

Memorandum

Date: May 23, 2024

To: Chris Marcum, Desk Officer
Office of Management and Budget

From: Emilda B. Rivers, Director
National Center for Science and Engineering Statistics
U.S. National Science Foundation

Via: Suzanne Plimpton, Reports Clearance Officer
National Science Foundation

Subject: Request for approval of a non-substantive change in the 2025 Survey of Earned Doctorates (SED)

The National Center for Science and Engineering Statistics (NCSES) within the U.S. National Science Foundation requests approval for a non-substantive change in the 2025 Survey of Earned Doctorates (SED), OMB control number 3145-0019. Based on preliminary results from the OMB approved experiment implemented in the 2024 SED to test Sexual Orientation and Gender Identity (SOGI) measures, NCSES proposes to replace the SED's current biological sex question with a question about sex assigned at birth (SAB) and include the SOGI questions in the 2025 SED (Exhibit 1).

Background

In the 2024 SED survey cycle, NCSES is conducting an experiment to continue its research on how to best collect SOGI data from doctorate recipients that would yield the most accurate and usable data while addressing privacy and confidentiality concerns. The separate module of the SOGI experimental questions is embedded in the demographic information section at the end of the SED web instrument. The experiment uses compound random assignment to compare seven different variations of SOGI questions. The SOGI Question Experiment Plan was included in Attachment 10 of the 2024-2025 SED Information Collection Request.

The 2024 SED SOGI Data Collection Experiment Summary (Attachment 1) presents the details of the experimental research design and the key preliminary findings based on the analysis of the survey data collected between the launch of data collection on 31 May 2024 and 31 March 2024. A nonresponse bias analysis comparing early and late responders in the previous five SED data collections cycles indicates that in each cycle, a set of key characteristics of early respondents through March were not significantly different from all respondents in the survey cycle (data not shown). Based on this finding and the stability of the results from the 2024 SED SOGI experiment examined, the preliminary results appear to yield sufficient information to make the decision to collect the SOGI data in the 2025 SED survey cycle before the full results are available at the end of the 2024 SED data collection cycle.

Proposed Change

Among the three gender identity questions tested in the experiment, NCSES is recommending proceeding with G3, based on the dimensions assessed, item nonresponse rates, breakoff rates, ease of answering, and construct validity. In addition, this question raised the least concerns about confidentiality and privacy among gender minorities. This question also includes more response options, including “Non-binary, Gender Non-conforming, Gender fluid, or Genderqueer”, compared to G1 and G2.

While the results obtained by the three sexual orientation questions tested in the experiment were similar, NCSES is recommending proceeding with SO3 given it has more response options than the other two questions and aligns with the consideration from OMB’s recommendations on best practices to use design element in the question construction that improve data quality. The design of G3 and SO3 questions, with more detailed sets of response options and with an open-ended write-in, are being recommended for the 2025 SED data collection cycle.

Given that about half of SOGI minority respondents expressed concerns about privacy and confidentiality of SOGI data and the potential increase in the item nonresponse rates on the SOGI data collection outside of an experimental condition, NCSES plans to inform 2025 SED respondents that their individual responses to the SAB and SOGI questions will not be shared with their institutions to protect the data confidentiality. The SAB and SOGI information provided by the respondents will be used to develop a gender construct variable that replaces the current binary sex variable in the SED. In addition, SOGI data will only be shared with institutions in an aggregated format that does not lead to identification of individuals.

To promote transparency, NCSES plans to make the 2024 SED pilot data available for research purposes in the near future. This effort will include an assessment to determine an appropriate dissemination approach that will maintain trust and protect the confidentiality and privacy of the SED respondents.

Contact Person

Kelly Kang
Project Officer, Survey of Earned Doctorates
National Center for Science and Engineering Statistics
National Science Foundation
kkang@nsf.gov, 703-292-7796

Exhibit 1: Proposed SOGI questions for the 2025 SED

First screen

[Sex Assigned at Birth]

What sex were you assigned at birth, on your original birth certificate?

- Male
- Female

[Gender Identity]

G3. How do you currently describe yourself?

Select all that apply.

- Man
- Woman
- Transgender
- Non-binary, Gender non-conforming, Genderfluid, or Genderqueer
- I use a different term: _____
- I prefer not to answer

Second screen

[Sexual Orientation]

SO3. Which of the following best represents how you think of yourself?

- Straight or heterosexual
- Gay or lesbian
- Bisexual
- I use a different term: _____
- I prefer not to answer