Innovative Technology Experiences for Students and Teachers (ITEST) Program

Division of Research on Learning in Formal and Informal Settings

Program Solicitation: NSF 17-565

Proposals Due September 5, 2017

Proposal preparation

Project Summary Suggestions

- **First Sentence**
  - Type of Proposal – Exploratory, Strategies or SPrEaD
- **Second Sentence**
  - STEM or STEM-related areas of emphasis
  - Grade or age level(s) addressed
- **The strategy to be designed, implemented, and evaluated.**
- **Intellectual Merit and Broader Impacts**
  - Must include separate statements on each of these two NSB criteria.

Note: The Project Summary is used to group proposals, so should be "descriptive" rather than "persuasive".

Project Description Should Include…

- Project overview & succinct rationale
- Project goals and objectives
- Summary of effectiveness and impact of prior NSF support
- Explanation of principles or theoretical framework that guided the project design, informed by the literature
- Detailed work plan with a timeline
- Research plan
- Anticipated results
- Independent project evaluation process
- Dissemination plan
- Qualifications of key personnel who will be coordinating the project

Things to Consider Relating to Goals and Objectives

- Why is this project important?
- How will the project attract students or prepare them for the STEM workforce?
- How will it advance knowledge?
- What are the anticipated outcomes and/or products of this project?
- How might these products or findings be useful on a broader scale?

What Have You and Others Done? What is the context?

- Describe the theoretical and research basis on which the proposal is based.
- Discuss how the proposal is innovative and different from similar research and development projects.
- If you have been funded by NSF, provide evidence about the **effectiveness** and **impacts** of that work (Intellectual Merit & Broader Impacts).

How Are You Going To Do It?

- State clear research questions or hypotheses that the project will test.
- Describe the plan for developing, adapting or implementing the proposed innovative strategy.
- Describe the research methods, including data analysis plans, sampling plan, and assessments.
- **Briefly** describe the work plan and timeline.

Who Will do The Work?

- Briefly describe the expertise of the persons included on the proposal and why they are needed:
  - Education researchers and evaluators
  - Teachers
  - STEM-related content experts
- Upload two page bios for all senior personnel

Independent Project Evaluation

A proposal must describe appropriate project-specific independent review and feedback processes.

- The review might include an external review panel or advisory board or a third-party evaluator.
- The review must independent and rigorous
- The proposal must
  - Describe the expertise of the external reviewer(s);
  - Explain how that expertise relates to the goals and objectives of the proposal;
  - specify how the PI will report and use results of the project's external, critical review process.
- There can be different groups providing formative and summative evaluation

How Will Others Learn About The Project?

- Plan and describe specific strategies for **dissemination** of products or findings to researchers, policy makers, practitioners, and other relevant constituency groups.
- Requirement to provide project data as requested by the STEM Learning and Research (STELAR) Center.

Supplementary Documents

- Letters of collaboration (*commitment*, not *support*) from project partners*
- Data Management Plan
- Postdoctoral Mentoring Plan
- **NO OTHER DOCUMENTS**

*be careful not to include attachments to the letters

Budget

- **Should be consistent with level of work** – you do not have to request the maximum!
- **Two months salary:** No more than two months of salary for senior personnel with **academic** positions on all NSF grants ***unless*** justified.
- **Indirect cost rates:** Set by the institution and auditors and is non-negotiable.
- **Direct costs**: Not allowed for secretary or services provided through indirect costs.
- **No cost sharing**
- Limited equipment; no undergraduate tuition

Common reasons for proposals to be rated non-competitive

Importance

- Proposed problem not nationally important
- Weak, vague, or no connection to STEM content
- Relevant literatures not cited

Methods

- Inadequate or inappropriate research design
- Vague or inappropriate data collection & analyses
- Too much data being collected
- Appropriate expertise not represented
- Cost at small scale prohibitive when scaled up

Some Things POs Suggest You Avoid

- Ignoring requirements stated in the solicitation or the *Grand Proposal Guide*
- The “Trust Me” approach. Provide citations or evidence for critical assertions made.
- The “Oversell” of yourself or your project; take a neutral tone and let the evidence speak.
- General, vague, or rambling narrative without precision and details.
- Overemphasis of rationale for the project while neglecting methodology and details of what will actually be implemented.
- **Note:** URL’s are no longer allowed in Project Description

Reasons for Return Without Review

- Violation of formatting rules of the *PAPPG* (e.g. font, page length etc.).
- Failure to address specifically intellectual merit **and** broader impacts in the *Project Summary* and *Project Description.*
- Unauthorized documents/data in the appendix or supplementary document section.
- No *Post-doctoral Mentoring Plan* if post-doctoral researchers are included on budget.
- No *Data Management Plan.*

Where to Submit

NSF's FastLane:

https://www.fastlane.nsf.gov/index.jsp

- Collaborative proposals must be submitted through FastLane.
- Fastlane will check for required sections of proposals. **OR**

Grants.gov:

http://www.grants.gov (Note: submit 2-3 days in advance of deadline since this site may take 1-2 days to inform you of errors requiring resubmission, thus making your proposal late.)

Review Criteria

All proposals are reviewed under two criteria: Intellectual Merit and Broader Impact.

1. What is the potential for the proposed activity to:
   a. advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
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?
4. How well qualified is the individual, team, or institution to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities.

For Further Information

- Call **(703) 292-8628**
- Email: **DRLITEST@nsf.gov**
- Contact an ITEST Program Director

Note: If you wish to discuss your proposed project with a Program Officer prior to submission, it is helpful to submit a brief summary of your project (a page or less) and schedule a follow-up phone call.