



University
of Idaho

*Zoom participants: Please
keep your microphone muted
until the Q&A session*

BROADER IMPACTS *REALLY* DO MATTER

RESEARCH AND FACULTY DEVELOPMENT FACULTY SUCCESS SEMINAR SERIES

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Research and Faculty Development, ORED

Please note that this session is being recorded

OFFICE OF RESEARCH AND FACULTY DEVELOPMENT

I We provide proposal development assistance across the spectrum*



I Meet goals in the UI strategic plan – grow research and creative efforts across all disciplines

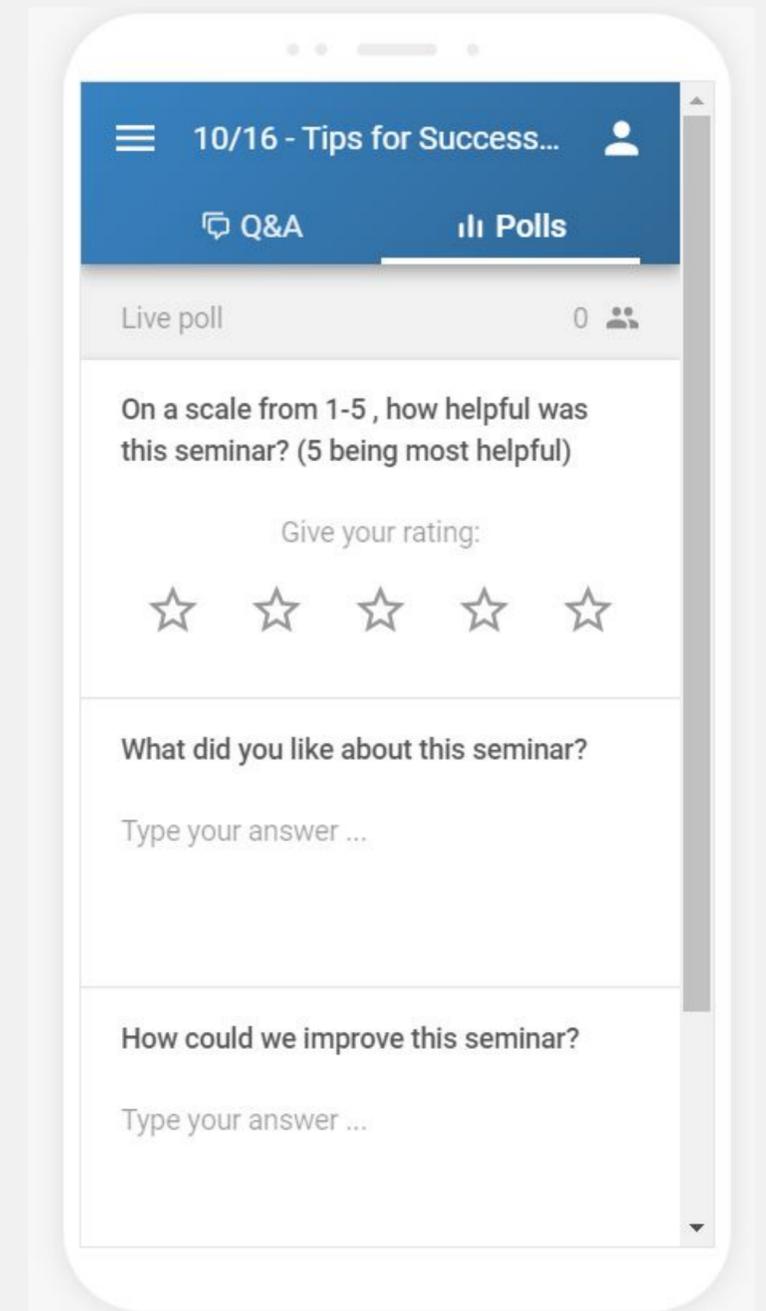
I Reach out to request service – uidaho.edu/orfd

*Not including budget preparation

HELP US IMPROVE OUR SEMINARS

- I After the Q&A session: brief 3 question sli.do poll
- *On a scale from 1-5, how helpful was this seminar?*
 - *What did you like most about this seminar?*
 - *How can we improve this seminar?*

www.slido.com or use the **sli.do** app (Use code #FSS)



OVERVIEW

-  NSF and you: building a BI legacy
-  Defining your BI identity
-  Planning BI activities
-  Writing your BI statement

NSF BROADER IMPACTS CRITERION

“...the potential [of the research] to benefit society and contribute to the achievement of specific, desired societal outcomes.”

“NSF values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes. Such outcomes include, but are not limited to...”

- full **participation** of women, persons with disabilities, and underrepresented minorities in STEM;



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- other...

