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Evaluating a
Web-based
Establishment Survey of
U.S. Academic
Institutions
using a
Web-based
Response Behavior
Survey



Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)

- Four sponsors
- Conducted annually since 1972
- U.S. academic institutions
- Introduced the Web in 1998





Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)

National estimates

- For fall each year
- Graduate enrollment
- Postdoctoral (postdoc) appointments
- In science, engineering, and health-related disciplines



Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)

Enrollment data by

- Discipline (field/area of study)
- Geographic location
- Demographics (citizenship, sex, race/ethnicity)
- Highest degree granted
- Sources and mechanisms of support



Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)

Data collection

- Starts in October/November each year
- “Deadline” is set for January 31
- Activities wrap up in July/August

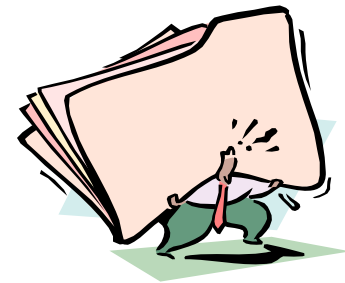


Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)

- Each institution (or similar) in the GSS is assigned a contact person (coordinator)
- Coordinator receives...
 - Introductory email
 - Mailed packet with paper surveys and Web instructions
 - Individualized contacts over approx. 10 months





Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)

- Confirm contact information
- Identify new or defunct departments/programs/centers with graduate students or postdocs
- Provide enrollment data for eligible departments/programs/centers





Background



Graduate Students and Postdoctorates in Science and Engineering (GSS)



High response rates (98%+) typically

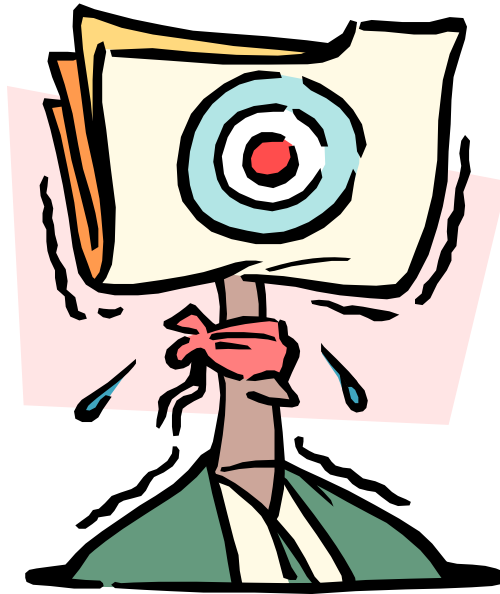
- But most responses after January deadline
- Often responses are incomplete or require imputation



Background



Feedback



Complex survey

- Multiple respondents
- Multiple record keeping sources



Current SRS Need



Close a major gap in knowledge

- Learn more about the individuals assigned the task of providing postdoc data in the GSS
- Learn more about the process they use to provide postdoc data in the GSS

What is the impact of response behavior on GSS postdoc data quality?



The Pilot Response Behavior Survey (RBS)



A survey focused on...

- Respondent characteristics
- Organizational (institutional or departmental) characteristics
- Postdoc definitions
- Response behavior
- Respondent perception of quality



The Pilot Response Behavior Survey (RBS)



Generally, the RBS is focused on understanding as much as it can about the response process related to postdoc data in a setting where the unit of interest is an establishment



Pre-Test RBS



Conducted Fall 2005 between 9/21/05 and 10/06/05 (15 days)

- Letter / Email invitation (experimental)
- Email / Letter reminder (experimental)
- Email reminder
- Letter reminder
- Email reminder



Pre-Test RBS



- 432 respondents invited to the pre-test
 - 288 responded (66.67% AAPOR RR2)
 - 258 completed the survey (89.58% completion rate), 14 of partials reported they were not the appropriate respondent
- Mean length, 23.71 minutes overall



Pre-Test RBS Lessons Learned



Rapid follow-up data collection procedure can work

Pilot changes

- Longer data collection period
- Telephone contact



Pre-Test RBS Lessons Learned



- Literature that supports mail contact prior to email contact may not be supported with this population
- Experimental design demonstrated no difference with mode of first contact on RR or CR

Pilot changes

Keep with mail first due to benefit of more control on timing with follow-up contacts



