IGERT SURVEY

Programming notes are in blue...

- There will be a variable created from the sample file that determines if a respondent is IGERT or not. Throughout the survey where there are "IGERT only" questions, we use the variable name "IGERT" to identify that a question should be given only to the IGERT respondents.
- All section headings are for internal use only and should not appear on the screens. Survey respondents should not see section headings
- Do not include question numbers on the screen (this is b/c we don't want to confuse respondents who skip sections).
- Response choices that are all numbered with one are to allow the respondent to choose more than one answer to the question. Response choices that are numbered sequentially are where the respondent is to choose only one answer to the question
- Analysis notes in green are for internal reference only and should not appear on screen or paper versions.

Section A: Decision To Pursue a Career in STEM

We would like to begin by asking you a few questions about your decision to pursue a scientific career.

A1. In deciding to pursue a scientific career, which of the following factors were most important to you? (Please select up to three responses from the list below)

Choose up to three:	
	Salary/Benefits
	Job security
	Opportunities for advancement
	Intellectual challenge
	Level of responsibility
	Degree of independence
	The opportunity to
1	The opportunity to Create new knowledge/make decisions
	Create new knowledge/make decisions
	Create new knowledge/make decisions Contribute to society
	Create new knowledge/make decisions Contribute to society Follow my passion
	Create new knowledge/make decisions Contribute to society Follow my passion Learn new skills

A2.	42. Which of the following were factors in your decision to pursue a graduat	e degr	ee in
	science, technology, engineering or mathematics? In the left hand colur	nn, <i>che</i>	eck all
	that apply, and in the right hand column, check the one most important f	actor.	

All factors (Check all that apply)		Most important factor (Choose one)
1	Needed a doctorate to advance in a career in my field of study	1
	Wanted to change my field of study	2
1	Wanted to increase my knowledge in my field of study	3
1	Wanted to earn more money, and expect my earnings will increase with a doctorate	4
	Prestige of an advanced degree	5
1	Could not find a job, so I decided to go back to school	6
	Other, specify	7
[A	nalysis note: Source: 3ML A-11-modified (re	sponses added)]

When you were applying to graduate programs, what types of programs did you consider? (Check only one)
☐₃ Discipline-based and interdisciplinary programs

[Programming note: If respondent IGERT respondent then continue to question A4; Non IGERT respondents, skip to Section B: "Graduate School Experience"]

[Programming note: For IGERT only—This question is OPTIONAL]

A4. Why were you interested in interdisciplinary graduate programs?

	i	1 0	
[TEXTBOX]			

[Programming note: Continue to question A6]

[Programming note: For IGERT only]

A5. If your IGERT program had not existed, would you still have gone to graduate school?

				N/A – I did not know about IGERT until after I
Definitely not	Probably not	Probably	Definitely	was enrolled
	2	3	4	5

[Programming note: Go to Section B: "Graduate School Experience"]

Section B: Graduate School Experience

In this section we would like you to answer a few questions about your graduate school experience.

into

	[Programming note: Institution Name in the following questions should be filled question stems from sample file.]
B1.	In what month and year did you originally ENROLL in your graduate program at [Institution Name]?
B2.	Were you initially enrolled in a masters program or a PhD program at [Institution Name]?
	₁ Master's program
	PhD program
B <i>3.</i>	Did you have a Master's degree prior to enrolling in your graduate program at [Institution Name]?
	1 Yes
D/I	Did you earn a graduate degree from [Institution Name]? (Check all that apply)
J4.	_
	□₁ Ph.D.
	□₂ Master's
	3 Other, specify
	4 I did not complete a degree
	[Programming note: If respondent answered 1 then continue to question B5; If respondent answered 2, then skip to question B6; If respondent answered 3, then skip to question B6 If respondent answered 4, then skip to question B8]
	and the second of the second o

B5.	In what month and year did you earn your doctoral degree from [Institution Name]?
	[Programming note: Skip to question B10]
B6.	[Programming note: If question B4= 2 or 3 only] In what month and year did you earn your Master's degree from [Institution Name]?/(MM/YYYY)
	[Continue to question B7]
B7.	[Programming note: If question B4= 2 or 3 only] Have you subsequently pursued additional education?
	1 Yes, completed. Please specify degree(s) earned
	2 Yes, still enrolled
	□₃ No
	[Programming note: [Skip to question B11]
В8.	[Programming note: If question B4= 4 only] In what month and year did you leave [Institution Name]?/(MM/YYYY)
	[Continue to question B9]
В9.	[Programming note: If question B4=4 only] Have you subsequently pursued additional education?
	1 Yes, completed. Please specify degree(s) earned
	2 Yes, still enrolled
	□₃ No
	[Programming note: Skip to question B11]

[Programming note: If question B4=1 only]

