

Suggestions for Improving the GSS:

Responses from the RBS Respondents



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Summary

This report provides a description of suggestions for improvement to the GSS from about 300 respondents to the Response Behavior Survey of 2006. Suggestions reflect both procedural and questionnaire design topics. The top recommendations based on responses from GSS RBS respondents are, as follows:

- Provide a summary of study findings and rationale for why the GSS is an important research effort. Many respondents experience a significant amount of burden that results from their tasks of gathering, verifying, and reporting data. Provision of a report or link to a study website would serve as positive reinforcement and token of appreciation for their hard work. It would also help those who don't understand why they are required to participate each year, and those who feel that someone other than the departments should be supplying the requested data. News alerts and press releases related to the GSS may also exemplify its importance and attract interest among the data reporters.
- Facilitate the provision of resources required to complete the study. RBS respondents made a request for more resources – both at their department level, in terms of personnel and funds for GSS-related activities and at the NSF /study level, in terms of Help Desk and online support for clarifying definitions and instructions in the survey. Respondents also made an appeal for more time, which may be accommodated by fielding the study earlier or improving the process for which the schools filter the survey down from the institutional contact to the departmental contact – which may add more time for reporting at the departmental level before the data collection period ends.
- Improve the clarity of the definitions and instructions in the survey. Reporting categories that were noted as vague to the respondents included funding sources, race, and postdocs. Include more examples and more detailed explanations on a question-by-question basis and overall “frequently asked questions” reference document to help explain what the study expects in each category and for each section of the survey. This request can be accommodated within the survey form itself or through links to an external study website.
- Improve the visual layout of the web survey form. Increase font size and decrease complexity. Improve /provide options for web-based functions such as summations and cross-checks of data. Reduce screen segmentation.
- Consider different reporters than departments for postdoc data. Many respondents commented that a centralized postdoc office would be a better place for gathering data about postdocs. Others suggested splitting the study into two components: one for graduate students and one for postdocs.

Suggestions for Improving the GSS: Responses from the RBS Respondents

The Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) is currently undergoing a redesign effort that aims to reduce respondent burden and improve overall data quality. The Response Behavior Survey (RBS) to the GSS can provide data to help inform redesign options. The RBS was conducted as a follow-up to the GSS 2005 with intent to learn more about respondent behavior and perceptions of data quality in the GSS. The RBS took place from June through September 2006, right on the heels of the GSS 2005 data collection. The respondents were sampled from a frame of GSS department contact persons and were thus departmental or institutional respondents to the GSS. The RBS resulted in an overall response rate of 72% (n=2,496).

Respondents in the RBS provided suggestions for changes to the GSS in five areas: (1) institutional activities; (2) departmental activities; (3) format of the survey; (4) procedures for administering the survey; (5) and support from NSF. Some responses such as, “sending the survey earlier” addressed the way the survey was administered and the process for reaching the most knowledgeable respondent. Other suggestions such as “provide definitions” addressed the layout and wording of the survey form. In sum, the data provided in the open-ended questions of the RBS addressed both procedures used to identify a contact person and the process of locating the respondent associated with Form 811 and questionnaire design of Form 812. This report describes the suggestions provided by the RBS respondents.

Coding Methods

As shown in Figure 1 below, the G4 question included five open-ended items that were displayed on the same screen with open boxes beneath each question.

Figure 1. Question G4, as Displayed to RBS Respondents

The screenshot displays the '2005 GSS Follow-Up Survey' interface. At the top left is the NSF logo. A navigation bar contains tabs for 'Introduction', 'GSS', 'Postdocs', 'Responding to the GSS', 'Other Departments', 'Improvements', and 'Demographics'. Below the navigation bar is a link: 'Questions? nsf@ssgresearch.com'. The main question reads: 'Using the following categories as guides, what suggestions do you have to improve the quality of data reported for this department/program/center? (Do not feel obligated to provide a suggestion for each category)'. Below the question are five open-ended text input boxes, each with a label and a small up/down arrow icon on the right side:

- Things the institution could do
- Things the department/program/center could do.
- Improvements to the format of the GSS (wording or layout of the questionnaire).
- Improvements to the procedures of the GSS (timing, mode, method of contacting people).
- Support NSF could provide.