Pre-Test RBS



Interesting Findings

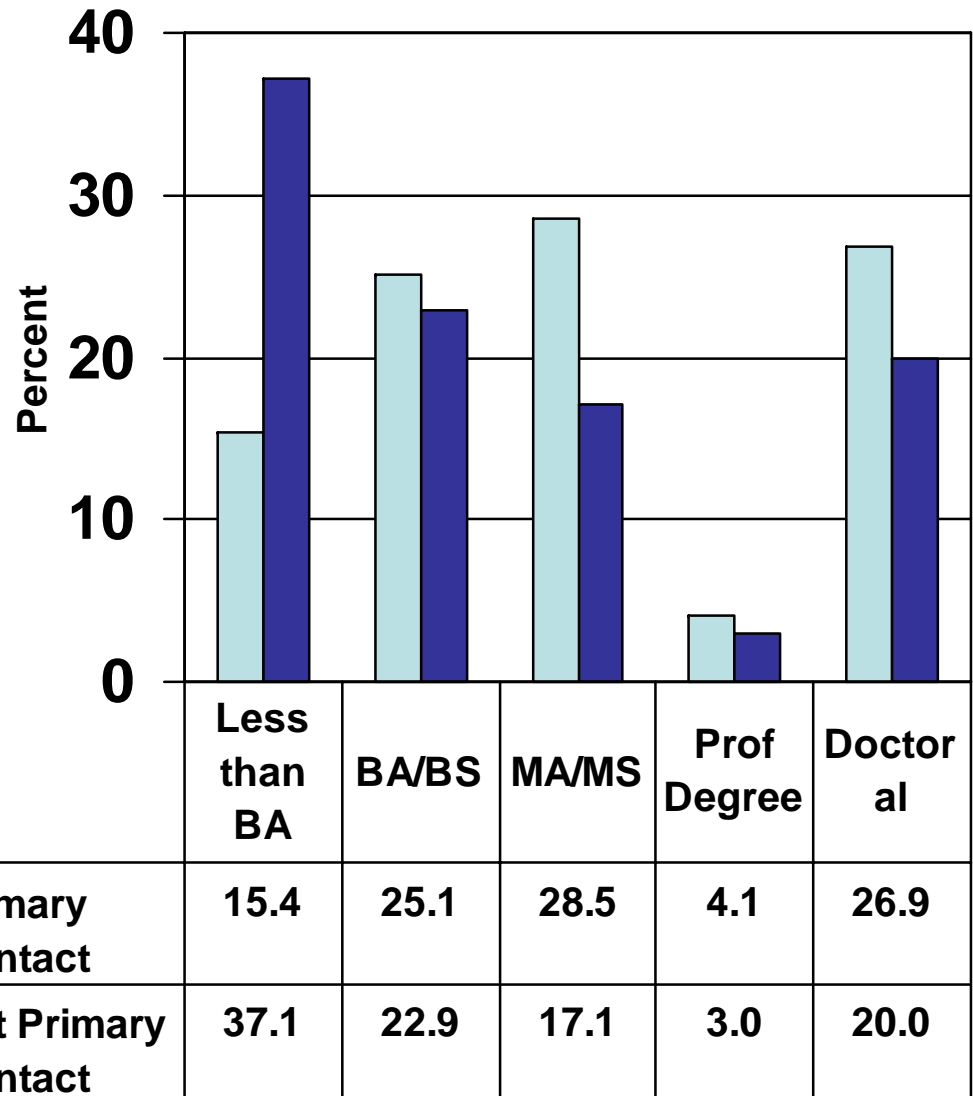
While this was a pre-test, several interesting findings emerged that will inform the development of the pilot survey



Respondent Characteristics



Respondent education low – especially for those who did not have “primary” responsibility for collecting GSS data

