational experiences that extend beyond academic content.

In conclusion, the impact of the S-STEM Scholarship program at SUNY Poly reaches beyond the confines of engineering, offering insights and practices that can be adapted by other disciplines. The project's objectives, if successful in addressing emerging challenges, promoting inclusivity, and fostering collaboration may provide valuable insights that may be extrapolated to augment the broader landscape of higher ed. and student support.

### **What is the impact on the development of human resources?**

**Recruitment and Access:** The project's collaboration with Admissions and Financial Aid has streamlined the identification and selection of academically talented students with financial need. Events like the Know One Be One (KOBO) event and the dedicated website have significantly expanded access to science, engineering, and technology education for economically disadvantaged students. This inclusive recruitment approach contributes to a diverse pool of prospective professionals entering the science, engineering and technology workforce.

**Educational Impact:** A notable and current educational impact is the development of a comprehensive First-Year Seminar (FYS) curriculum tailored to the S-STEM program. This curriculum will not only support scholars academically but also fosters self-identification as engineers.

Interdisciplinary Collaboration and Skill Enhancement: Engagement with external evaluators and collaboration with key staff and faculty members from different engineering disciplines create a collaborative and interdisciplinary learning environment. This exposure prepares scholars with specialized knowledge and essential skills for interdisciplinary teamwork—a crucial aspect of contemporary science, engineering, and technology professions.

**What was the impact on teaching and educational experiences?**

Nothing to report.

**What is the impact on physical resources that form infrastructure?**

The project has also demonstrated its influence on event spaces, as evidenced by the success of the Know One Be One (KOBO) event mentioned in the external evaluation report. This event showcases the effective utilization of physical space for recruitment and promotion activities, emphasizing the project's impact on campus infrastructure.

**What is the impact on institutional resources that form infrastructure?**

The Know One Be One (KOBO) event, highlighted in the external evaluator's report, demonstrates the project's impact on institutional resources related to event management. Successful organization of events like KOBO involves leveraging information resources and electronic means for communication. This contributes to the establishment of efficient systems for organizing and promoting activities, reflecting positively on the institution's ability to host impactful events that align with its goals.

**What is the impact on information resources that form infrastructure?**

The Know One Be One (KOBO) event, highlighted in the external evaluator's report, showcases the project's impact on information resources related to event management. The successful organization of events like KOBO involves the development of policies and practices for effective information dissemination and program promotion. This contributes to the establishment of efficient systems for organizing and promoting activities, enhancing the institution's ability to disseminate information to a broader audience.

**What is the impact on technology transfer?**

Nothing to report.

**What is the impact on society beyond science and technology?**

Nothing to report.

**What percentage of the award's budget was spent in a foreign country?**

Nothing to report.

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## Changes/Problems

**Changes in approach and reason for change**

Nothing to report.

**Actual or Anticipated problems or delays and actions or plans to resolve them**

During the reporting period, our SUNY Poly S-STEM project encountered a notable transition in leadership, with Dr. Carolyn Rodak passing the role of Principal Investigator to Dr. Jiayue Shen. While this change brought valuable perspectives and expertise, it also introduced the challenge of adapting to a new leadership structure.

One anticipated challenge is the adjustment period required for the team to align with Dr. Shen's vision and expectations. This may potentially lead to temporary delays in decision-making processes and project implementation. To address this, we have implemented a comprehensive onboarding plan for Dr. Shen, including orientation sessions, detailed project briefings, and regular team meetings. This proactive approach aims to expedite the acclimatization process and mitigate potential delays.

Another consideration is the reallocation of roles within the team due to the leadership transition. The addition of a new Co-PI to assume responsibilities previously managed by Dr. Shen requires careful coordination to ensure a seamless transition of duties. To tackle this challenge, we have developed a clear plan for redistributing tasks, clarified roles and responsibilities, and initiated cross-training sessions to facilitate a smooth handover of duties.

Additionally, Dr. Carolyn Rodak's decision not to claim summer salary introduces a financial consideration that requires careful planning to address potential budgetary constraints during the summer months. To mitigate any impact on project timelines, we are actively reviewing and adjusting the budget to accommodate the change in personnel costs, ensuring that project objectives are not compromised.

In summary, we recognize these anticipated challenges and are proactively implementing strategies to address them. Through effective communication, targeted training, and meticulous budget adjustments, we aim to navigate these transitions smoothly and uphold the momentum of the S-STEM project. Our commitment to flexibility and proactive problem-solving positions us to overcome these challenges and ensure the continued success of the initiative.

### **Changes that have a significant impact on expenditures**

As of now, despite the anticipated leadership change and associated adjustments, the SUNY Poly S-STEM project has continued to progress smoothly, with no significant delays encountered. The proactive measures taken to facilitate the transition, including detailed onboarding sessions for Dr. Jiayue Shen and the redistribution of roles within the team, have contributed to the project's ongoing success.

While we initially anticipated potential delays due to the leadership transition, the effective coordination and collaboration among team members have mitigated any adverse impacts. Regular communication channels, team meetings, and cross-training initiatives have ensured that everyone is aligned with the project's objectives and tasks, fostering a seamless transition.

It is essential to note that our initial concerns regarding Dr. Carolyn Rodak's decision not to claim summer salary have been carefully addressed through thorough budget reviews and adjustments. This proactive financial planning has positioned the project to manage potential challenges without compromising timelines or deliverables.

Moving forward, we remain vigilant and committed to addressing any unforeseen challenges that may arise during the course of the project. Our proactive approach to leadership changes and financial considerations reflects our dedication to ensuring the continued success and impact of the S-STEM initiative at SUNY Poly.

### **Significant changes in use or care of human subjects**

Nothing to report.

### **Significant changes in use or care of vertebrate animals**

Nothing to report.

### **Significant changes in use or care of biohazards**

Nothing to report.

### **Change in primary performance site location**

Nothing to report.

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## **Special Requirements**

**Responses to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.**

Nothing to report.