At the bottom of the form are two buttons: '<< Previous' and 'Next >>'.

The G4 questions were presented to all respondents, although it did not require a response. Close to one-fifth of the respondents provided a response. Of those individuals, approximately two-thirds gave substantive responses to the G4a-e sub-questions. A substantive response was a meaningful reply that was informative. Remarks such as “none,” “don’t know,” “n/a,” were not included in the analysis.

During the summer of 2007, the open-ended responses to the G4 series of questions were reviewed and grouped into coded categories by an intern from the Joint Program in Survey Methodology. This report describes the themes that emerged from the responses.

Findings

G4a. Recommendations for Improving Data Quality at the Institution Level

The first item in the G4 question focused on changes at the institutional level. The question read:

Using the following categories as guides, what suggestions do you have to improve the quality of data reported for this department / program / center?

... Things the institution could do.

Out of the 320 responses to this question, four general themes emerged: (1) create or provide access to a centralized database (33%), (2) assign the reporting task to a centralized office rather than departments (17%), (3) assign the task of reporting postdocs to a Postdoc Office or create a Postdoc Office for this purpose (15%), and (4) provide additional resources in terms of time, personnel, and tools for extracting data (19%). Ten percent of the 320 respondents reported that the way their institution handles the survey was good for them and they did not see a need for any changes.

Table 1. G4a—Recommendations for Institutional Changes

Theme	Percent N=320
Create or provide access to a centralized database	33%
Have a centralized office at the university complete the survey	17%
Create or ask the Postdoc Office to report on postdocs	15%
Add resources: time, personnel, and tools	19%
Misc. other categories	7%
No Change	10%
Total	100%

Centralized Database

Under the rubric of centralized databases, respondents called for improved access to existing institutional databases and systems. Their comments suggested that they have developed “workaround solutions” to obtaining data for the GSS and they felt that more direct access to the institutional databases, such as Human Resources or Graduate School would streamline their efforts. For example:

“If improvements could be made in sharing information regarding graduate student funding that passes through the university, that would be a huge help, as I currently rely on students to report that data themselves.”

Other comments included “Permit HR data access, or provide reports with race and immigration status to Department Administrators” and “Provide better access to the institution database for graduate students with more sophisticated sorting capabilities. The current database does not allow for choosing specific information.”

From the comments that focused on access-related issues to centralized databases, we observed that this topic was most noticeably of concern for the financial data: “Provide access to centralized payroll database” and “Provide access to more detailed data on financial support.”

In lieu of direct access to databases, some respondents requested that the institution send reports or lists to the departments that could be used for the GSS. Again, these comments suggested that the departments felt that the institution had better records or more direct access to information across multiple databases than they did. For example:

“The university as a whole could provided a download from the a Human Resource database done centrally not by each individual department (similar to how GSBS students are currently being handled by the GSBS office)”

“Generate reports to separate US citizens, green card holders and internationals.”

One institution successfully had implemented such a reporting system that others requested through their RBS responses: “Last year, UM created a report that individual departments could access. The report pulled information from several different databases and significantly decreased the reporting burden on departments.”

Finally, others felt that new databases and systems should be created for the purpose of reporting for the GSS: “Develop a comprehensive data report that would provide the necessary data without need for individual manipulation prior to reporting” and “Develop a system within MPathways to query the data and upload to GSS survey.”

Use Central Administrative Offices as GSS Reporters

While some respondents wanted access to centralized databases so they could better report for the GSS, other respondents felt that the centralized offices should be the reporters. While some comments simply referenced the institution, for example, “Have a central location to complete the required information”, others were specific in which centralized office should report:

“Designate a person responsible at the Office of the Dean of Graduate Studies for data collection from the departments and programs”

“Assign the task to IR”

“Have registrar's office track data”

“Have the graduate school complete these surveys.”

Postdoc Offices

Similar to the comments above that appeared targeted to graduate student reporting, about 35 respondents felt that information about postdocs likewise should be reported from a centralized institutional office. These comments reflected that it would not only be easily for a central “Postdoc Office” to do such

reporting, but that the data for the institution as a whole would be of better quality. Some of their responses regarding postdocs included:

“All postdoc data could be best reported by the Office of Postdoctoral Services. At this institution I expect that we are more likely to double count than to undercount. Institutional Office (in this case the School of Medicine) is quite slow at getting survey to the departments.”