B10. From th	the list of disciplines below, please select those you drew upon in your n research. (Check all that apply)
Agri	icultural Sciences/Natural Resources
Biol	ogical/Biomedical Sciences
Hea	Ith Sciences
☐₁ Eng	ineering
1 Com	nputer and Information Sciences
Mat	hematics
Astı	ronomy
Atm	ospheric Science and Meteorology
Che	mistry
Geo	logical and Earth Sciences
☐₁ Phy	sics
Oce	an/ Marine Sciences
☐₁ Psy	chology
soc	ial Sciences
₁ Hun	nanities
₁ Edu	cation
Prof	fessional Fields/Business Management/Administration
1 Oth	er
	[Analysis note: Source: SDR A22, slightly modified]
	mming note: For each response item checked above, respondent will receive up question with sub-fields. See APPENDIX for sub-questions and an e].
	mming note: If IGERT respondent, skip to question B12. Otherwise, go to C "Entering the Workforce"]

[Programming note: If question B4=2, 3, or 4 only]

-	Which of the following discipline(s) listed below are most closely aligned with what ou studied during your graduate education at [Institution Name]? (Check all that pply)
	Agricultural Sciences/Natural Resources
	☐₁ Biological/Biomedical Sciences
	Engineering
	Computer and Information Sciences
	Atmospheric Science and Meteorology
	Geological and Earth Sciences
	Physics
	Ocean/ Marine Sciences
	Psychology
	Social Sciences
	1 Professional Fields/Business Management/Administration
	Other
	[Analysis note: Source: SDR A22, slightly modified
	[Programming note: Format is same as question B10. For each response item checked above, respondent will receive a follow up question with sub-disciplines. See APPENDIX for sub questions]
	[Programming note: If IGERT respondent, continue to question B12. Otherwise, go to Section C "Entering the Workforce"]

[Programming note: If IGERT respondent]
2. On the following scale from 1 to 5, to what extent did your IGERT experience contribute to your ability to complete your degree? B12.

Not at all	A little	To some extent3	Quite a bit	A great deal5
1	2	3	4	5

[Programming note: Go to Section C: "Entering the Work Force"]

Section C: Entering the Work Force

Thank you. We would next like to ask you a few questions about your experience entering the work force.

C1	. What was your job situation at the time you left [Institution Name]?
	\square_2 I was looking for work, but did not have an offer
	☐₃ I had an offer
	☐₅ Other, specify
	[Programming note: If respondent answered 1 then skip to question C3; else continue to question C2]
C2	[Programming note: If C1=2, 3, 4, or 5] . How many months did you spend actively looking for employment before accepting your first paid position (including postdoctoral positions)?
	months [Analysis note: Source: APA#22, slightly modified]
C3	[Programming note: All respondents answer this question] . Are you currently working for salary or wages?
	□₃ No
	[Analysis note: Source: SDR A1, modified]
	[Programming note: If respondent answered 3 then skip to Section O: "Unemployed"; Else, continue to question C4]

	No					
[Cor	ntinue to question C5]					
grad	what extent do you agree with the luate program in <u>obtaining a po</u> n row)					
	As a result of my graduate program:	Disagre e	Somewhat disagree	Somewhat agree	Agree	I don't know
	I was at a competitive advantage compared to graduates of other institutions when applying for positions			3	4	5
	I felt prepared for a broad range of careers			3	4	

[Programming note: If question C3=1 or 2]
C4. Is your current position a postdoctoral appointment or fellowship?

1 Yes

[Programming note: If IGERT respondent, continue to question C6; Non IGERT respondents skip to question C7]

[Programming note: IGERT only]

C6. On the following scale of 1 to 5, to what extent did your IGERT experience contribute to your ability to obtain a position in the workforce?

Not at all 1	A little	To some extent3	Quite a bit	A great deal5
1	2	3	4	5

[Programming note: Continue to question C7]

C7. After leaving graduate school, which of the following employment sectors did you consider for your first position in the workforce (including postdoctoral positions)? In the left hand column, check all that apply, and in the right hand column, check which one sector in which you most desired to work.

All that you considered (Check all that apply)		Most desired (Choose one)
1	Government	1
1	Industry/Business	2
1	Educational Institution (College, university or K-12)	3
1	Nonprofit	4
1	Entrepreneur/Self-employed	5

Analysis note: Can map categories (with some modifications) to SED B5, SDR A15.

[Programming note: Continue to question C8]

C8. Which of the following fac	tors were most important to you in choosing your curr	ent
position in the owrforce?	(Please select up to three responses from the list below	N)

choose up to three:	
1	Salary/Benefits
1	Job security
	Opportunities for advancement
	Intellectual challenge
	Level of responsibility
	Degree of independence
	The opportunity to
	Create new knowledge/make decisions
1	Contribute to society
1	Follow my passion
1	Learn new skills
1	Other
	[Source: SDR C10- modified]

[Programming note: Continue to question C9]

Thank you. Now we would like to ask you a few questions about your $\underline{\text{current}}$ position.