Broader impacts may be accomplished...

1) ...through the research itself

- for example, research that has potential to lead to breakthrough in certain industries. Citizen science is another example.

Broader impacts may be accomplished...

2) ...through the activities that are directly related to specific research projects

- for example, providing research experiences to undergrads and high school students, and integrating your research into your teaching.

Broader impacts may be accomplished...

3) ...or through activities that are supported by, but are complementary to the project.

- For example, running a workshop for high school teachers on your research topic, but at a conceptual level. This can be appropriate for science involving difficult concepts.

<https://www.nsf.gov/od/oia/special/broaderimpacts/>



Everything NSF wants you to know about BI, along with resources, examples and inspiration



WHAT IS YOUR “BI IDENTITY” ?

A well-defined “broader impact identity” can serve as the foundation integrating scientific research with societal impacts over the course of a career.

What impact do *you* want to make?



ARIS BI IDENTITY WORKSHEET

Created by NSF-funded program, Advancing Research Impact in Society (ARIS)

Exercise 1 – What is your Origin Story?

Take a minute to individually reflect back to when you realized you wanted to pursue a STEM career path. Write down one-sentence answers to the following:

- When did you “fall in love” with science/STEM? Why?
- What (or who) drove/inspired you?
- Did you imagine your work might change the world? If so, how?

Exercise 2 – Create your BI Asset Map

Write down a few sentences to answer the following questions:

Besides your science, what do you love to do? What are your interests, and passions?

What skills, partnerships, tools, resources do you have?

- Do you like to work with kids?
- Do you enjoy/embrace new media/social media/new technology?
- Do you love field research experiences?
- Are you interested in the interface of science, art and creative writing?
- Is your brother a teacher? Is your neighbor a podcaster? Is your tennis partner a scout troop leader?
- Etc.

Exercise 3 – What is *Your* BI Identity?

- Craft a 3-4 sentence “Impact Identity and Goals” statement
- “If I am successful in my BI efforts over the next 10 years, what will my biosketch say about the impact my work has had on society?”

Next Steps – How will you continue down the path of developing and defining your BI Identity?

- (At least) One thing I will do:
- (At least) One person/potential partner I will contact:

PLANNING BI ACTIVITIES

A BI activity is:

“a planned experience, engagement, action, function, etc. that is conducted over a finite period of time for a specific purpose and with a target audience. Broader Impacts refers to activities that go beyond traditional faculty responsibilities.”

National Alliance of Broader Impacts (NABI) Guide

1. Define your audience: Who needs to know?

2. Who else could use your findings? Who else could benefit from learning about your findings or process? With whom outside your field could you engage in BI activities?

general public

citizen scientists

(1) K- 12 students

K-12 teachers

undergraduate students

policy makers

researchers in related disciplines

conservationists

health care providers

patient support groups

industry groups

etc.

- (1) **2. Identify the message:** Communicate the value of your research. In 1-2 sentences, explain the value of your research to your audience.
- (2) “My research is important to <audience> because...”

3. Determine what outcomes you want from the audience.

For example:

- Do you want them to have a better attitude about science?
- Do you want your audience to be more knowledgeable about your research or a particular scientific concept?
- Do you want them to make different life choices?

4. Design your outreach activities and prepare outputs that will give you the outcomes you identified above.

- (1) 5. Evaluate whether you've made an impact**
- (2) Have some way to objectively evaluate success.

(1) 6. Link your activities back to the NSF Broader Impacts/Outreach Criteria and communicate this in your proposal.

(2) Best case scenario: each audience, outcome, activity, and assessment should correspond to one of the NSF Broader Impacts categories.

- Full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
- Improved STEM education and educator development at any level
- Increased public scientific literacy and public engagement with science and technology
- Improved well-being of individuals in society
- Development of a diverse, globally competitive STEM workforce
- Increased partnerships between academia, industry, and others
- Improved national security
- Increased economic competitiveness of the US
- Enhanced infrastructure for research and education

QUESTIONS TO ASK AS YOU DESIGN YOUR BI PLAN

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- Does your project align with the mutual goals of you and your partners?
- Is adequate infrastructure available?



5 REVIEW ELEMENTS

Or,

What reviewers are asking as they read your BI plan



PLAN A BI ACTIVITY

1. What is the potential for the proposed activity to *benefit society* or advance desired societal outcomes?

- Are the BI activities being proposed clearly described?
- Is the audience being targeted clearly described and the rationale for engaging them clearly justified?
- Is the target number of engaged participants clearly described?
- How will the audience be recruited?
- What is the length of engagement? Is there a mechanism described for reaching audiences? Has the proposer described existing relationships or new partnerships, which will help them reach their audience?
- Are the benefits to the target audience(s)/society described?

