Articulating Broader Impact Statements

Maximize NSF Merit Review Scores

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Overview

1. Statement Sort
2. NSF Broader Impact Themes
3. 5 Steps to BI Statement Development
4. Sample Review & Revise

Goals

- Develop convincing broader impact statements
- Develop statements that specify a plan to achieve the broader impact

Overview & Goals

- Advance discovery while promoting teaching, training, and learning.
- Broaden participation of underrepresented groups.
- Enhance research and education infrastructure.
- Broadly disseminate results to enhance understanding.
- Provide benefits to society.

Broader Impact Themes

A well-written broader impacts section should include activities that are:
- Clearly described;
- Have a well-justified rationale; and
- Demonstrate creativity or originality, or have basis in established approaches.

The proposer should have:
- A well-organized strategy for accomplishment of clearly stated goals;
- Establish the qualifications of those responsible for the activities;
- Demonstrate sufficient resources for support.

A plan should be in place to document the results.

NSF Guideline

Audience

Budget

Activities & Partners

Project Description

Evaluation Plan

Overview of Steps

Who is the audience?

- Government, Teachers, Students, Industry, Public, Underrepresented Groups

Why is it important to work with this audience?

- Teachers/Students:
  - Foster a scientifically literate population
  - Enhance the future workforce
  - Increase the ability to solve future challenges
  - Increase America's global competitiveness

How will you deliver your message to your audience?

1. Determine Audience

READ, REVIEW, & REVISE

Sample Statement

Decide what portion of your proposal's total research budget to allocate for BI activities.

- Factors to consider include whether
  - Full funding is required
  - Utilize in-kind funding,
  - Leverage an existing program

2. Identify Budget
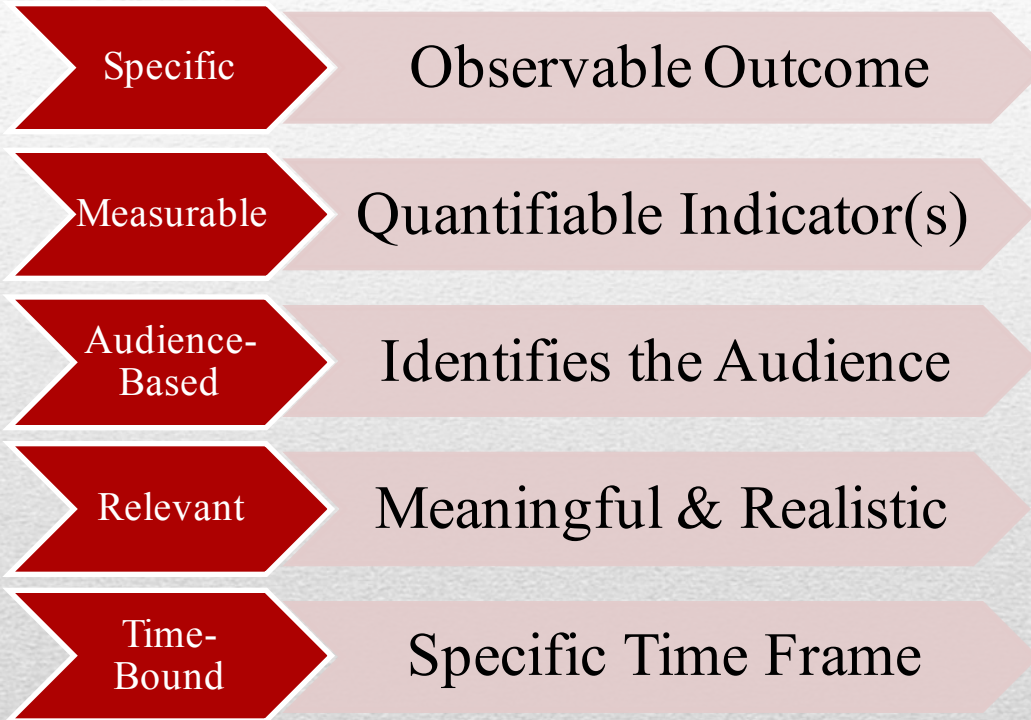
READ, REVIEW, & REVISE

Sample 1

- Grounded in the literature
- Involve partners
  - Professionals with expertise in translating and presenting your science to target audience.
    - Established program at Tech
    - Individuals who specialize in education or mass communication
    - Organizations with broad networks targeting your audience

3. Select Activities

READ, REVIEW, & REVISE

Sample Statement

What does success look like? How you will demonstrate success in BI?

Specific	Observable Outcome
Measurable	Quantifiable Indicator(s)
Audience-Based	Identifies the Audience
Relevant	Meaningful & Realistic
Time-Bound	Specific Time Frame

4. Project Description

Examples

Specific	incorporate educational materials on aquatic invasive species
Measurable	70% of participants will report increased awareness 500 unique users to website each month
Audience-Based	workshop participants, community members
Relevant	given needs assessment trends, literature etc.
Time-Bound	at the conclusion of the workshop, three months after receiving outreach materials

TTU STEM CORE

READ, REVIEW, & REVISE

Sample 1

- Collect data on efficacy
- Plan for evaluation of BI
- Can be simple or sophisticated
  - STEM-CORE can help!
- In-depth detail not necessary **BUT** should demonstrate that evaluation of BI has been considered and integrated into project plan.

5. Evaluation

Example 1: Throughout the project we will measure students' knowledge of climate change and feelings about what they can do about it. Survey data collected will help inform decisions regarding improving the project for students and the final survey will determine how students have changed over time.

Example 2: To ensure that a correct and effective message is reaching this audience, survey data will be collected at the beginning of the project to determine the teachers' backgrounds and attitudes regarding climate change. To measure impact, teachers will be surveyed again after completion of the project to captures changes in attitudes and teaching practices.

BI Evaluation Statements

READ, REVIEW, & REVISE

Sample 1

- ✓ Goals/Aims/Objectives
- ✓ Rationale
- ✓ Collaboration
- ✓ Activities-with Time Frame
- ✓ Evaluation Statement

Statement Checklist

READ, REVIEW, & REVISE

Sample 2

- Develop convincing broader impact statements
- Develop statements that specify a plan to achieve the broader impact

STEM CORE: http://www.depts.ttu.edu/stem/

Goals