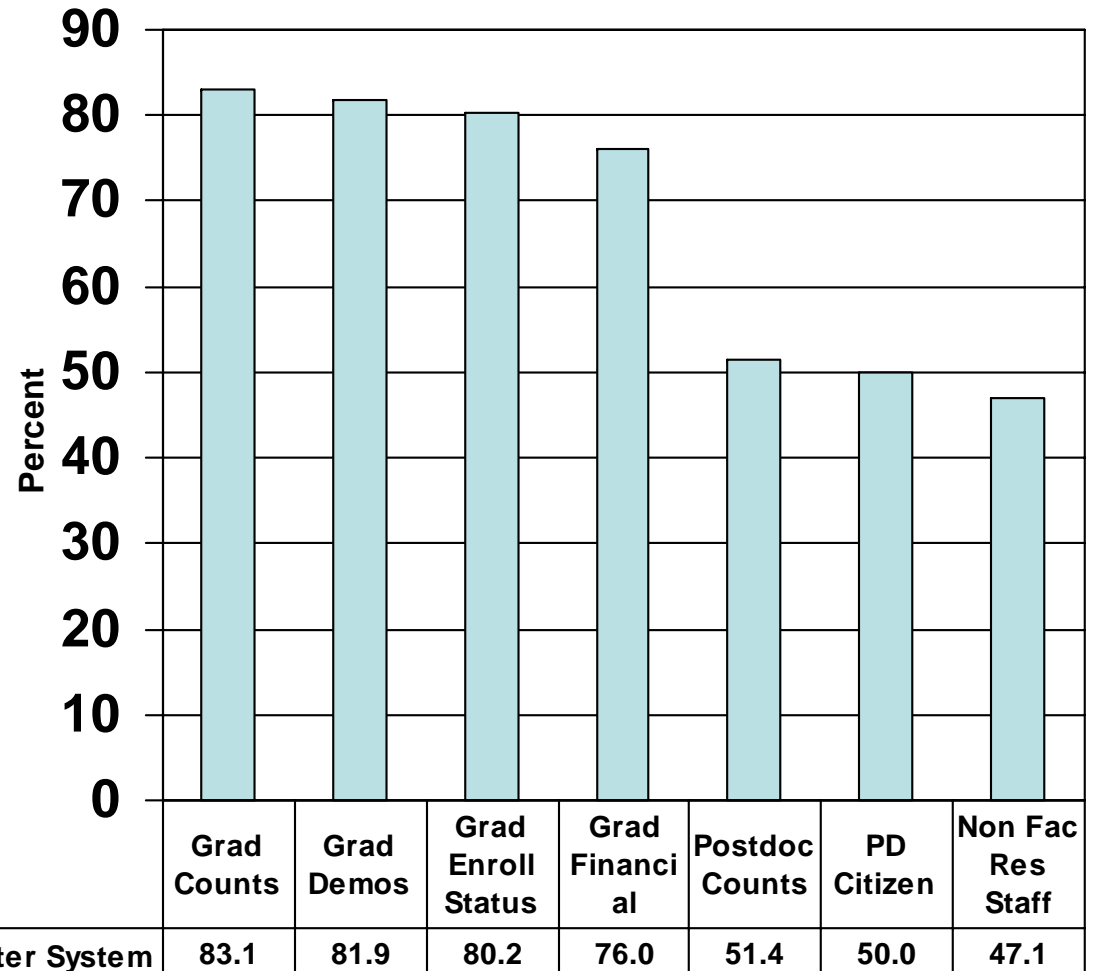




Respondent Characteristics



Most respondents did not have sufficient knowledge of the institution's computer systems to find the postdoc data