“Provide more centralized oversight of postdocs as we have with graduate assistants”

“Set up a central office for research postdocs - always in the plans, but never realized”

Provide Additional Resources

About 60 respondents felt that that the institution could provide more resources for the study – in terms of time, personnel, and software. Additional time for reporting to the study was the most frequently mentioned resource. Examples of this request included: “forward data request in a timelier manner to the departments;” “get me the survey more quickly;” and “give us more lead time.” From these comments, it appears that the respondents felt they could plan better and manage their time and tasks if the institutional contacts distributed the survey much earlier.

Other comments focused on the provision of additional staff at the department level to help pull and report the data and upgrade / provide new software tools for extracting data. Some institutions were already in the process of upgrading their software and respondents felt optimistic about new capabilities for setting up queries and obtaining information.

Institutional Level Changes: Summary

While there were a significant number of responses and variation across responses to the question about ways in which the institution could improve GSS reporting, there emerged an emphasis on data accessible to centralized offices. One-third of the respondents to G4a asked for direct access to databases that make their task of reporting easier. Another third of the respondents to G4a, on the other hand, felt that centralized offices could pull the data more efficiently and they should do the reporting. There was a request for additional resources in terms of time, personnel, and software / tools for extracting data.

G4b. Recommendations for Improving Data Quality at the Department Level

The second item in the G4 question focused on changes at the department level. The question read:

Using the following categories as guides, what suggestions do you have to improve the quality of data reported for this department / program / center?

... Things the department could do.

Four general themes emerged from responses to G4b: (1) centralize a database for reporting in the GSS; (2) assign a centralized office in the institution as the GSS reporter; (3) provide additional resources and (4) provide definitions for terms and codes.

Eighteen percent of responses to G4b reflected that the respondents were satisfied with the way their department handles the survey. Respondents had different reasons for wanting the survey format to stay the same. Some respondents believed that the data was accurate. Responses indicating this sentiment were: “I feel the quality of data is accurate and nothing needs to be done;” and “The quality of our data submitted is excellent.” Others believe they had a good system for completing the survey. “Our

department currently has a good working database so no other "things" are necessary;" and "the system works well – suggestions."

Table 2. G4b—Recommendations for Department-Level Changes

Theme	Percent
Create centralized database for reporting purposes	40%
Assign to a centralized institutional office	21%
Provide additional resources	6%
Provide definitions for terms and codes	5%
No change	18%
Misc. responses	10%
Total	100%

Create a Centralized Database

As with the comments for G4a which queried about possible suggestions for change at the institutional level, a significant proportion of responses to G4b which focused on change at the department level reflected a need to create a centralized database that could be maintained, updated, and improved. These comments were 40% of the substantive responses to the G4b sub-question. Specific responses were: "have a better database" and "establish a better database for these statistics". Many of the comments on centralized databases appeared directed at postdoc information. Responses felt that better records on postdocs could be achieved by having a central database with data that was checked periodically against other records and also updated when new information on postdocs was made available.

Another response was: "better coordination between administrators, however, this is now much improved." When one department needed data about a graduate student or postdoc, respondents thought that this information could be obtained through connections between administrators instead of having the departmental contact search throughout the institution for the data.

Designate a Centralized Office for Reporting the Data

A second recommendation was to give the role of reporting survey data to administrative departments or offices at the institution. The comments that were summarized in this recommendation were 21% of the substantive responses to the G4b. Some responses were: "have the personnel administrators provide information for this survey;" "assign responsibility for financial aid component to the Director of Admissions and Financial Aid, who maintains data on all student awards."

Provide Additional Resources

As in the comments for the question regarding changes at the institutional level (G4a), respondents felt that their departments could provide additional resources in terms of personnel, funds, and tools to reduce the burden of reporting. For example, they suggested: "Have more staffing. We are swamped all of the time and to spend hours on this survey is always considered irksome;" and "provide more support personnel for the graduate program, but they have no free resources." The respondents offering these suggestions appeared overwhelmed and would like to have had more assistance with the survey. They seem to view the GSS as just one task among many to complete within a limited time and with little resources.

