Preview of Award 1650390 - Final Project Report

Cover

Federal Agency and Organization Element to Which Report is Submitted:	4900
Federal Grant or Other Identifying Number Assigned by Agency:	1650390
Project Title:	DCL: NSF INCLUDES Conference on Multi-Scale Evaluation in STEM Education
PD/PI Name:	Louis J Gross, Principal Investigator Pamela R Bishop, Co-Principal Investigator Ernest Brothers, Co-Principal Investigator Suzanne Lenhart, Co-Principal Investigator
Recipient Organization:	University of Tennessee Knoxville
Project/Grant Period:	09/01/2016 - 08/31/2018
Reporting Period:	09/01/2017 - 08/31/2018
Submitting Official (if other than PD\PI):	Louis J Gross Principal Investigator
Submission Date:	10/29/2018
Signature of Submitting Official (signature shall be submitted in accordance with agency specific instructions)	Louis J Gross

Accomplishments

* What are the major goals of the project?

In evaluation responses from prior conference and tutorial activities, a consistent theme was the general lack of prior knowledge of participants in the processes of program evaluation, and their appreciation for the project's efforts to provide resources to assist them as they collaborate on INCLUDES and other NSF STEM education projects. Given this, we expanded on the previously developed openly available resources on program evaluation on a variety of topics of particular interest to INCLUDES awardees.

Our major goals during the final reporting period were to develop, publicise, and deliver a series of webinars to foster understanding of various aspects of program evaluation that were only touched on in the previously held webinar and tutorial. Announcements of these webinars were made broadly to the INCLUDES community through Trellis, direct correspondence with the many attendees at previous activities supported by this award, and through the large NIMBioS contact network of
interdisciplinary researchers and educators. As was done for the webinar carried out in the first year of this project, slides,video and audience responses for each webinar were posted on the project website: http://www.nimbios.org/IncludesConf/webinars

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

Major Activities: Major activities were the development of content and delivery of five evaluation-focused webinars targeted at the community of educators in the broadening participation STEM arena. Descriptions of the five webinars follow:

Evaluating Social Media Impact in NSF INCLUDES Projects (February 1, 2018): Social media are increasingly an integral part of grant-funded projects. Whether using Instagram, LinkedIn, Facebook, Twitter, Snapchat or another social media platform, project managers must determine what brings maximum impact to their project. Participants in this webinar had the opportunity to learn about online measurement and analytic tools as well as social media evaluation design plans to increase communication and engagement with stakeholders within their project, and to determine the most effective social media plans for their projects.

Program Models as a Tool for Scaling up NSF INCLUDES Projects (March 1, 2018):
Evaluation of projects often begins with a program model as a plan for successfully measuring activities, outcomes and impacts. When projects scale up to include multiple sites and projects, these models must also scale up. This webinar engaged participants with case study examples of evaluation design techniques than can be applied to the scaling up of INCLUDES projects. Communication strategies, program mapping techniques, and data sharing and analysis plans gave participants a tool kit for adaptation to their own project evaluations.

Engaging Diverse Populations in Evaluations of NSF INCLUDES Projects (April 5, 2018):
This webinar provided insight into the ways in which cultural competency can contribute to mindful evaluation of diverse populations. We addressed understanding of social and personal biases towards diverse populations and how we can we assure that we are not imposing our own beliefs into our

research and evaluation. We also discussed ways to understand social norms of diverse cultures. Participants in this webinar explored approaches to identify potential barriers and opportunities for culturally responsive evaluation data collection.

Qualitative Data in Culturally Rich Evaluations of NSF INCLUDES Projects (May 3, 2018):
Evaluators often incorporate qualitative methods to understand the context through which participants from different backgrounds experience a program. Assembling knowledge from sources such as focus groups and interviews and layering them with methods such as observations, analytic memos, field notes, and reflective journaling, can help project leaders understand diverse perspectives. Participants in this webinar engaged with case study materials to code and analyze culturally rich data for program evaluation. We shared tools and methods for layering data in qualitative analyses with participants.

Evaluation Strategies for Measuring the Broader Impacts (BI) of NSF INCLUDES Projects (June 7, 2018):
Planning for the measurement of Broader Impacts (BIs) can feel overwhelming to project leaders. Some of the ways evaluators can encourage effective definition and measurement of BIs is through program and stakeholder mapping of outcomes related to BI goals, and through appropriate measurement tools. In this webinar, we examined different models for relating BIs to their project activities, and also tools for measuring progress towards BI goals.

Specific Objectives:

Significant Results:

Key outcomes or
Other achievements:

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

The main thrust of the final year of the project was the provision of professional development to the broader STEM education community through the delivery of five evaluation-focused webinars, which provided practical information to the targeted audience about tackling major issues in evaluating broadening participation projects.