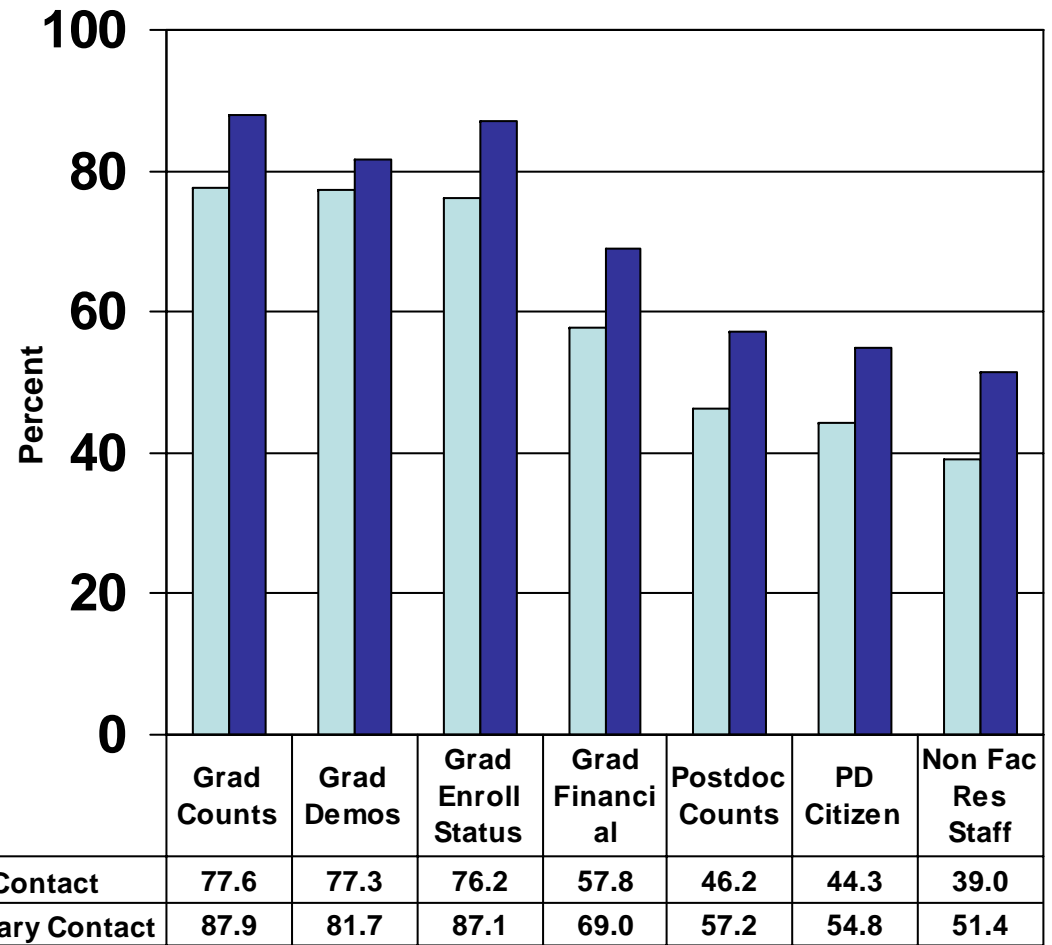


Response Behavior



Primary contact or not...

- Respondents clearly able to respond on their own to some but not all of the data requested
- Large percent of "primary" respondents unable to provide all of the postdoc-related data

