

## IITG Project Outcomes Form - Report Outcomes

### Name of person reporting outcomes

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### Email

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### IITG Project Title

2016-ESC-Whitley-Grassi-STEM Open Educational Resources (OERs)

### Have you applied for, or received additional funds? (choose all that apply):

- Have applied for additional IITG funds to extend this project

### Access Keywords: Enrollment, Diversity, Capacity, Affordability

This project continues to expand our current efforts to capitalize on SUNY faculty experience to develop OERs in STEM areas, based on the need to increase access to STEM research techniques for students learning at a distance or with other barriers to access, and to introduce STEM topics to engage and “on ramp” non-traditional and adult learners into STEM programs. As such we created OER objects that were designed to increase access and portability to scientific techniques, while supporting an instructional model that allows for further refinement, development, growth and use across SUNY and beyond. By creating materials that are free to use and remix we have made course development and student engagement more affordable.

### Completion Keywords: Completion, Persistence, Transfer, Retention

Student engagement and completion have been shown to be closely connected. In this project we worked with faculty partners and other interested faculty can gain valuable professional development as well as become versed in the use of OERs as tools to increase student engagement, support educational flexibility, and reduce barriers to STEM learning experiences. It is our hope that as these objects are integrated into their future instruction and shared more broadly we will see an impact on completion at the course level.

### Success Keywords: Applied Learning, Student Supports, Financial Literacy, Career Success

Research has shown that incorporating hands-on, field experiences with lectures has the potential to create a problem-based learning environment that engages learners in authentic scientific inquiry (e.g. Orion, 1993; Simmons et al. 2008). It is, therefore, more important than ever that our students are inspired, empowered and fully engaged in STEM learning. This project drew on the need to leverage and diversify available resources to expand access to scientific field-based research techniques through open education resources (OERs) for students, while providing faculty with a professional development opportunity. Our project supports SUNY's commitment to increase access to degree opportunities by maximizing online-enabled learning opportunities as well as the development of new approaches to learning and better utilization of shared instructional resources to improve instructional quality.

### Inquiry Keywords: Scholarship, Discovery, Innovation, Mentoring

This project has generated a lot of interest in the creation of OERs and how to effectively use them in course development. We presented at SUNY CIT and have plans for several other scholarly activities:

- Development of an article on Instructional Design models to support OER development
- Development of a second article on OER development for STEM fields
- A proposal for the international college conference on teaching and learning in Niagara falls this winter.

### Engagement Keywords: START-UP New York, Commercialization, Workforce Development, Alumni/Philanthropic Support, Community Service.

This project in addition to engaging with faculty across the SUNY system also engaged experts in STEM industries. We hope that further development of these relationships will create information and possible career pathways for students in STEM fields.

Institutionally a great deal of resources were provided by the host institution, these include: professional

services, space and technical support for a STEM OER conference, release time for several staff, hardware and software use for development of materials, and storage and distribution of digital materials just to name a few. This work has prompted conversations about pursuing a federal grant to expand this work and to broaden the impact.

**1st Choice:**

Discipline Specific Pedagogy

**Discipline Specific Pedagogy**

- STEM

**2nd Choice:**

Instructional Technologies

**Instructional Technologies**

- Open Educational Resources (OER)

**3rd Choice:**

Organizational Issues: Teaching & Learning

**Organizational Issues: Teaching & Learning**

- Learning Organization/Community (Integration Fac/Staff)

**If you would like to create a community of practice within the SUNY Learning Commons, please describe "members of your community" who would be most interested in your outcomes. Please be specific (e.g., math faculty, instructional designers, student services, registrars, administrators, accreditation or assessment specialists).**

STEM faculty, Instructional Designers

**Do you intend to create an ongoing "Community of Practice" within the SUNY Learning Commons to continue work and dialog regarding this project?**

Yes

**Overall, how successful was IITG in meeting your project goals? (You may elaborate on your response in the final question if not addressed elsewhere.)**

Very successful

**Do you wish your current abstract to be used?**

Yes

**File One Upload and Brief Description**

Program for STEM OER symposium

**File One**

- [STEM-OER-Symposium-Program-4-25-2017.pdf](#)

**File Two Upload and Brief Description**

CIT Presentation

**File Two**

- [CIT-STEM-OER-Presentation.pptx](#)

**Project Website Address (Hyperlink 1)**

<https://www.esc.edu/its/educational-technology/open-educational-resources/>

**Project Website Address (Hyperlink 2)**

<https://www.esc.edu/stem-oer-symposium/>

**Consistent with the RFP, you must indicate which Creative Commons license you intend to use.**

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