C9.	Which of the following best describes your principal employer? \Box_1 Government
	☐₃ Educational Institution (non-government college, university, or K-12)
	Nonprofit
	₅ Entrepreneur/Self-employed
	Analysis note: Can map categories (with some modifications) to SED B5, SDR A15
	[Programming note:
	If respondent answered 1, then go to Section E: "Government";
	If respondent answered 2, then go to Section D: "Business/Industry";
	If respondent answered 3, then go to Section F: "Education";
	If respondent answered 4, then go to Section G: "Nonprofit";
	If respondent answered 5, then go to Section H: "Entrepreneur/Self-Employed"]

Section D: Business/Industry

[Programming note: Respondents sent here if question C10=2 only]

D1. Please select the sector below which most closely aligns with your area of professional concentration.

Goods-Producing
Service-Providing
Information, communications, media services In Finance and banking services In Professional, scientific, and business services In Education services In Health and healthcare-related services In Leisure and hospitality services In Public administration In Other services
D2. Did your employer come into being as a new business within the past 5 years?
1 Yes
No [Analysis note: Source: SDR A14]
[Analysis note: Source: SDN A14]

D3. What is your job title?
[TEXTBOX]
D4. What is the name of the company for which you work?
[TEXTBOX]
D5. Which of the following best describes your position?
Other- (please specify)
D6. Do you regularly engage in any of the following activities as part of your current job? (Check all that apply)
$\ \ \ \ \ \ \ \ \ \ \ \ \ $
$\hfill \Box_1$ Play a significant role in the development, implementation, and execution of policies, procedures, and standards
\square_1 Develop or direct the technical or scientific agenda of the organization
\square_1 Develop and oversee budget and/or profit and loss statements
None of the above

D7. In the left column, please indicate which of the following (if any) you regularly engage in as part of your current job.

In the right column, please indicate how well your graduate program prepared you in each area.

Regularly engage in			How well your graduate program prepared you		
Yes	No		Not Well	Well	Very Well
	2	Publish research/technical findings/reports		2	3
	2	Balance the demands of multiple projects		2	3
	2	Develop my own technical or scientific agenda		2	3
1	2	Work and network with scientists/technologists in other disciplines	1	2	3
	2	Work as part of a team		2	3
1	2	Explain my work/research to scientists/technologists in other disciplines	1	2	3
1	2	Present my or my organization's research/work to non-technical audiences	1	2	3
	2	Be informed of research in other countries		2	
	2	Serve as a mentor		2	
	2	Lead projects or programs		2	
1	2	Develop and or commercialize a service or product	1	2	3

D8. In your current position, have you done any of the following? (Check all that apply)

	₁ Applied or been recruited for a position outside the United States
	1 Attended professional conferences outside the US
	$_{ exttt{1}}$ Worked as part of a team with colleagues located in other countries
	1 Searched or used international databases or citations
	Studied a foreign language for career-related reasons
	₁ Worked abroad
	1 Traveled to other countries for your work
	1 None of the above

[Programming note: Go to Section I "Function"]

Section E: Government

[Programming note: Respondents sent here if question C10=1 only]

E1.	By which of the following are you employed? (Check only one)
	3 U.S. federal government laboratory (any department or agency)
	5 U.S. state government
	☐ U.S. local government
	Foreign government
	B Other
	(Analysis note: Source: SED B6 modified)
E2.	For which specific agency/department/lab etc. do you work?
	[TEXTBOX]
E3 <u>.</u>	What is your job title?
	[TEXTBOX]
E4.	Which of the following best describes your position?

E5. Do you regularly engage in any of the following activities as part of your current job? (Check all that apply)
Play a significant role in the development, implementation, and execution of policies, procedures, and standards
\square_1 Delegate responsibilities and assignments
\square_1 None of the above

 $\it E6.$ In the left column, please indicate which of the following (if any) you regularly engage in as part of your current job.

In the right column, please indicate how well your graduate program prepared you in each area.

Regulary	engage in		How well your graduate program prepared you		
Yes	No		Not Well	Well	Very Well
	2	Publish research/technical findings/reports		2	
	2	Balance the demands of multiple projects		2	3
1	2	Develop my own technical or scientific agenda		2	3
1	2	Work and network with scientists/technologists in other disciplines		2	3
	2	Work as part of a team		2	3
1	2	Explain my work/research to scientists/technologists in other disciplines	1	2	3
1	2	Present my or my organization's research/work to non-technical audiences		2	3
	2	Be informed of research in other countries		2	3
	2	Obtain funding for research/project work		2	3
	2	Serve as a mentor		2	3
	2	Lead projects or programs		2	3
1	2	Develop and or commercialize a service or product	1	2	3