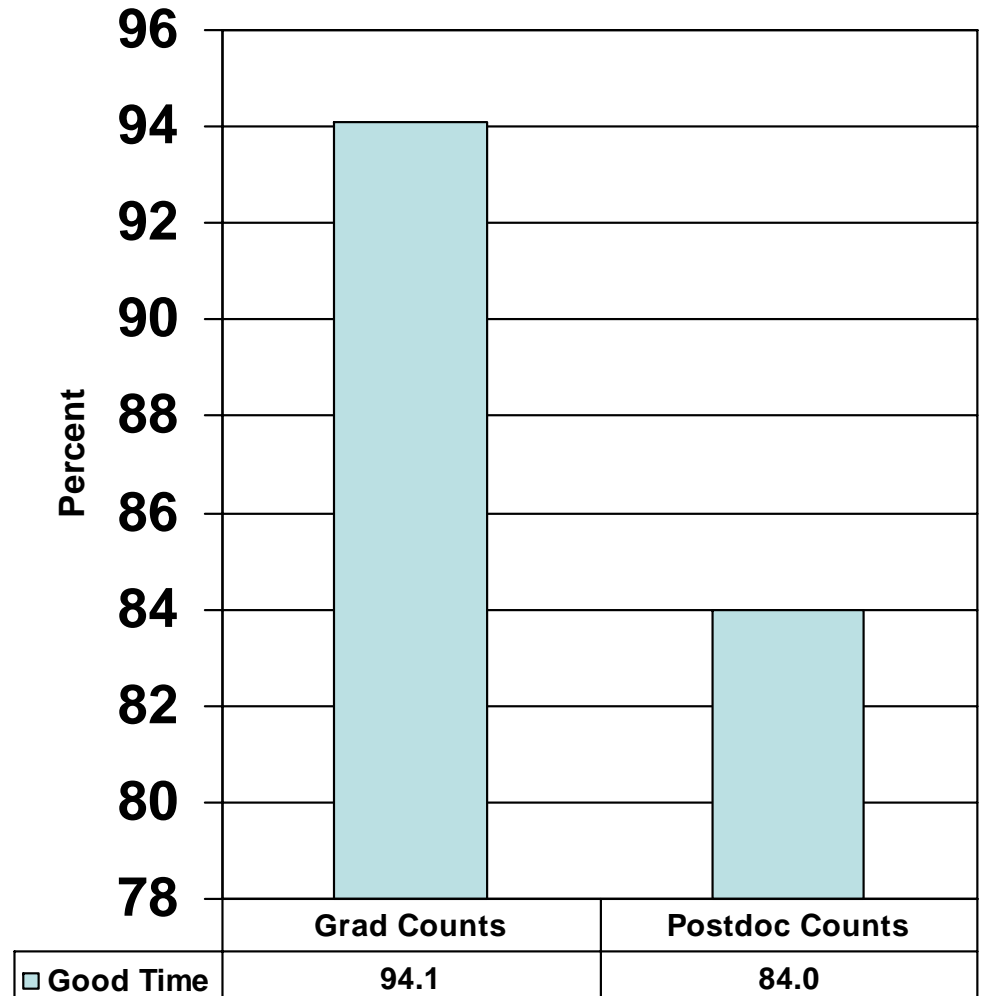




Response Behavior



Although it took 10 months for a near complete response, a large number of respondents reported that the current data collection schedule is a good one

