

EHR Response to the Committee of Visitors Report for the Robert Noyce Teacher Scholarship Program

April 2016

COV Consideration:

“The COV suggests NSF clarify for reviewers what Intellectual Merit and Broader Impacts mean in the context of a scholarship program, such as Noyce. The criteria provided to panelists reviewing service-focused programs should more specifically state which elements are more important and which are less central to award decisions - this will help ensure reviewers are uniformly placing the appropriate weight on the different criteria.”

“The program announcement does not specifically highlight innovation as a requirement for the Noyce Program, so this emphasis in reviewer comments may be inappropriate. See also: COV comments on pages 14-15. [Those comments note:] The required structure of the Noyce Program, especially the requirement that 75% of budgets go to participant support, makes it difficult to fund research and development sufficiently in addition to participant and program support. This may affect definitions of Intellectual Merit and Broader Impacts for this program.

- *Intellectual Merit*: Focus more on best practice and less on innovation (see *Scholarship Reconsidered* by Ernest Boyer)
- *Broader Impacts*: Focus more on impact of participants being supported and less on dissemination and publication.”

EHR Response:

The Noyce Program agrees that the meaning of Intellectual Merit and Broader Impacts needs to be assessed in terms of the nature of the particular program. The NSF-wide review criteria provide for a number of dimensions to be considered in the context of Intellectual Merit and Broader Impacts, and NSF wishes to allow reviewers latitude to interpret the review criteria in the context of individual proposals and programs. During both reviewer webinars and the orientation session at panel meetings, we will highlight, with specific slides, the elements that tend to be most important in the Noyce Program, but we will also point out that reviewers may exercise their expert judgment in assigning weight to the elements for individual proposals.

As the COV notes, innovation is not an explicit requirement of this scholarship program, although the program welcomes creative and innovative proposals. However, one element that NSF asks reviewers of all proposals in all programs to consider when they evaluate *both* Intellectual Merit *and* Broader Impacts is: “To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts.” In this light, it is appropriate for reviewers to note when innovative or creative approaches are specified in a proposal and to take this into account in their reviews and when assigning their ratings.

COV Recommendation: “Reviewers with expertise in evaluation and program effectiveness should be consistently or evenly distributed among review panels.”

EHR Response: The Noyce Program agrees with the comments of the COV. In the future, the program will strive to have at least one reviewer with this expertise on every panel.

COV Suggestion: “The COV suggests the following factors may help to strengthen the quality of all reviews:

- Providing a more specific listing of potential review criteria to help reviewers distinguish between proposal requirements vs. ideal qualities or characteristics of previous awards (e.g., best practices).
 - The COV notes this listing must also be available to applicants.
- Provide a condensed list of indicators to consider when evaluating proposals.
 - The COV feels that, for the FY 2011-2013 panel reviews, the list of indicators may have been overwhelming for reviewers.
- As Noyce is a program focused on providing a specific service, certain standards and best practices related to teacher preparation for high-need school districts should be included in proposals and noted in reviewer comments.”

EHR Response:

The Noyce Program agrees with the comments of the COV. The COV examined the review process and solicitations for Fiscal Years 2011, 2012, and 2013. Beginning with the 2015 solicitation (NSF 15-530), we eliminated the long lists of “solicitation-specific review criteria” that appeared in previous solicitations, and we pointed instead to the sections of the solicitation that describe the Noyce Program and the requirements for the Project Description in proposals. Thus, beyond the standard (NSF-wide) description of NSF’s review criteria, the “solicitation-specific review criteria” in the Noyce solicitation now consist of only four bullets. In addition, we consolidated several long lists of “elements” that previous solicitations asked applicants to address in the Project Description of their proposal. These changes have reduced the length and complexity of the information that the applicants and the reviewers need to digest, and we hope the consolidated format promotes a focus (by both applicants and reviewers) on the most important characteristics of successful projects. We believe it is important that the applicants and the reviewers follow the same guidance about the expectations for proposals, and the solicitation provides that common ground.

With regard to best practices for preparing teachers to serve in high-need school districts, the program has done the following: (1) During the negotiation of prospective awards for the proposals submitted to solicitation NSF 15-530, if a proposal did not speak clearly to preparing teachers for serving in high-need schools, program officers requested further elaboration. (2) In the new solicitation, NSF 16-559 (which was recently published), the following specific language was included: “As Noyce recipients will be teaching in high-need local educational agencies, proposals must include a description of how the proposed project will provide these Noyce recipients with the cultural competence, pedagogical knowledge, and dispositions to be a successful teacher in a high-need school district.”