* How have the results been disseminated to communities of interest?

All of the webinars were announced broadly to the INCLUDES and STEM education community through Trellis, direct correspondence with the many attendees at previous activities supported by this award, and through the large NIMBioS contact network of interdisciplinary researchers and educators. Post-delivery, the recordings of the webinar, along with slides and transcription of participant chats, were made publicly available on the projects website: http://www.nimbios.org/IncludesConf/webinars

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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

Patents

Technologies or Techniques

Thesis/Dissertations

Websites
NSF INCLUDES Evaluation-Focused Webinars
http://www.nimbios.org/IncludesConf/webinars

This website contains information about the five webinars we developed and presented during the no-cost extension year of the project. It contains descriptions, links to webinar recordings, links to webinar slides, and links to transcriptions of the webinars.

Supporting Files

Filename	Description	Uploaded By	Uploaded On
INCLUDES Webinar Evaluation Report FINAL.pdf	This is a report of the evaluation survey data for all webinars presented during the final year of the project.	Pamela Bishop	10/15/2018

Participants/Organizations

What individuals have worked on the project?

Name	Most Senior Project Role	Nearest Person Month Worked
Gross, Louis	PD/PI	1
Bishop, Pamela	Co PD/PI	1
Brothers, Ernest	Co PD/PI	1

Name	Most Senior Project Role	Nearest Person Month Worked
Lenhart, Suzanne	Co PD/PI	1
LoRe, Sondra	Other Professional	1
Kidder, Kevin	Non-Student Research Assistant	1

Full details of individuals who have worked on the project:

Louis J Gross
Email: gross@NIMBioS.org
Most Senior Project Role: PD/PI
Nearest Person Month Worked: 1

Contribution to the Project: Collaborated on planning for and development of the webinars held during this year of the project, moderated the webinars.

Funding Support: Support from the University of Tennessee in the role of Director of NIMBioS

International Collaboration: No
International Travel: No

Pamela R Bishop
Email: pbaird@utk.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1

Contribution to the Project: Led planning for development of the webinars held during this year of the project, delivered webinar content and fielded audience questions.

Funding Support: N/A

International Collaboration: No
International Travel: No

Ernest Brothers
Email: ebrother@utk.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1

Contribution to the Project: Collaborated on planning for and development of the webinars held during this year of the project, with recommendations regarding diversity and inclusion.

Funding Support: N/A

International Collaboration: No
International Travel: No

Suzanne Lenhart
Email: lenhart@math.utk.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1

Contribution to the Project: Collaborated on developing the concepts of the webinars and contributed to their development

Funding Support: only this grant

International Collaboration: No
International Travel: No

Sondra LoRe
Email: sondra@utk.edu
Most Senior Project Role: Other Professional
Nearest Person Month Worked: 1

Contribution to the Project: Ms. Lore collaborated with project PIs to develop and deliver four of the five webinars produced during the no-cost extension year.

Funding Support: NA

International Collaboration: No
International Travel: No

Kevin Kidder
Email: kkidder@vols.utk.edu
Most Senior Project Role: Non-Student Research Assistant
Nearest Person Month Worked: 1

Contribution to the Project: Helped to develop and deliver the April 5, 2018 webinar: Engaging Diverse Populations in Evaluations of NSF INCLUDES Projects

Funding Support: funding was provided by this project

International Collaboration: No
International Travel: No

What other organizations have been involved as partners?
Nothing to report.

What other collaborators or contacts have been involved?
Nothing to report

Impacts

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

This project provided information on a range of methods for project managers to more effectively evaluate projects emphasizing broadening participation in STEM. The webinars developed and made available were not discipline-specific and could benefit STEM education and research projects across multiple disciplines.

What is the impact on other disciplines?
Nothing to report.

What is the impact on the development of human resources?

As many projects supported by NSF include emphasis on braodening participation, the information included in the webinars developed and posted from this project can assist project managers in evaluating their project objectives related to broadening participation in their worksforce development project components.

What is the impact on physical resources that form infrastructure?
Nothing to report.

What is the impact on institutional resources that form infrastructure?
Nothing to report.

What is the impact on information resources that form infrastructure?
Nothing to report.

What is the impact on technology transfer?
Nothing to report.

What is the impact on society beyond science and technology?

As enhancing the breadth of capabilities of the US workforce is one of the objectives of many agencies, the methods discussed in the webinars developed as part of this project provide information of use to project managers in assessing the success of their workforce development program objectives.

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
Nothing to report.

Changes that have a significant impact on expenditures
Nothing to report.

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.