Other respondents suggested that additional funding would contribute to improved processes for gathering the GSS data. For example, one respondent commented: "with more funds we could keep

current more detailed records.” In addition to money, the respondents reported that the provision of key information directly related to the survey demands would be helpful. Examples were: “supply the financial and postdoc data;” and “the most time consuming portion of the survey is finding out from students who are not supported by our program, where they receive support - having a mechanism in place to find this information without contacting each student would save time.” These comments additionally reflect a common desire to create a centralized database or to allow academic departments’ direct access to all records related to graduate student or post doctorates.

Provide Definitions for Terms and Codes

A fourth recommendation (5% of the comments for G4b) was to provide definitions for terms and codes. Respondents wanted the survey terms and codes used in the survey to be defined consistently. For some respondents, definitions were only part of a set of recommendations, while for others it was the only suggestion. Having better definitions and using a set of standard codes could be inferred to increase their ability to apply these terms to their institutions, to answer the questions, and to give more exact responses to the questions.

Specifically, respondents wanted to have the term “Postdoctorate” clearly defined. Some responses were: “more accurate job codes/titles for postdocs;” “the department could spell out what constitutes a postdoc;” and “Define and track their postdocs in the same way. Have the department understand that I am requesting this for a reason and that it's not my fault if each different survey asks for the data in a different way. Realize that we are all busy as they are and that I am just doing my job, also, and working on a deadline as well.” The term Postdoctorate seemed to be a confusing term that respondents believed to have been used unclearly and inconsistently.

Department Level Changes: Summary

Over 60% of the substantive responses to the G4b question, “Things the department/program/center could do to improve data quality,” were summarized in the top two recommendations related to developing a central database and to designating a centralized office to report the data. Other suggestions for departmental-level change were to increase resources for the study and clarify definitions and terminology.

G4c. Recommendations for Improving Data Quality via Format Changes

The third item in the G4 question focused on changes to the format. The question read:

Using the following categories as guides, what suggestions do you have to improve the quality of data reported for this department/program/center?

...Improvements to the format of the GSS (wording or layout of the questionnaire).

There were 180 responses to this question that grouped into three main recommendation categories: questionnaire wording, which included commentary on definitions (n=21), instructions (n=15), and specific question items (n=14); suggestions on reporting categories, particularly for funding (mainly) (n=18), race (n=11), graduate student/postdoc distinction (n=11) and full-time/part-time status (n=6); and web survey functionality (n=30) and layout (n=26). Twenty-eight respondents reported that they felt the format was good as is, and recommended no changes.

Table 3. G4c-Recommendations for Format Changes

Theme	Percent N=180
Wording: instructions, definitions, and individual question wording	28%
Reporting categories	26%
Web survey functionality	17%
Questionnaire layout	13%
No change	16%
TOTAL	100%

Instructions and Wording

Respondents remarked on several aspects of the wording in the questionnaire itself, including commentary on definitions (n=21), general instructions (n=14), and specific question items (n=18). Definitions were noted as sometimes vague and difficult to understand. For example, one respondent wrote “[provide] less government-speak; clarify the instructions, definitions, etc.”, while another indicated, “Some of the instructions need to be easier to understand exactly what is needed for that category. Some of the questions sound very similar to each other.”

Other suggestions were directed at the instructions provided in the survey, as noted by such comments as “The directions for each section could be worded more clearly”, and “Sometimes understanding what is asked is confusing so getting numbers to correspond is difficult”. Some of the comments were targeted at the individual question items themselves. For example, “Sometimes you had to read the questions several times just to understand what you asking. One question I answered and it still said I needed to answer it”. Several respondents offered, “Add not applicable to all questions”.

Reporting Categories

Closely tied with the responses about question wording and instructions were comments on the reporting categories themselves, particularly the counts by funding source, by race, and part-time and full time status. Respondents did not always appear to understand what to put in the various categories. The funding category was most confusing. Respondents remarked “Institutional and GSS terminology such as Graduate Fellowships and Traineeships do not always mean the same” which then led to confusion over which individuals to count for the fellowships and traineeships. One respondent commented, “The source of funding section is the hardest and most time consuming because coming up with that information from students and interpreting the categories on the survey is very difficult to do accurately. Maybe have instructions/definitions for different sources on the survey so I can feel better about the category choices I make for each student. Also, funding is frequently not the same in both semesters for several students.”

