

June 12, 2023

Ms. Suzanne Plimpton
Reports Clearance Officer
National Science Foundation
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Alexandria, VA 22314

Submitted via https://www.regulations.gov/commenton/NSF_FRDOC_0001-3121

Subject: National Science Foundation Proposal/Award Information—NSF Proposal and Award Policies and Procedures Guide, 88 FR 22488

Dear Ms. Plimpton:

We represent a peer group of academic institutions affiliated with the Big Ten Academic Alliance (BTAA) who serve in roles promoting research integrity. The BTAA represents a portfolio of \$11.5 billion in research funding across 14 member institutions in 11 states. In FY20, member institutions had more than 53,000 faculty, educated more than 600,000 full and part-time students and awarded more than 9,000 research-based PhDs. We appreciate the opportunity to respond to the 2024 Draft NSF “Proposal and Award Policies Procedures Guide” (PAPPG). Please accept the following comments from the BTAA Responsible Conduct of Research Collaborative in response to the National Science Foundation (NSF) request for public comment published April 13, 2023 at 88 FR 22488,

<https://www.federalregister.gov/documents/2023/04/13/2023-07780/agency-information-collection-activities-comment-request-national-science-foundation-proposalaward>

The proposed 2024 PAPPG adds a requirement that graduate students and postdoctoral scholars funded by NSF research have Individual Development Plans (IDP). This is similar to the requirements from the National Institutes of Health (NIH), including a certification to be provided as part of annual progress reports. Specifically, the 2024 PAPPG adds the following requirement:

Certification Requirements for Annual and Final Annual Reports:

In submission of each annual and final annual report, the PI or co-PI is certifying that:

[...]

for awards that support graduate student or postdoctoral scholars include certification by the PI that each graduate student and postdoctoral scholar receiving substantial support from such award has developed and annually updated an individual development plan to map educational goals, career exploration, and professional development.⁷⁴ NSF defines “substantial support” as a graduate student that has received one person month or more of support for the annual reporting period under the NSF award

The NIH outlines a similar requirement in NOT-OD-14-113,

<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-113.html>, stating that:

[...] NIH encourages grantees to develop institutional policies that employ an IDP for every graduate student and postdoctoral researcher supported by NIH awards.

Beginning on October 1, 2014, annual progress reports are required to include a description of whether the institution uses IDPs or not and how they are employed to help manage the training and career development of those individuals.

Exploring how an IDP requirement would benefit graduate students is advantageous to all impacted by this requirement. The BTAA-RCR Collaborative embraces NIH and NSF promotion of positive mentoring practices and we feel that assessment of agency IDP requirement effectiveness would be beneficial. Specifically, do documented conversations regarding career goals and professional development result in more positive outcomes for postdoctoral researchers and graduate students? Previous studies suggest that IDPs can have a positive impact on the goal-setting, career planning and preparedness among doctoral and postdoctoral students. However, the usage varied across institutions, suggesting a need for greater support and implementation strategies.¹⁻⁴

We encourage the Federal government to examine whether the current and proposed IDP requirements result in more favorable outcomes for individuals subject to these requirements, in contrast to efforts towards implementation of other positive mentoring practices. For instance, what is the appropriate duration of an individual's appointment that would correspond with the need for an IDP and an effective implementation of it? Also, would institutions solely implement IDPs for graduate students in lieu of other mentoring practices? We also encourage agency harmonization of any IDP requirements, including the individuals affected, content required, certification, and agency reporting.

Thank you for the opportunity to respond to the proposed revisions of January 2024 NSF PAPPG, and for NSF's efforts to promote effective mentoring. We welcome the opportunity to continue this important conversation which affects the US research enterprise.

With best regards,

University of Illinois, Urbana-Champaign

- Christopher M.B. Lehmann, Research Integrity Officer

Indiana University

- John R. Baumann, Ph.D., Associate Vice President for Research Compliance, Office of Research Compliance, Office of Vice President for Research

University of Iowa

- Michael Andrews, Director Research Integrity and Security, Research Integrity and Security Officer

University of Minnesota

- Danielle Rintala, Risk Intelligence and Compliance Director

Purdue University

- James Mohler, Research Integrity Officer
- Cecon Mahapatra, Lead Compliance Officer

University of Wisconsin–Madison

- Brian G. Fox, Associate Vice Chancellor for Research Policy and Integrity, Research Integrity Officer

References:

1. Vanderford NL, Evans TM, Weiss LT, Bira L, Beltran-Gastelum J. Use and effectiveness of the Individual Development Plan among postdoctoral researchers: findings from a cross-sectional study. *F1000Res*. 2018 Jul 25;7:1132. doi: [10.12688/f1000research.15610.2](https://doi.org/10.12688/f1000research.15610.2). PMID: [30498569](https://pubmed.ncbi.nlm.nih.gov/30498569/); PMCID: [PMC6240468](https://pubmed.ncbi.nlm.nih.gov/pmc/PMC6240468/).
2. Vanderford NL, Evans TM, Weiss LT, Bira L, Beltran-Gastelum J. A cross-sectional study of the use and effectiveness of the Individual Development Plan among doctoral students. *F1000Res*. 2018 Jun 11;7:722. doi: [10.12688/f1000research.15154.2](https://doi.org/10.12688/f1000research.15154.2). PMID: [30026933](https://pubmed.ncbi.nlm.nih.gov/30026933/); PMCID: [PMC6039936](https://pubmed.ncbi.nlm.nih.gov/pmc/PMC6039936/).
3. Chang CN, Patterson CA, Vanderford NL, Evans TM. Modeling individual development plans, mentoring support, and career preparedness relationships among Doctor of Philosophy (Ph.D.) trainees in the life sciences. *F1000Res*. 2021 Jul 21;10:626. doi: [10.12688/f1000research.53705.2](https://doi.org/10.12688/f1000research.53705.2). PMID: [35083035](https://pubmed.ncbi.nlm.nih.gov/35083035/); PMCID: [PMC8758970](https://pubmed.ncbi.nlm.nih.gov/pmc/PMC8758970/).
4. Hobin JA, Clifford PS, Dunn BM, Rich S, Justement LB. Putting PhDs to work: career planning for today's scientist. *CBE Life Sci Educ*. 2014 Spring;13(1):49-53. doi: [10.1187/cbe-13-04-0085](https://doi.org/10.1187/cbe-13-04-0085). PMID: [24591503](https://pubmed.ncbi.nlm.nih.gov/24591503/); PMCID: [PMC3940462](https://pubmed.ncbi.nlm.nih.gov/pmc/PMC3940462/).