

SRS MEMO

Date: September 28, 2010

To: Shelly Martinez, Office of Management and Budget

From: Kelly Kang, Human Resources Statistics, Division of Science Resource Statistics, National Science Foundation

Subject: Request for Approval of Non-Substantive Changes to the NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS)

The National Science Foundation requests approval of a non-substantive change to the GSS survey. For the 2010 cycle, NSF proposes adding items regarding postdoctoral appointments that were piloted in a subsample of schools during the 2009 data collection. All but two of the proposed postdoc items are substantively similar to the items asked about graduate students, including questions on race/ethnicity, and sources and mechanisms of financial support. The exceptions are a question about the unit's definition of a postdoc position and a question on the origin of the doctoral degree, neither of which is applicable for graduate students.

A description of the pilot study that was conducted to test these questions follows, along with a description of the proposed changes.

Results of 2009 Postdoc Pilot Study

The purpose of the Postdoc Pilot Study was to improve the procedures currently used in the GSS to collect information on postdocs. The specific objectives of the Postdoc Pilot included the following:

- **Objective 1.** Determine the best methods for identifying the person at a school who is most knowledgeable about postdocs and nonfaculty researchers (NFRs)
- **Objective 2.** Identify the common characteristics of a postdoc position across institutions and develop the best operational definition of a postdoc position
- **Objective 3.** Determine whether schools can reliably report additional data about postdocs beyond what is currently collected on the GSS, e.g. race/ethnicity, detailed funding, and origin of doctoral degree
- **Objective 4.** Implement methods to reduce underreporting of postdoc data in the GSS.

A detailed set of postdoc questions was developed during two rounds of cognitive and usability testing. A sample of 74 institutions participated in the pilot, completing a version of the GSS web survey that contained the new postdoc items. In all, there were 870 reporting units within the participating schools. (A copy of the question that has historically been asked about postdocs can be found in Appendix A; screenshots of the 2010 postdoc items can be found in Appendix B.)

The results of the pilot study suggest that, for the most part, schools can answer the new postdoc questions. The demographic items (Question A) appear to be the easiest to complete and have the least amount of item nonresponse; 96.7 percent of reporting units were able to supply these data. The financial support items (Question B) were answered by 90.8 percent of reporting units. On doctoral degree type items (Questions C1 and C2), it was difficult to distinguish between true zeros and missing values given the format of the questions in the pilot study, which was similar to the format historically used in the GSS for such questions. Respondents may leave a cell blank rather than typing a zero. These two items are being modified from the pilot format to a format similar to doctoral degree origin item (Question C3) to ensure the ability to distinguish between true zeros and missing data.

The results of the pilot also suggest that providing the option of appointing a separate postdoc coordinator was a valuable addition. Exactly half of the 74 pilot schools chose to designate a postdoc coordinator. From the debriefing interviews, Student Coordinators and Postdoc Coordinators seemed pleased with the arrangements. None of the schools that had designated a postdoc coordinator asked to change back to having only a school coordinator.

Postdoc coordinators had higher response rates (97.3%) compared to school coordinators (86.5%) to the postdoc section. Having a postdoc coordinator may also result in more comprehensive coverage of postdocs in an institution. For small schools (those with less than 10 units reporting postdocs) designating a postdoc coordinator was associated with a larger net increase in units per school reported to have postdocs (2.5) compared to a net increase of about 0.5 per school if postdocs were reported by school coordinators. Similarly, small schools with postdoc coordinators reported 30% more postdocs than in the previous year compared to a 12% increase for school coordinators.

Proposed Changes to the GSS 2010 Instrument

For the 2010 data collection NSF plans to implement the questions piloted in 2009 with the exception of two minor modifications listed below.

- For question B “Financial Support”, what had been line N in the pilot, “Unknown, not stated, or personal resources” has been split into two separate categories, line N: “Personal resources” and line O: “Unknown or not stated.”
- The format of doctoral degree type questions C1 and C2 will be changed to appear similar to C3.