Many others voiced frustration on how to categorize students who have more than one source of support. For example, “The part that drives me over the edge is answering questions on the financial support. Most of our students are supported by more than one source of funding.”

There were about a dozen comments on the demographic categories. Race seemed to be the main concern for the respondents making these remarks. They did not want to report, generally, and some expressed that they did not understand why such information is important, especially when crossed by funding source. Others seemed to find the format and wording of the category confusing. For example, “I do not have in front of me but the demographic data is very confusing and your categories are not lined up the way we usually do the data so I must constantly watch the columns” and “Questions about multi-racial individuals aren't possible to answer, we don't keep this sort of data.”

Another concern under reporting categories was the distinction between full and part-time students. The confusion seemed to come into play for advanced students working on preliminary exams or dissertations: “Sometimes I wonder about the definitions of full-time and part--time students and how well that reflects reality. For instance, we have many students who are officially enrolled part-time (defined by our institution as 9 s.h. or less for a graduate student) who are actually working on theses or major exams and who do not consider themselves part-time in the generally accepted meaning of the term. It is difficult to make these distinctions.”

Others comments reflected confusion over the definition of a “postdoc” and what was expected for this category, while others wanted graduate student and postdoc information separated. For example, one comment that reflected the sentiment of several respondents was, “Having two surveys - one for Postdocs and one for Graduate Students would be very helpful.”

Questionnaire Layout

Some respondents made comments about the overall questionnaire layout. A common sentiment amongst these suggestions was that the current layout did not support the task of gathering and inputting the requested data. For example, “making sure all columns add correctly in relation to other columns is not difficult per se, but the layout may be able to be improved to make errors more noticeable”, while another noted, “Make layout user friendly in terms of counts in columns and rows and reduce overlapping count.”

One person felt that itemizing the required information requests upfront would facilitate the task of gathering and inputting the data:

“A listing of all needed data should be given up front and simply listed as item 1, 2, 3, etc. The needed data should be able to be entered on just one screen so that the provider can see data already entered and what data is yet missing.”

Schools may vary in how their data are stored, and the task of converting the information from their systems to the GSS categorization is not always easy and data apparently do not always neatly fit into the categories. This leaves the schools to determine for themselves where to record what data, or how to deal with changes across semesters/terms within an academic year. For example, one respondent suggested,

“Maybe break down the information requested to specific semesters... i.e. number of graduate students during the fall semester, number of graduate students during the spring semester, number of graduate students during the summer semester. Since our types of assistantships change for students between the fall and spring semesters, the types of funding change, and a number of graduate students leave the program at the end of each semester, breaking down by semesters would help to achieve a more accurate result”.

Another respondent was focused on department rather than academic term:

“Instead of separating the data by department/program, group similar data together for all departments since that is how I gather the data. If the data were presented more like a spreadsheet it would eliminate redundancy.”

Web Functionality

The final theme that emerged on format issues was the functionality of the online survey itself. Some respondents wanted their data from previous years preloaded for them to update; others wanted the ability to forward sections of the survey to others to fill out. Some mentioned a desire for automated calculations

while others asked for more streamlined error messages. Quite a few noted that they were never sure if the submission function worked and needed to email the data collection office to learn if the form was successfully submitted.

Suggestions for Format Changes: Summary

Respondents called for improved instructions and clearer definitions in the GSS, particularly with respect to the reporting categories for funding, demographics, and postdocs. In addition, they generally felt that the overall layout of the tables did not support the task of gathering and inputting data. Some wanted to break out the data by semester; others by department in order to help them count individuals for particular categories. Web functions, such as the ability to forward a link to particular tables within the online survey was mentioned as one way to improve overall functionality of the survey.

G4d. Recommendations for Improving Data Quality via Procedural Changes

The fourth item in the G4 question focused on procedural changes. The question read:

Using the following categories as guides, what suggestions do you have to improve the quality of data reported for this department/program/center?

...Improvements to the procedures of the GSS (timing, mode, method of contacting people).

By and large, the most prevalent suggestion in response to this question focused on the timing of the data collection period. Other comments addressed issues related to the process for distributing the survey to the departments, mode of contact, and complexity of the survey.