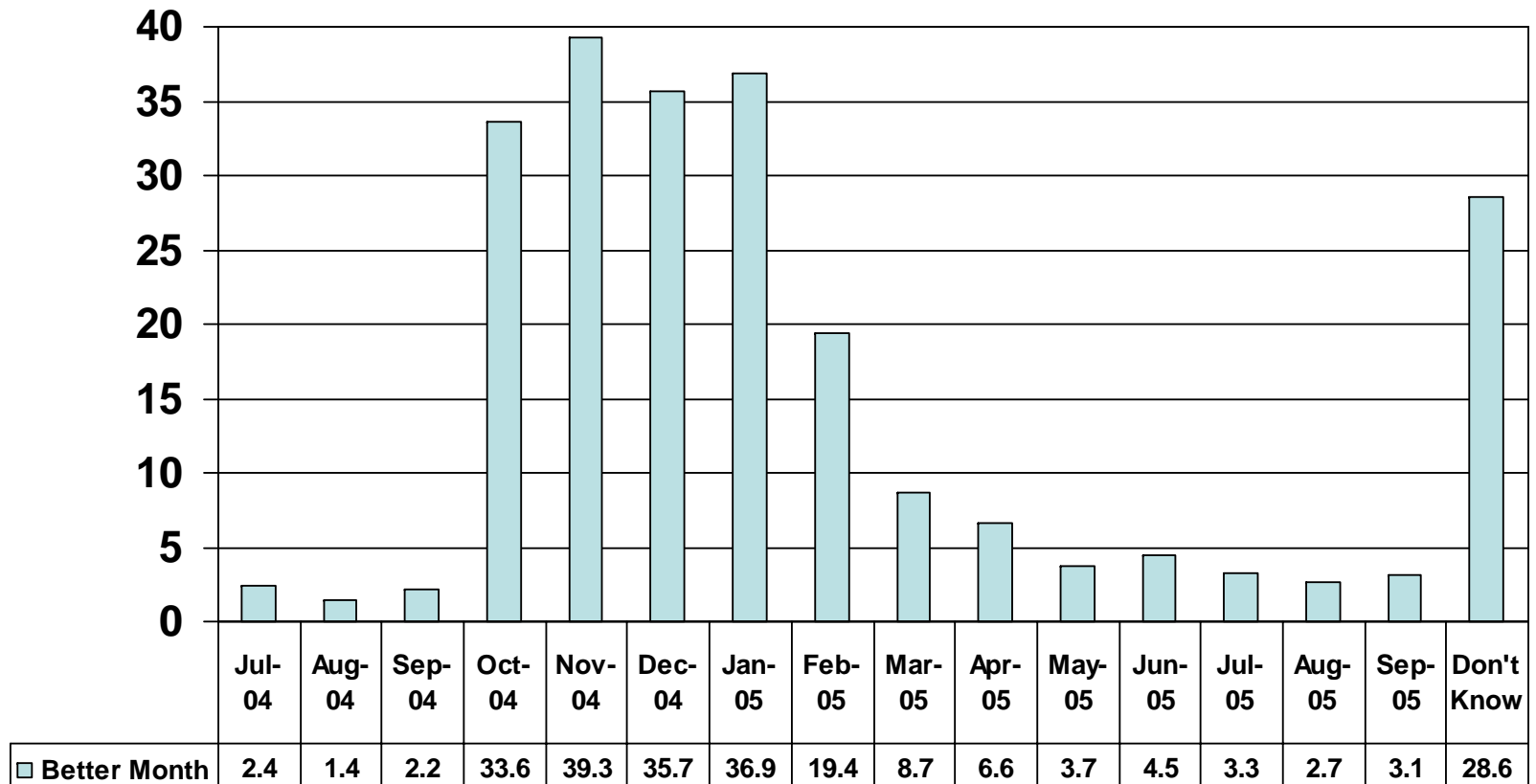




Response Behavior

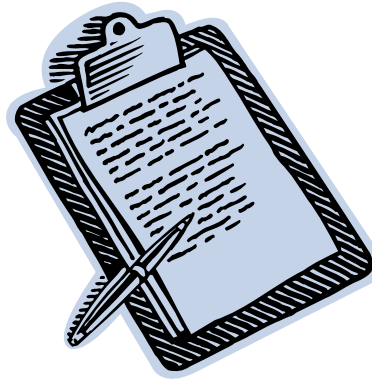


Oddly, when those who thought October – January was not a good time were asked when a good time would be... they overwhelmingly chose October – January as “better months”





Respondent Behavior



Approx. 1/3 of the institutions rely on the paper survey to use as a worksheet for completing the Web later



Postdoc Data



- Large proportion of respondents report no standard way that postdoc data are organized
- Further, of those who DO have a standard postdoc definition at their institution, approx. 1/3 report that the standard differs within the institution

This raises the question... how does the respondent provide postdoc data when there is so much variation?



Benefits of Web Survey for the RBS



- Familiar mode to GSS
- Rapid data collection
- Reduction of respondent burden through...
 - Flexibility of when they complete the survey
 - Ability to customize the questionnaire to the respondent



RBS Benefits



The Pre-Test RBS proved to be valuable for...

- Providing baseline data about respondents in establishment surveys
- Identifying and quantifying areas in which survey data collection may be changed to improve the quality of data being collected
- Identifying areas where more in-depth study will be required to fully understand the impact of the survey process on postdoc data quality



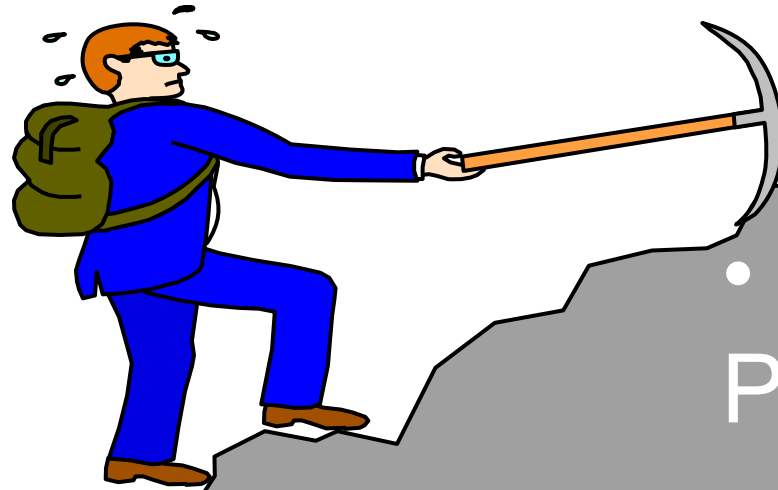
RBS Limitations



- Current design has its focus on individual respondents – while it is likely that multiple respondents are truly involved at the reporting unit level
- Relies on self-reported assessments of quality
- Same mode design may allow for mode induced errors to go undetected



Next Steps



- Conduct Pilot RBS
- Analyze results
- More in-depth study



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