7. In your current position, have you done any of the following? (Check all that apply)
1 Applied or been recruited for a position outside the United States
1 Attended professional conferences outside the US
1 Worked as part of a team with colleagues located in other countries
1 Searched or used international databases or citations
1 Studied a foreign language for career-related reasons
1 Worked abroad
1 Traveled to other countries for your work
$_{1}$ None of the above

[Programming note: Go to Section I "Function"]

Section F: Education

	[Programming note: Respondents sent here if question C10=3 only]
F1.	By which of the following are you employed? (Check only one)
	☐₃ U.S. junior or community college or technical institute
	s Foreign educational institution
	Gother, Please Specify
	(Analysis note: Source: SED B6 modified)
	[Programming note: Create variable called <u>HigherEd</u> from question F1 as follows: If F1=1,2,3 then <u>HigherEd</u> =Yes. If F1=4,5,6 then <u>HigherEd</u> =No. This <u>HigherEd</u> variable will drive skip patterns throughout the rest of this survey.) If <u>HigherEd=Yes</u> continue to question F2; If respondent answered 4 then skip to question F5; If respondent answered 5 or 6, then skip to question F6]
F2.	[Programming note: If HigherEd=Yes only] Which of the following best describes your position? (Check only one)
	☐₁ Faculty
	2 Research faculty
	☐₃ Postdoctoral fellow or associate
	4 Other university staff
	☐₅ Other- (please specify)
	[Programming note: Continue to question F3]
	(Analysis note: Source: Modified SDR A18)

[Programming note: If HigherEd=Yes only] F3. What is your faculty rank? (Check only one) \square_1 Not applicable: no ranks designated in my organization or for my position ² Professor 3 Associate Professor 4 Assistant Professor 5 Instructor/Lecturer 6 Adjunct Professor 7 Other (Analysis note: Source: SDR A19) [Programming note: Continue to question F4] [Programming note: If HigherEd=Yes only] F4. What is your tenure status? (Check only one) Not applicable: no tenure system at this organization 2 Not applicable: no tenure system for my position 3 Tenured On tenure track but not tenured 5 Not on tenure track [Programming note: Skip to question F7] (Analysis note: Source: SDR A20) [Programming note: If question F1=4 only] F5. Which of the following best describes your position? (Check only one) ₁ Teacher 2 School administrator 3 District administrator 4 Curriculum specialist 5 Professional development specialist/provider ₆ Evaluator 7 Other- (please specify) (Analysis note: Source: Modified SDR A18) [Programming note: Skip to question F7]

	[Programming note: If question F1=5 or 6]
F6.	What is your job title?
	[TEXTBOX]
l	
F7.	What is the name of the school/institution/organization for which you work?
	[TEXTBOX]
F8.	Have you engaged in any of the following activities as part of your current job? (Check all that apply)
	$\ \ \ \ \ \ \ \ \ \ \ \ \ $
	\square_1 Develop or direct the technical or scientific agenda of a center
	\square_1 Play a significant role in the development, implementation, and execution of policies,
	procedures, and standards in your department
	1 Participate in revising or developing curricula
	1 Develop new degree programs
	None of the above

F9. In the left column, please indicate which of the following you are required to do to succeed in your current job.

In the right column, please indicate how well your graduate program prepared you in each area.

	d to do in position		How well your graduate program prepared you		
Yes	No		Not Well	Well	Very We
	2	Publish research/technical findings/reports			
	2	Balance the demands of multiple projects		2	3
	2	Develop my own technical or scientific agenda		2	3
1	2	Work and network with scientists/technologists in other disciplines	1	2	3
1	2	Work as part of a team	1	2	3
1	2	Explain my work/research to scientists/technologists in other disciplines	1	2	3
1	2	Present my or my organization's research/work to non-technical audiences		2	3
	2	Be informed of research in other countries		2	3
	2	Obtain funding for research/project work		2	3
	2	Serve as a mentor		2	3
1	2	Lead projects or programs	1	2	3
1	2	Develop and or commercialize a service or product		2	3
	Applied or be Attended prof Vorked as pa Searched or	nt position, have you done any of the following? (en recruited for a position outside the United States fessional conferences outside the US art of a team with colleagues located in other countries used international databases or citations eign language for career-related reasons		nat apply)	

[Programming note: Go to Section I "Function"]

1 Traveled to other countries for your work

1 Worked abroad

1 None of the above

Well

Section G: Nonprofit [Programming note: Respondents sent here if question C10=4 only] G1. By which of the following are you employed? (Check only one) 1 Private foundation 2 Professional association 3 Nongovernmental organization (NGO) 4 Research/consulting organization 5 Other, specify G2. Did your employer come into being as a new business within the past 5 years? ___1 Yes [Analysis note: Source: SDR A14] G3. What is your job title? [TEXTBOX] G4. What is the name of the organization for which you work? [TEXTBOX] G5. Which of the following best describes the nature of your position? 1 First line Supervisor, Administrator, Manager (e.g. Director, Department/Division head) 2 Individual Contributor/Program or Project Leader (e.g., Researcher, Scientist, Fellow) ☐ 3 Other- (please specify)

G6.	. Do you regularly engage in any of the following activities as part of your current job? (Check all that apply)
	$\ \ \ \ \ \ \ \ \ \ \ \ \ $
	$\ \ \ \ \ \ \ \ \ \ \ \ \ $
	\square_1 Develop or direct the technical or scientific agenda of the organization
	Develop and oversee budget and/or profit and loss statements
	1 None of the above

G7. In the left column, please indicate which of the following you are required to do to succeed in your current job.