Table 4. G4d-Recommendations for Procedural Changes

Theme	Percent
Data collection period	65%
Centralize reporting	6%
Email as preferred method of contact	9%
Simplify	5%
No change	13%
Other topics	2%
TOTAL	100%

Data Collection Period

More than one-half of the comments on data collection procedures focused on the timing of the data collection. The general sentiment was that the data collection came at a busy time for the departments, which contributed to the study’s burden. Respondents wanted the surveys to be sent earlier or perhaps during the summer so that the surveys could be completed under less stress and, possibly, with greater accuracy. For example, one respondent commented: “This survey is done during a busy time of year (graduation, admissions, orientations etc.). After the spring semester the office isn’t as busy and it’s easier to dedicate time to the survey then.” Others recommended: “A submission date earlier in the Fall Semester would be helpful. January is a difficult time to find the time to work on the survey, and I always end up doing it at the last minute;” “It would help if the time frame were changed. Requesting fall data in February for a March or April deadline would be better for us;” and “possibly move the collection time to the summer months when classes are out.”

Expedite the Delivery of the Survey to the Departments

Eight percent of the substantive responses to G4d focused on the time lag between when the institutional contact receives the survey and when that individual passes it to the departments. Respondents felt that the institutional contact may postpone the distribution of the survey in lieu of other more pressing university business. Thus, NSF would be better served by staying engaged in the process of finding the respondent until they are found instead of handing the task off to other people within the university. Some responses to illustrate this were: “Contact departments directly instead of through the central university. The NSF is often better at communicating with us quicker than the university” and “Contact department chair to disseminate information to the appropriate staff and faculty members early enough in the academic year to start the process.”

Email as Preferred Method of Contact

Overall, respondents preferred and requested email as the mode of contact over postal mail. For example, they remarked: “email is preferred” and “e-mail contact is great”. There was mixed commentary about paper-versus-electronic mode of the survey. For example, some commented: “I like the paper copy for the survey. If it is on my desk, I remember to do it. Sometimes if it is the web it is easy to keep putting it off until you forget it.” More often, however, respondents voiced preference for electronic form, for example, “I like the electronic method.”

Decrease Length and Frequency of GSS

Four percent of the respondents viewed the GSS as too long and too frequent. They believed that the survey could be simplified by asking fewer, more direct questions. Some statements that focused on the periodicity of the survey were: “[collect the data] every other year instead of annually;” and “Go to a biennial data collection, is it really needed every year. Generally this is a burden on departmental resources and staff time.”

Procedural Changes: Summary

The timing of the data collection period emerged as the strongest theme from the responses to the question about procedural changes to the GSS. The respondents remarked that the survey comes at a busy time of year for them and thus recommended delivering it earlier in the year, or even in the summer. Smaller proportions of comments focused on issues related email as preferred mode of contact, desire for a less frequent and shorter interview, and more direct contact from the NSF rather than the current filter of the survey through institutional contacts.

G4e. Recommendations for Improving Data Quality via NSF Support

The fifth item in the G4 question inquired about additional support for the GSS from the NSF. The question read:

Using the following categories as guides, what suggestions do you have to improve the quality of data reported for this department/program/center?

...Support NSF could provide.

This item received the fewest comments – about 79 in total – perhaps because it was the last item on the page, or perhaps respondents felt they voiced their concerns in earlier questions. The topics that emerged from this question did mirror many already expressed, even though the “target” for the comments was different (NSF, versus institution and departmental level). One theme that was voiced more strongly in this question, compared to the ones discussed earlier was the request for information on study results.

Table 5. G4e-Recommendations for NSF Support Changes

Theme	Percent N=79
Feedback about the study	15%
Improve instructions	17%
Provide additional resources	15%
Simplify the study	14%
Centralize the reporter	14%
Change the field period	9%
Improve web functions	8%
Other topics	8%
TOTAL	100.0%

Provide Feedback on the Study

There were respondents who felt the survey should be eliminated, or, at least, a stronger rationale for conducting the study should be provided to the participating institutions and departments. For example, one respondent commented: “Give me a good reason why we're doing this year after year. We NEVER use this info, and it seems that the institution (who might, just possibly, benefit from the data gathering) should be doing the gathering. And, with all the data that we now provide to the institution, they should be able to pass it on to you.” The annoyance directed at the survey by respondents could be due to a lack of understanding of how the GSS data are used and why they are important. Respondents who completed the surveys did not always receive the results and this caused some to conclude that the survey was not valuable. They asked, “Send a copy of the report to people who supplied the data.” If the respondents were told where and how to access the final GSS full reports, the survey may be perceived as “valid” and “useful” to educational issues. Respondents did not always specify who should justify the need for this data to be collected, but did imply that an explanation would be helpful to improve data quality and to provide motivation to continue completing the survey annually. Other related comments included:

“There was nobody at the institution that could answer where this goes or if it becomes available once compiled. NSF could provide better information in this regard.”

