Robert Noyce Teacher Scholarship Program, NSF 17-541
2019 Proposal Writing Webinar
Webinar Focus: Track 4: Noyce Research Track

Kathleen Bergin & Andrea Nixon
kbergin@nsf.gov anixon@nsf.gov
Division of Undergraduate Education
2 ways to interact during webinar

A) Respond to the Polls

B) Write in the chat window

Note: Your QUESTIONS & COMMENTS are really important to us, so please take advantage of these two mechanisms.
POLL – Getting to Know You!

1. How familiar are you with the Noyce program?
   • 3 answer choices: Very familiar, Somewhat familiar, Not very familiar (only select one)

2. Do you currently serve on the leadership team for a Noyce funded project?
   • 2 answer Choices: YES or NO (only select one)

3. What is your area of expertise?
   • 4 answer choices: STEM faculty member, Education faculty member, Researcher, Other (can select more than one)

4. Have you submitted a proposal to NSF in the last 15 years?
   • 2 answer Choices: YES or NO (only select one)
Webinar Outline

• Track 4: Research Track NSF 17-541
  • Funding Levels
  • Important Notions, Factors & Resources
  • Grantee Eligibility

Q & A #1

• Preparing the Proposal
• Merit Review Criteria

Q & A #2

• Proposal Writing Tips

Q & A #3
Track 1: S&S
Scholarships & Stipends
Undergraduate STEM majors
and/or STEM professionals

Track 2: TF
NSF Teaching Fellowships
STEM professionals

Track 3 (MTF)
NSF Master Teaching Fellowships
Exemplary, experienced STEM teachers

Track 4: Noyce Research
Research related to STEM teacher effectiveness,
persistence, and retention in high-need LEAs

*Capacity Building projects, which may lead to the development of full proposals for Tracks 1, 2, or 3, are also supported.
Track 4 (Noyce Research)
Research on teacher effectiveness, persistence, or retention in a high-need school district

No Previously Funded Noyce Projects Required

Researchers + STEM faculty + STEM education faculty

Up to $800K for up to 5 years

Noyce Projects Substantively Involved

Researchers + Noyce projects + STEM faculty + STEM education faculty

Up to $800K + $100K for each Noyce project not to exceed $2.3M for up to 3 years
FOCUS MUST BE ON: STEM Teacher effectiveness, persistence, or retention in high-need school districts (HNSD).

Examples of possible research studies:

- Teacher characteristics or programmatic features predictive of highly effective teachers who persist in teaching in HNSDs
- Persistence of Noyce Scholars or Fellows as teachers in HNSDs beyond their service requirement
- Identify characteristics of HNSDs that result in retention of STEM teachers

Note: These are just examples and do not span the scope of research studies possible to examine STEM teacher effectiveness, persistence or retention in HNSDs.
FOCUS MUST BE ON: STEM Teacher effectiveness, persistence, or retention in high-need school districts (HNSD).

From the Noyce Solicitation:

Research studies may range from research synthesis to experimental investigations in order to show relationships between teacher preparation and learning (National Research Council report, *Preparing Teachers: Building Evidence for Sound Policy*, 2010, p. 6).
More important factors to attend to

Research studies **must** include:

- Substantive collaboration among STEM faculty, STEM education faculty, and researchers in education (and/or the social, behavioral, and economic sciences)
- Theory which underlies the research design
- Provide appropriate methodologies & strategies
- Contribute to the knowledge base of scholarly research in STEM education
- Objective external feedback
Common Track 4 Weaknesses

• Studies that involve examination of only a single institution’s teacher preparation program are discouraged unless the proposal provides a compelling argument that the results can be generalized to the larger community.

• Failure to address effectiveness, persistence or retention in HNSD

• Failure to clearly articulate the research questions, their relationship to the data to be collected, the methods of analysis, and the project’s ability to authoritatively answer the research questions.
Critical Resources

• Solicitation 17-541 (required)

• Proposal and Award Policies and Procedures Guide (PAPPG), NSF 18-1 (required)

• Common Guidelines for Education Research and Development

• Design-Based Implementation Research (DBIR) tenets

• nsfnoyce.org
Eligibility for a Noyce Grant

Proposals may be submitted by:

• One or more universities, four-year colleges, and/or two-year colleges; or
• U.S. nonprofit entities that have established consortia among such institutions of higher education (IHE); or
• Professional societies and similar organizations that are directly associated with educational or research activities (for Track 4: Noyce Research only)

No restrictions on the number of proposals per organization

No restrictions on the number of proposals (or tracks) per PI or Co-PI
Q & A # 1

15 minutes
Proposal Due Dates for NSF 17-541

• Tuesday, August 27, 2019 for FY20 funds

• Last Tuesday of August, Annually Thereafter

Note: No new Noyce solicitation was released in 2019.
Project Summary (1 page)

Overview: The first sentence must -

- Indicate the specific Track of the proposal (e.g., S&S); and
- Name all institutions, including high-need local educational agencies and non-profit organizations as appropriate, that are involved in the proposal.

Intellectual Merit (How important is this work & how well designed is the project?)

Broader Impacts (What is the benefit of this work to STEM Education, to society?)
Intellectual Merit & Broader Impacts
(Required)

• **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and

• **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.
Elements of Both Merit Review Criteria

• What is the potential for the proposed activity to
  • Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
  • Benefit society or advance desired societal outcomes (Broader Impacts)?

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

• 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?

• How well qualified is the individual, team, or organization to conduct the proposed activities?

• Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?
Poll – True or False Quiz

Track 4 Proposals Must:

1. Involve Noyce Scholars, Fellows, or Projects
2. Include both qualitative and quantitative methods
3. Include letters of commitment detailing access to appropriate data
4. Identify the methods to be used to answer the research questions as well as a description of the sample to be studied
Q & A # 2

15 minutes
Poll – One Question Quiz

Check all the following that should be included in the Proposal?

- Project Summary with Intellectual Merit & Broader Impacts Labeled
- 15-Page Project Description
- Dissemination plan
- Prior NSF Support (if applicable)
- Research Question(s)
- Research design, data sources, methodology
- Relevant Research literature
- Objective external feedback
General Tips for Success

1. Be aware of other projects and advances in the field.
2. Cite the literature.
3. Include details and **all** requirements per solicitation.
4. Discuss prior (including Noyce) NSF results.
5. Include plan for objective external feedback (evaluator or advisory board) w/ timelines and benchmarks.
6. Propose a cost effective but high impact project.
7. Put yourself in the reviewers’ places.
8. If resubmitting previously declined proposal, consider reviewers’ feedback. Do not resubmit same declined proposal.
9. Have someone else read the proposal.
10. Call or email cognizant Noyce Program Officers.
Other EHR Programs of Possible Interest

- Improving Undergraduate STEM Education (IUSE: EHR NSF 17-590)

- EHR Core Research (NSF 19-508)
Cognizant Noyce POs

• Sandra Richardson (*Program Lead*) srichard@nsf.gov
• Kathleen Bergin (*Program co-Lead*) kbergin@nsf.gov
• Karen Keene kkeene@nsf.gov
• Jennifer Lewis jenlewis@nsf.gov
• Andrea Nixon anixon@nsf.gov
• Tamara Smith tfsmith@nsf.gov
• R. Steve Turley rturley@nsf.gov
• Talitha Washington twashing@nsf.gov

If you are interested in serving as program reviewer and not submitting a proposal in 2019, contact a cognizant PO in August.
Q & A # 3

15 minutes