In the right column, please indicate how well your graduate program prepared you in each area.

	d to do in position		How well your graduate program prepared you		
Yes	No		Not Well	Well	Very Well
	2	Publish research/technical findings/reports		2	3
	2	Balance the demands of multiple projects		2	3
	2	Develop my own technical or scientific agenda		2	3
1	2	Work and network with scientists/technologists in other disciplines		2	3
	2	Work as part of a team		2	
1	2	Explain my work/research to scientists/technologists in other disciplines		2	3
1	2	Present my or my organization's research/work to non-technical audiences	1	2	3
	2	Be informed of research in other countries		2	3
	2	Obtain funding for research/project work		2	
1	2	Serve as a mentor		2	3
	2	Lead projects or programs		2	3
1	2	Develop and or commercialize a service or product	1	2	3

G8. In your current position, have you done any of the following? (<i>Check all that apply</i>)
\square_1 Worked as part of a team with colleagues located in other countries
$igsqcup_1$ Studied a foreign language for career-related reasons
\square_1 Worked abroad
\square_1 None of the above
[Programming note: Go to Section I "Function"]

Section H: Entrepreneur/Self-employed

[Programming note: Respondents sent here if question C10=5 only]

Н1.	How would you best characterize your business? (<i>Please check the one which best applies</i>)
	2 Product provider
	☐₃ Other (please specify)
H2.	To which of the following industrial sectors do you provide your products/services? (Check all that apply)
Go	ods-Producing
<u>Ser</u>	vice-Providing
	Information, communications, media services In Finance and banking services In Professional, scientific, and business services In Education services In Health and healthcare-related services In Leisure and hospitality services In Public administration In Other services

Н3.	Did your company come into being as a new business within the past 5 years?
	□₁ Yes
	[Analysis note Source: SDR A14 modified]
Н4.	How is your business funded? (Check all that apply)
	\square_1 Seeking external funding
H5.	How many individuals do you employ including yourself?
Н6.	Is your business based on proprietary intellectual property?
	□₁ Yes
	□₂ No
	[Programming note: If respondent answered 1 then continue to question H7, else skip to question H8]
H7.	[Programming note: If question H6=1 only] Please describe where your business intellectual property is from:
	☐₁ Self-developed
	☐₃ Not self-developed, licensed from another source
	Other-(please specify)
Н8 <u>.</u>	What is the name of your company or business?
	[TEXTBOX]
н9. Г	What is your job title? [TEXTBOX]
	[ILAIDOA]

one)
Top level executive (e.g. President, CEO, VP)
2 First line Supervisor, Administrator, Manager (e.g. Director, Department/Division head)
☐₃ Individual Contributor/Program or Project Leader (e.g., Researcher, Scientist, Fellow)
Other- (please specify):
H11. Do you regularly engage in any of the following activities as part of your current job? (Check all that apply)
$\ \ \ \ \ \ \ \ \ \ \ \ \ $
$\ \ \ \ \ \ \ \ \ \ \ \ \ $
\square_1 Develop or direct the technical or scientific agenda of the organization
\square_1 Delegate responsibilities and assignments
1 Develop and oversee budget and/or profit and loss statements

H12. In the left column, please indicate which of the following you are required to do to succeed in your current job.

In the right column, please indicate how well your graduate program prepared you in each area.

	d to do in position			vell your quant	
Yes	No		Not Well	Well	Very Well
	2	Publish research/technical findings/reports		2	3
1	2	Balance the demands of multiple projects		2	3
1	2	Develop my own technical or scientific agenda		2	3
	2	Work and network with scientists/technologists in other disciplines		2	3
	2	Work as part of a team		2	3
1	2	Explain my work/research to scientists/technologists in other disciplines		2	3
1	2	Present my or my organization's research/work to non-technical audiences		2	3
	2	Be informed of research in other countries		2	3
	2	Obtain funding for research/project work		2	3
	2	Serve as a mentor		2	3
	2	Lead projects or programs		2	3
1	2	Develop and or commercialize a service or product	1	2	3

H13. In your current position, have you done any of the following? (Check all that apply) Applied or been recruited for a position outside the United States

Applied of been recruited for a position outside the officed states
1 Traveled to other countries for your work
1 None of the above

[Programming note: Go to Section I "Function"]

Section I: Function

Thank you. Next, we would like you to learn a little more about the nature of your work.