“I would like to see some surveys from Econ Depts. at other intuitions. I complete these every year and never get to compare our program with other grad Econ programs.”

“Provide feedback from the survey to the survey preparer, broken down by like depts., so we could compare ourselves to others and see trends and anomalies”

“Send a copy of the report to people who supplied the data”

“Well, why not provide some feedback as to how this information is actually used. It has been an annual activity.... but to what end???”

Improve Instructions

As noted in early sections, respondents asked NSF to improve overall instructions and definitions in the study. They requested increased clarity in defining who is considered a postdoc and the demographic categories, particularly race.

Provide Resources

About one quarter of the valid responses to G4e focused on the need for additional assistance for gathering and inputting the requested data. This sentiment was supported by such responses as: “continue to provide support for questions,” “have a contact person to call for assistance,” and “money.” This “resource theme” has surfaced in questions mentioned earlier in the report. While the needs were voiced, it is not clear from the comments from whom the respondents expect to receive such support – NSF, the institutions, or the departments. The respondents who made these recommendations did say that it would have been good to have extra assistance beyond what was being provided currently. This extra assistance was thought to allow the respondents to better complete the survey and thus yield better data quality.

Timing

Respondents made additional remarks about the timing of the data collection period, as noted in earlier sections of this report. For example, one commented: “With the number of surveys we are requested to complete continuing to increase, ample notification and completion time are very important. From mid-fall through the end of April, most graduate programs are heavily involved in graduate recruitment. Perhaps summer would be a better time to complete this questionnaire.”

Make Survey Simplifications

As discussed earlier, we found some respondents reporting at G4e a desire for a simpler survey, in terms of instructions, burden, and overall design. Instructions appeared difficult to understand, as evidenced in comments such as “Simplify your instructions” or “Provide clearer Internet instructions”. Another focus under the theme of simplification was response burden. Respondents suggested that their burden was high because of the time they spent making sure that there were not errors made in the data entered into the survey. Some requested allowance for a margin of error, ““Allow for a small percentage of human error instead of making us explain slight difference when data doesn't equal total”, while others requested an internal checking system to make sure that the information entered did not have errors, which, in turn, would save time for the respondents and improve overall data quality.

Other respondents were more focused on the general length and periodicity of the survey. They offered, “Shorten the length and frequency of these surveys!”, “this survey is too lengthy & burdensome. You need a more concise and short survey if you want people to complete the whole thing”; “reduce the amount of info requested. Develop five to ten key indicators and can the rest.”

Centralized person

Again, several respondents made comments on assigning the bulk of reporting to centralized reporters versus departmental reporters. One respondent noted:

“If you need the information, just work with Rackham [Graduate School] or HR Payroll to determine the best procedure. Each department is different in that the administrator would be the best person to ask financial support questions for grad students AND postdocs. That is HR. I am the best for other student related only stats such as demographics. This is not true for every department though so I don't know what you would do unless you can divide it according to department. That might be too much work for you. Since I cannot pull GSRA support info from my system it is a tedious process. The administrator could pull it in a flash. Due to the time of year, she can't get to it so it is manual and frustrating for me. I do not know project grants are DOE, DOD, NIH, etc. She can do it in a snap. We have a clear division.”

NSF Initiated Changes: Summary

Responses to the last open-ended question, G4e, called for additional support and resources for gathering the data and simplification of the survey. Respondents wanted a shorter survey on a less frequent data collection schedule. They wanted simpler instructions and features built into the survey design to help them check for errors. While some respondents were content with the status quo, others did not understand why they were required to complete this exercise each year and needed some rationale or additional information to help justify the time and effort they put into the survey.