In advance of the survey, RTI (the contractor conducting the GSS) will send a letter to the presidents of participating schools advising them of the additional questions regarding postdocs and asking them whether or not they would like to appoint a separate postdoc coordinator for their school.

Appendix A shows the screen shot for the information gathered on postdocs in the 2008 and 2009 GSS.

Appendix B shows the proposed screen shots for the 2010 postdoc data collection. Minor changes remain to be made to questions C1 and C2 to change the format to resemble Question C3 so that the categories will sum to the total.

Appendix A – Screenshot of postdoc questions in the 2009 GSS

Postdocs by support and citizenship, and other doctorate-holding nonfaculty research staff (report individuals in whole numbers)	Sex and selected degree field			Of the total in Col. 3, how many have an MD, DO, DDS, or DVM? 4
	Male 1	Female 2	Total ¹ 3	
Postdocs by largest mechanism of support				
• Federal fellowship A				
• Federal traineeship B				
• Federal research grant C				
• Nonfederal sources D				
Total postdocs (sum Rows A–D)¹ E				
• Of the total postdocs (Row E), how many are foreign nationals holding temporary visas F				
Doctorate-holding nonfaculty researchers G				
Please explain significant differences from the 2008 survey or provide other comments here				
¹ Shaded row and column totals will be automatically calculated if you are reporting via the GSS Web survey				

A

Appendix B – Screenshots of proposed postdoc questions in the 2010 GSS



Postdoc Definitional Question

Lincoln Laboratory
School of Dentistry (1467)

Listed below are common characteristics of postdocs used by different organizations.

Please tell us which of the following are requirements for a postdoc at Lincoln Laboratory, School of Dentistry.

Postdoc Characteristics	Is Required?
a. Requires a Ph.D. or an equivalent doctorate degree (such as a Sc. D., M.D., D.V.M, or D.D.S.)?	<input type="radio"/> Yes <input type="radio"/> No
b. Requires that the doctorate was recently awarded?	<input type="radio"/> Yes <input type="radio"/> No
c. Is a temporary position?	<input type="radio"/> Yes <input type="radio"/> No
d. Is intended to provide training in research?	<input type="radio"/> Yes <input type="radio"/> No
e. Is intended to advance professional skills?	<input type="radio"/> Yes <input type="radio"/> No
f. Requires a full-time commitment to research?	<input type="radio"/> Yes <input type="radio"/> No
g. Requires that the postdoc work under the direction of a senior scholar?	<input type="radio"/> Yes <input type="radio"/> No
h. Is for a defined period of time (i.e., has a term limit)?	<input type="radio"/> Yes <input type="radio"/> No
i. Requires publication of research in scholarly journals?	<input type="radio"/> Yes <input type="radio"/> No
j. Requires mentorship for professional development?	<input type="radio"/> Yes <input type="radio"/> No
k. Is intended to prepare the postdoc for an independent career in research?	<input type="radio"/> Yes <input type="radio"/> No

Does your institution have a formal definition of a postdoc position that is used by all units at your institution?

- Yes
 No

Postdocs: Ethnicity, Race and Citizenship

Biology (27369)

A

In fall 2009, how many postdocs did this organizational unit have in the categories in the table below? Please do not count doctorate-holding nonfaculty researchers.

Check this box if this unit had no postdocs

Check this box if this unit had postdocs for which you cannot report complete data

- Count individuals in one and only one unit.
- Include clinical fellows if the primary purpose of the appointment is research training.
- Exclude postdocs with appointments in residency training programs.
- Count postdocs who are Hispanic/Latino or Hispanic/Latino and any other race in Row B.
- See the [Glossary](#) for full definitions of citizenship, ethnicity and race categories or place your mouse over the category heading.