1.	From the list of disciplines below, please select those you use in your current work.
	Agricultural Sciences/Natural Resources
	☐₁ Biological/Biomedical Sciences
	Engineering
	\square_1 Computer and Information Sciences
	☐₁ Mathematics
	Astronomy
	$\square_{\scriptscriptstyle 1}$ Atmospheric Science and Meteorology
	Chemistry
	$\square_{\scriptscriptstyle 1}$ Geological and Earth Sciences
	☐₁ Physics
	☐₁ Ocean/ Marine Sciences
	☐₁ Psychology
	☐₁ Social Sciences
	\square_1 Humanities
	$igsqcup_1$ Professional Fields/Business Management/Administration
	Other
	[Analysis note: Source: SDR A22, slightly modified]

[Programming note: Format is same as question B10 and B11. For each response item checked above, respondent will receive a follow up question with sub-

disciplines. See APPENDIX for sub questions]

31

12. Please indicate your primary and, if applicable, secondary work responsibilities.

Primary		Secondary, if applicable
1	Research/Technology: Research & Development	1
2	Manufacturing	2
3	Technical Services or Technical Support	3
4	Education: Training, Teaching	4
5	Administration, Management	5
6	Other – Specify	<u></u> 6

(Analysis note: Source: SED B7, slight modification)

[Programming note:

If respondent answered 1, 2, or 3 in either Primary or Secondary column then go to Section J: "Research";

If respondent answered 4 in either Primary or Secondary column, then go to Section K: "Teaching/Training";

If respondent answered 5 in either Primary or Secondary column, then go to Section L: "Administration/Management";

If respondent only answered 6 and did not choose any other response, then go to Section M: "Other"]

Section J: Research/Technology

[Programming note: Respondents sent to this section J "Research/Technology" if question "I-2"=1, 2, or 3 only]

J1.	Which of the following characterize(s) the type of research or development that you do? (Check all that apply)
	$\ \ \ \ \ \ \ \ \ \ \ \ \ $
	$\ \ \ \ \ \ \ \ \ \ \ \ \ $
	$_1$ Development – using knowledge gained from research for the production of materials, devices, and products
	□₁Design of equipment, processes, structures, models
	1Computer applications, programming, systems development
	\square_1 Production, operations, manufacturing, maintenance (e.g., chip production, operating lab equipment)
	☐₁Technology services/technological support
	Other, specify
	(Source: selected from SDR A31)
J2.	Do you currently collaborate with individuals from disciplinary backgrounds other than your own?
	1 Yes
	□ 2 NO
J3.	How would you best describe the disciplinary focus of your work?
	I most often work on scientific/technical projects that(Check only one)
	1 are centered in a single discipline
	2 require the integration of two or more disciplines

J4.	Are there scientists/technologists in other countries doing work that is relevant to your current research?
[₁Yes
[₂ No
[₃ I don't know
	[Programming note: For IGERT only]
J5.	Please explain the relevance of what you learned in your IGERT program to the work you are currently doing, if any.
	[TEXTBOX]
	[Programming note: For Non-IGERT Comparison Respondents only]
J6.	Please explain the relevance of what you learned in your graduate program to the work
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any.
J6.	Please explain the relevance of what you learned in your graduate program to the work
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any.
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [TEXTBOX]
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [TEXTBOX] [Programming note: From here
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [TEXTBOX] [Programming note: From here If respondent answered 4 in either column on question "I-2", then go to Section K:
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [TEXTBOX] [Programming note: From here If respondent answered 4 in either column on question "I-2", then go to Section K: "Teaching/Training";
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [TEXTBOX] [Programming note: From here If respondent answered 4 in either column on question "I-2", then go to Section K:
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [TEXTBOX] [Programming note: From here If respondent answered 4 in either column on question "I-2", then go to Section K: "Teaching/Training"; If respondent answered 5 in either column on question "I-2", then go to Section L:
J6.	Please explain the relevance of what you learned in your graduate program to the work you are currently doing, if any. [Programming note: From here If respondent answered 4 in either column on question "I-2", then go to Section K: "Teaching/Training"; If respondent answered 5 in either column on question "I-2", then go to Section L: "Administration/Management";