Conclusions

The Response Behavior Survey (RBS) to the Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS) conducted in summer of 2006 included a series of open-ended questions that asked the respondents to provide their suggestions for improvements to the GSS study. In the report, we summarized the themes in the open-ended comments regarding suggested changes or improvements to the GSS.

Summary for Changes in Procedures:

1. Create or provide access to a centralized database

Many respondents called for greater access to centralized institutional systems and databases, either through direct login to the HR or Financial systems, or through customized reports sent to the departments. Some respondents even called for creation of central databases for the purpose of reporting to the GSS. These comments were made in respect to data on postdocs, but also there was reference to data on graduate students as well. It may be that the data on postdocs would be better reported by a centralized postdoc office databases. For the data on graduate students, prior research has suggested that the departments provide better quality information. Perhaps the commentary about centralized data came out of frustration from the departmental reporters. Many of their suggestions reflected that they felt burdened by the duties required to report for the GSS. They may have assumed that the institution has accurate data readily accessible. These respondents may benefit on improved communication about the reasons their role is important and what the departments can uniquely contribute to the study that the centralized offices cannot.

2. Centralize the reporter

Likewise, a significant proportion of responses focused on assigning the reporting role to a centralized office, rather than a department, for both postdoc and graduate student data. The conclusions derived for the comment above also apply here: for postdoc data, it may very well be that a centralized office may do a better job at reporting data on postdocs. For graduate student data, departmental reporters may need to better understand their roles and why GSS feels it is important for them to do the reporting.

3. Provide resources

Many respondents reported that they would benefit from additional resources to help with the task of gathering and reporting data. A good deal of these comments focused on time: some respondents wanted the survey to reach them earlier in the year, others suggested avoiding the beginning of terms, while some voiced that they generally wanted more time. A recommendation is for NSF to work with the institutions on developing a timeline and helping them to expedite the process of filtering the survey down to the reporting departments.

Time was not the only resource requested. Respondents wanted more help – in terms of assistants, funding and other personnel – for gathering the data. Some suggested that if the institution provided additional funding, they could create and maintain a database in their department that would directly feed into the GSS. Others asked for additional “Help Desk” support for both GSS related survey and institutional/departmental databases. They asked for “live assistance” for answering questions about local systems, for example, logging onto university systems and running queries, as well as for GSS-specific needs, such as using the web-based survey and specific definitions.

4. Contact Methods

Respondents voiced that email is a preferred method of contact. They asked for pre-notification of the study and reminders during data collection for upcoming deadlines.

5. Feedback

Respondents voiced an interest in receiving reports and other information about the study outcomes. Some expressed that they did not understand why NSF conducts this study – they would benefit from some information sharing on the findings and utility of the data.

Summary for Changes in Questionnaire Format:

1. Definitions and Instructions

Respondents reported that the definitions and instructions were often vaguely defined and they were not certain what information was specifically needed. They reported not always feeling confident in translating terms from the university’s own definition of particular categories to the GSS definition for those categories. They requested more detail in the definitions and more examples. This was particularly true for specific reporting categories for funding, race, and postdocs.

In addition, they asked for concrete general instructions for the various sections of the survey, and upfront detail on the tasks involved for the survey as a whole.

Improved definitions and instructions can be incorporated within the survey document as a whole, as well as through on-line help webpage, for example, “frequently asked questions” or a dictionary of study terms.

2. The GSS questionnaire made assumptions about how funding is distributed and how race / ethnicity is defined. Some graduate students and postdocs receive funding from multiple sources or may have different funding across semesters. The GSS does not allow for this. Race can be defined in many ways – the categories in the GSS do not always meet the classifications in the universities. One recommendation is to provide detailed examples of whom to categorize in which categories, pushing the burden of “recoding” onto the schools. Or, perhaps, leave it open-ended and recode as part of data cleaning task in the end, which shifts the burden to the data collection staff and may even improve consistency in counts for categories across schools. Further, some schools do not require reporting of race and ethnicity among their graduate students and postdocs. Requirement of this information would improve the reporting on the GSS.
3. The overall layout of the GSS was noted as difficult to read, very small, and complex for the task of summing columns. Other respondents noted that the segmentation of screens makes reporting

task difficult. One recommendation is to hold focus groups or workshops to explore ways to improve the visual layout and web functionality.