Citizenship, ethnicity, and race of postdocs (report postdocs in whole numbers)		Male 1	Female 2	Total 3
Calculate Totals				
Foreign nationals with temporary visas, regardless of ethnicity or race	A	0	0	0
U.S. citizens and permanent residents (non-U.S. citizens holding green cards)				
• Hispanic/Latino ethnicity (one or more races)	B	0	0	0
• Non-Hispanic/Latino (one or more races)				
One race, American Indian/Alaska Native	C	0	0	0
One race, Asian	D	0	0	0
One race, Black/African American	E	0	0	0
One race, Native Hawaiian/ Other Pacific Islander	F	0	0	0
One race, White	G	0	0	0
More than one race (non-Hispanic/Latino)	H	0	0	0
• Ethnicity/race unknown or not stated	I	0	0	0
Total Postdocs (sum Rows A - I)	J	0	0	0
Calculate Totals		1 Male	2 Female	3 Total
Please provide any comments about your data here				

Postdocs: Financial Support

Biology (27369)

B

In this organizational unit in fall 2009, how many postdocs received their largest source of financial support from each category in the table below? Please do not count doctorate-holding nonfaculty researchers.

Check this box if this unit had no postdocs

Check this box if this unit had postdocs for which you cannot report complete data

- Count individuals in one and only one unit.
- Include clinical fellows if the primary purpose of the appointment is research training.
- Exclude postdocs with appointments in residency training programs.
- See the [Glossary](#) for full definitions of sources and mechanisms of support or place your mouse over the category heading.

Largest source of financial support	Largest mechanism of financial support (report postdocs in whole numbers)					
	Fellowships 1	Traineeships 2	Research Grants 3	Other Support 4	Total 5	
Federal (e.g., training grants from federal sources)						
• Department of Defense	A	0	0	0	0	
• HHS-NIH only	B	0	0	0	0	
• HHS-Other than NIH	C	0	0	0	0	
• NSF	D	0	0	0	0	
• Department of Agriculture	E	0	0	0	0	
• NASA	F	0	0	0	0	
• Department of Energy	G	0	0	0	0	
• Other federal sources	H	0	0	0	0	
Sub-Total, Federal (sum Rows A - H)	I	0	0	0	0	
Nonfederal						
• Institutional/state and local government	J	0	0	0	0	
• Other U.S. sources	K	0	0	0	0	
• Non-U.S. sources	L	0	0	0	0	
Sub-Total, Non-Federal (sum Rows J - L)	M	0	0	0	0	
Personal resources	N			0	0	
Unknown or not stated	O	0	0	0	0	
Total Postdocs (sum Rows I, M, N & O)	P	0	0	0	0	
Total Postdocs, Men	Q	0	0	0	0	
Total Postdocs, Women	R	0	0	0	0	
		Fellowships 1	Traineeships 2	Research Grants 3	Other Support 4	Total 5
Largest Mechanism of Financial Support						
Please provide any comments about your data here						

Postdocs: Type and Origin of Degree

Biology (27369)

Glossary

Printer-Friendly Table

C1

Please report the number of postdocs in this organizational unit by type of doctoral degree and by mechanism of support.

		Calculate Totals		Fellowships 1	Traineeships 2	Research Grants 3	Other Support 4	Total 5
Total Postdocs (Determined from question B)	A	0	0	0	0	0	0	0
Of the postdocs in Row A, how many have an MD, DO, DDS, or DVM?	B	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

C2

Please report the number of postdocs in this organizational unit by type of doctoral degree and by citizenship.

		Calculate Totals		U.S citizens & permanent residents 1	Foreign Nationals with temporary visas 2	Total 3
Total Postdocs (Determined from question A)	A	0	0	0	0	0
Of the postdocs in Row A, how many have an MD, DO, DDS, or DVM?	B	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

C3

Please report the number of postdocs in this organizational unit by origin of doctoral degree.

Number of postdocs who received their doctoral degree in the United States (including Puerto Rico and the U.S. territories)?	A	<input type="text"/>	} Must sum to total for postdocs = 0
Number of postdocs who received their doctoral degree in a foreign country? .B	B	<input type="text"/>	
Number of postdocs with origin of doctoral degree unknown?	C	<input type="text"/>	
Total	D	0	

Please provide any comments about your data here