Section K: Teaching/Training

2 No

[Programming note: Respondents sent here if question "I-2" = 4 only] Please answer a few additional questions about your work responsibilities related to teaching/training. K1. How would you best describe the content of the courses, seminars, or workshops you teach or the training activities you conduct? (Check all that apply) I most often teach content that... ₁ is centered in a single discipline 2 requires the integration of two or more disciplines [Programming note: If HigherEd=Yes, skip to question K4; Else continue to question **K2**] K2. Do you currently lead or co-lead teaching or training sessions for your employer or related to your job? ☐₁ Yes 2 No K3. Do you currently develop or co-develop interdisciplinary teaching or training materials for your employer or related to your job? ₁ Yes 2 No [Programming note: If IGERT respondent, skip to question K6; If non-IGERT respondent, skip to question K7] [Programming note: For HigherEd=Yes only] K4. Do you currently provide instruction to undergraduate or graduate students, including teaching, preparing courses, and/or advising or supervising students? 1 Yes

[Programming note: If K4=Yes then continue to K5; else if IGERT respondent, skip to question K6; else if non IGERT respondent, skip to question K7]

ΛJ	[Programming note: For Higher Ed=Yes only] In the past year, have you engaged in any of the following activities related to undergraduate or graduate education? (Check all that apply)
	1 Team taught a course with colleague(s) from another discipline
	1 Had an undergraduate or graduate student <u>from another department</u> work on your research projects
	1 Discussed the international nature of the scientific enterprise in a course
	1 Helped develop a new interdisciplinary course
	\square_1 Helped develop a new <u>interdisciplinary</u> undergraduate or graduate program of study
K6	[Programming note: If IGERT respondent, continue to question K6; non IGERT respondent, skip to question K7] [Programming note: For IGERT only] Please explain the relevance of what you learned in your IGERT program to the educational teaching or training work that you are currently doing, if any.
	[TEXTBOX]
1	
	[See programming note after question K7 for skip pattern directions]
K 7	
K7	[See programming note after question K7 for skip pattern directions] [Programming note: For Non-IGERT Comparison Respondents only] Please explain the relevance of what you learned in your graduate program to the

Section L: Administration/Management

[Programming note: Respondents sent here if either response to question "I-2" = 5]

	Please answer a few additional questions about your work responsibilities related to administration/management.
L1.	How would you best describe the content of the work you currently oversee? (Check only one)
	I primarily oversee work that
	\square_1 is centered in a single discipline
	2 requires the integration of two or more disciplines
L2.	What is the primary function of the group/organization that you manage or supervise? (Please check one)
	☐₁ Research and/or Development
	₃ Quality
	☐₄ Safety/Environment/Health
	☐₅ Professional services (e.g. health care, counseling.)
	☐ ₆ Teaching/Training
	☐ ₇ Business/Marketing/Development
	Other
L3.	Please select the status of the personnel whom you manage or supervise (Check only one)
	2 Some professional and some non-professional
	₃ Primarily non-professional
	4 Unionized workers
	s Other
	[Programming note: If IGERT respondent, continue to question L4; non IGERT respondent, skip to question L5]

[Programming note: For IGERT only]

L4. Please explain the relevance of what you learned in your IGERT program to your administrative and managerial responsibilities, if any.

[TEXTBOX]

[See programming note after question L5 for skip pattern directions]

[Programming note: For Non-IGERT Comparison Respondents only]

L5. Please explain the relevance of what you learned in your graduate program to your administrative and managerial responsibilities, if any.

[TEXTBOX]

[Programming note: Everyone go to section O: "Reflections on your IGERT training"]

Section M: Other				
[Programming note: Respondents sent here if question "I-2"=6 only]				
M1. Which of the following best describes your <u>primary</u> work responsibilities?				
☐₁ IT Services				
2 Financial Services				
₃ Marketing/Business development				
4 Professional services (medical; counseling)				
₅ Counseling Services				
☐ ₆ Quality				
☐8 Intellectual Property: Patent review/examination; technology transfer; external relations				
Other, specify				
 M2. Do you currently collaborate with individuals from disciplinary backgrounds other than your own in your current work? 1 Yes 2 No 				
M3. How would you describe the disciplinary focus of your job?				
The work related to my job is primarily (Check only one)				
\square_1 centered in a single discipline				
2 requires the integration of two or more disciplines				
M4. Are there individuals in other countries doing work that is relevant to your current job?				
□₁ Yes				
₃ I don't know				

M5. Please describe your primary roles and responsibilities.

[TEXTBOX]

[Programming note: If IGERT respondent, continue to question M6; non IGERT respondent, skip to question M7]

[Programming note: For IGERT only]

M6. Please explain the relevance of what you learned in your IGERT program to the work you are currently doing, if any.

[TEXTBOX]

[See programming note after question M7 for skip pattern directions]

[Programming note: For Non-IGERT Comparison Respondents only]

M7. Please explain the relevance of what you learned in your IGERT program to the work you are currently doing, if any.