2. To what extent do the proposed activities suggest and explore *creative, original, or potentially transformative* concepts?

- Are the BI activities based on existing activities, programs, or infrastructure? What new elements are added with this project?
- How might your proposed activity transform the existing program?
- What other partners or collaborators are you bringing to this activity?
- How does your program integrate STEM or education research?
- How well grounded is the idea in the relevant literature, or what is known about research in learning?

3. Is the *plan for carrying out the proposed activities* well reasoned, well organized, and based on a sound rationale? Does the plan incorporate a mechanism to *assess success*?

- Is there a documented justification/need for the proposed activity/program?
- What effective practices and/or models is this activity based on?
- Have you sufficiently cited the appropriate literatures?
- Are the goals and objectives clearly defined with measurable outcomes?
- How will the outcomes be measured and who will be conducting the measurement?
- Are the intended target audience/societal impacts of the activities described?

4. How *well qualified* is the individual, team, or institution to conduct the proposed activities?

- Is the individual's or team members' credentials and roles adequately described?
- Is the individual or team appropriate/adequate for the scale of the project?
- Is evidence provided that the PI and/or the team have the necessary experience to implement the proposed BI activities and evaluate success?

5. Are there *adequate resources* available to the PI (either at the home institution or through collaborations) to carry out the proposed activities? Is the budget allocated for Broader Impact activities sufficient to successfully implement them?

- Does the institution(s) have the infrastructure to support the activities and the associated evaluation?
- Is the scale of the BI activities appropriate for the scale of the overall Project?
- Does the budget justification match what is proposed in the project description in sufficient detail?



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- Use and cite best practices for program design. But, If you are doing something creative and original, build on current research results.
- *Establish a track record of BI work even before you apply for NSF funding* as evidence of your capabilities and commitment. Collaborate to gain experience. Think of the outcomes of your early BI activities as pilot data,

Increasingly, investigators are encouraged to envision an *integration of their research with education, so that broader impacts are interwoven throughout.*

RESOURCES

NSF BI Website:

<https://www.nsf.gov/od/oia/special/broaderimpacts/>

RFD BI resources:

<https://www.uidaho.edu/research/about/orfd/protected/proposal-development-resources>



STEM Access Upward Bound

Outreach Collaboration Guide

This guide provides a process for multiple parties to collaborate on an outreach program, facilitating strong positive working relationships to support a rich and rewarding learning experience for youth.

FACULTY SUCCESS SEMINARS

*Let Us Be Your Guide
Through the Proposal
Development Process*



**JOIN US IN IRIC 305
12:30 P.M. – 1:30 P.M. PT**

Can't join us in person? Then join us live via Zoom:
uidaho.zoom.us/j/798224314. Each seminar will
be recorded and be available on our website.

 **University of Idaho**
Office of Research and
Faculty Development





FALL 2019

- Sept. 4** HERC IGEM Info Session
- Sept. 11** Find Funding Opportunities: Intro to Pivot
- Sept. 25** NSF CAREER All Year: An Introduction
- Oct. 2** W.M. Keck Foundation Info Session
- Oct. 16** Tips for Successful Proposal Writing
- Oct. 23** NSF CAREER All Year: Getting Started
- Oct. 30** Exploring Humanities Funding Opportunities
- Nov. 13** MW CTR-IN Funding Opportunities
- Nov. 20** NSF CAREER All Year: Integrating the Research and Education Plans
- Dec. 11** M.J. Murdock Trust Commercialization Initiation Program Info Session

SPRING 2020

- Jan. 22** Developing Successful Project Management Plans for Large Proposals (**Rescheduled Apr 15**)
- Feb. 5** NSF: Broader Impacts Really Do Matter!
- Feb. 12** NIH: Funding Mechanisms Overview (R03, R21, R01)
- Feb. 19** NIH: Developing Your First RO1 Proposal
- Mar. 4** NIH: Understanding Proposal Review
- Mar. 11** NSF: Understanding Proposal Review
- Mar. 25** Fulbright Faculty Scholar Program Info Session
- Apr. 1** Find Funding Opportunities: Intro to Pivot
- Apr. 8** NSF MRI: Creating Competitive Proposals
- Apr. 15** Developing Successful Project Management Plans for Large Proposals



**WE GUIDE THE DEVELOPMENT
OF COMPETITIVE EXTERNAL
GRANT PROPOSALS**

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and Faculty
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THANK YOU FOR COMING!



QUESTIONS?

BEFORE YOU GO...

Please take a brief 3-question sli.do poll

www.slido.com or use the **sli.do** app

Use code #FSS