COV Recommendation: “The program announcement, guidance to reviewers, and reviews provided to PIs should be aligned with a shorter list of core criteria that represent best practices in programs that support teachers for high-need school districts. For example, four aspects of best practice that seem less evident in the reviews than their importance warrants are as follows:

- *Recruitment.* Does the proposal identify a pool of promising candidates who could be especially well qualified for teaching in high-needs schools and provide them with a pathway to teaching?
- *Quality and content of institution's methods courses.* Does the proposal provide evidence of the quality and content of institution's methods or related courses required for students in teacher preparation programs?
- *Support in schools.* Does the proposal provide adequate field experience in high-needs schools with strong professional support from program staff and mentor teachers?
- *Induction/retention.* Does the proposal provide adequate support for new teachers during their first years of teaching in high-needs schools?”

EHR Response: The Noyce Program agrees with the comments of the COV and is most appreciative of the specificity that is suggested in the recommendation. The new solicitation, NSF 16-559 (which was recently published), specifies all four of the aspects mentioned above; and when we prepare another edition of the solicitation, we will consider incorporating the specific language cited by the COV. During both reviewer webinars and the orientation session at panel meetings, we will draw attention to these four aspects with specific slides.

COV Recommendation: “Find ways to leverage additional funds to support innovation and dissemination by the most promising Noyce projects. For example:

- Innovation and dissemination supplements to Noyce grants that support research time for faculty or research assistantships for graduate students to engage in and design research on innovative practices and disseminate findings.
- Encouraging connections between Noyce grants and grants supported by research and development programs. This could go in either direction:
 - Encourage Noyce PIs to apply for (for example) Discovery Research K-12 (DRK-12) exploratory grants, perhaps especially first-time PIs or minority PIs.
 - Encourage PIs of DRK-12 or STEM-CP: MSP (Science, Technology, Engineering and Mathematics, including Computing, Partnerships: Math and Science Partnership) grants focusing on pre-service or in-service teacher education to submit Noyce proposals that would enable them to focus on working with high-needs schools and supporting teachers in those schools.”

EHR Response:

The Noyce Program agrees that it is important to support research on innovative practices associated with Noyce projects, as well as dissemination of what is learned. As the COV suggests, our program officers will encourage PIs to look at connections between Noyce grants and projects supported by education R&D programs. The Noyce Program has also supported several conferences that have brought together Noyce PIs and researchers from other EHR programs. In Noyce solicitations, we will continue to include a list of related NSF programs that support aspects of R&D associated with pre-service teacher education.

In both the 2015 and 2016 solicitations (NSF 15-530 and NSF 16-559), we have included a specific track seeking to support research proposals related to teacher preparation, recruitment, and retention. In addition, both solicitations have required previous Noyce grantees to “provide strong evidence of the success of, and *what was learned from*, the previous Noyce award(s).” Solicitation NSF 16-559 (which was recently published) further requires previous Noyce grantees to “detail what new may be learned from the proposed project, including how this information may inform further improvement in STEM teacher preparation.” The 2015 and 2016 solicitations have also required that proposals describe “plans for disseminating the results of the project and for contributing to the knowledge base about teacher preparation, recruitment, and retention.” Thus, we are trying to lead PIs, more and more, to consider these issues early, when they are designing their Noyce projects, and they can begin to think then about what issues can be effectively addressed inside, and outside, the Noyce grants.

COV Recommendation: “The COV recommends that POs consider ongoing funding – in Phase II – of stable, high-quality Noyce projects. This continuous funding would ensure consistency in recruitment and retention of well-developed STEM teachers in hard-to-staff core subjects.”

EHR Response: The Noyce Program agrees that continued funding for highly successful Noyce projects is desirable. The program has offered an opportunity for “Phase II” awards to previous grantees for

several years. As in other NSF programs, because the program's budget is always limited, balancing new projects with renewals of prior successful ones is a constant challenge, and projects seeking renewal are expected to demonstrate their merit. The most recent Noyce solicitation, NSF 16-559, continues to welcome proposals from previous grantees, although the "Phase" labels, including "Phase II," have been eliminated. The solicitation encourages proposals from previous Noyce grantees that provide evidence of success, describe what has been learned, include the longitudinal following of Noyce Scholarship recipients, and demonstrate continuing local workforce need coupled with the capacity to recruit STEM majors. The amount of funds allowable for previously funded projects has also been increased.

COV Suggestion: "The COV suggests the following:

- Provide COV members with access to the jackets approximately one week prior to COVs in order to give enough time to review before the onsite portion of the review.
 - Additionally, request that the COV chair provide proposal review assignments to the COV members approximately one week prior to the COV to ensure enough time for review.
- Provide additional time (closer to 30 minutes) at the end of the NSF's COV preparation webinar to address additional questions and conduct pre-planning among the COV members.
- Provide a sample jacket (with context for the review process) to review during the COV webinar – this will help maximize the COV's onsite efficiency.
- Provide a clickable table of contents within the binder of general program information provided to the COV."

EHR Response: These are reasonable suggestions, and we will follow them when preparing for the next COV.