[TEXTBOX]

[Programming note: Everyone go to section O: "Reflections on your IGERT training"]

Sec	ction N: Unemployed					
[Pro	ogramming note: Respondents	sent here if	question C3=	3 only]		
	In this section we would like status.	e to ask you	u a few questi	ions about yo	ur currei	nt work
N1.	What are your reasons for not	working? (Check all that	apply)		
	☐₁ Seeking employment ☐₁ Student ☐₁ Family responsibilities ☐₁ Suitable job not available ☐₁ Do not need or want to w					
	$\square_{\scriptscriptstyle 1}$ Other, please specify:					
				[Analysis note	: Source:	SED A3]
N3.	Have you worked for salary or	on Name sh dent answe GERT resp "Reflections on N2=1] with the follo	ould be filled i red 1 then com ondents and qu s on Your IGE	nto question s tinue to questi uestion O6 for RT/Graduate	tem from son N3; non-IGEI Training*	RT '] f your
	As a result of my graduate program:	Disagre e	Somewhat disagree	Somewhat agree	Agree	I don't know
	I was at a competitive advantage when applying for positions compared to graduates of other institutions I felt prepared for a broad range of careers				4	5

[Programming note: If question N2=1]

N4. After leaving graduate school, which of the following employment sectors did you consider for your first position in the workforce (including postdoctoral positions)?

In the left hand column, *check all that apply*, and in the right hand column, *check which one sector you most desired*.

All that you considered (Check all that apply)		Most desired (Choose one)
1	Government	1
1	Industry/Business	2
1	Educational Institution (College, university or K-12)	3
1	Nonprofit	4
1	Entrepreneur/Self-employed	5

[Programming note: If question N2=1] N5. In which of the following sectors did you work? (Check all that apply)

₁ Government
1 Industry/Business
$_{\scriptscriptstyle 1}$ Educational Institution (College, university, or K-12)
1 Nonprofit
Entrepreneur/Self-employed

Analysis note: Can map categories (with some modifications) to SED B5, SDR A15.

[Programming note: If question N2=1]

N6. In choosing your prior position in the workforce (including postdoctoral positions), how important was each of the following factors to you?

	Not important	A little important	Moderately important	Very important
Salary/Benefits		2	3	4
Job security		2	3	4
Opportunities for				
advancement	1	2	3	4
Intellectual challenge		2	3	4
Level of responsibility		2	3	4
Degree of independence				4
The opportunity to				
Create new knowledge/make decisions		2	3	4
Contribute to society	1	2	3	4
Follow my passion		2	3	4
Learn new schools skills		2	3	4
	[An	alysis note: S	ource: SDR C10	0- modified]

[Programming note:

If IGERT respondent, continue to question N7;

If non IGERT respondent go to question O4 in section O: "Reflections on your graduate training"]

[Programming note: For IGERT only]

N7. On the following scale of 1 to 5, to what extent did your IGERT experience contribute to your ability to obtain a position in the workforce?

Not at all	A little	To some extent	Quite a bit	A great deal
1	2	3	4	5
1	2	3	4	5

[Programming note: Go to section O: "Reflections on your IGERT training" question O3]

Section O: Reflections on your Graduate training

The next three questions ask you to reflect back on your graduate training. [If IGERT respondent then continue; if Non-IGERT respondent skip to question O4.] O1. Given your current job responsibilities, what was the single greatest contribution of your IGERT-related graduate education? (If none, write none.) Benefits: [TEXTBOX] O2. Given your current job responsibilities, what was the single greatest deficit in your **IGERT-related graduate education?** (If none, write none.) Disadvantages: [TEXTBOX] O3. Would you recommend your IGERT-related graduate program to prospective graduate students? ₁ Yes ₂ No [Programming note: Go to Section P: Background and Demographic Information"] [Programming note: For NON IGERT Comparison Respondents] O4. Given your current job responsibilities, what was the single greatest contribution of your graduate education? (If none, write none.) Benefits: [TEXTBOX]

[Programming note: For NON IGERT Comparison Respondents] O5. Given your current job responsibilities, what was the single greatest deficit in your graduate education? (If none, write none.)
Disadvantages
ETELYMP O.V.

Section P: Background and Demographic Information

{This information will only be asked of IGERT trainees if missing from the IGERT Distance Monitoring System.}

P1. In what month and year did you earn your bachelor's degree? (if you have more than one bachelor's degree, enter date of most recent.)

[month dropdown] / [year dropdown]

The following questions ask about your background. Providing data on race, ethnicity, gender, and disability status is entirely voluntary. Providing this information, however, is very helpful to this study.

P2. What is your ethnicity? (Check only one) 1 Hispanic or Latino	
☐₃ I choose not to report this information	
P3. What is your race? (Check all that apply) American Indian or Alaska Native, specify tribal affiliation(s)	
Asian	
☐ Asian ☐ Black or African American	
Native Hawaiian or Other Pacific Islander	
White	
\Box_1 I choose not to report this information	
	{Source: SED C14}
P4. What is your gender? (Check only one)	
☐ ₁ Male	
\square_2 Female	
\square_3 I choose not to report this information	
P5. What is your citizenship status? (Check only one)	
US Citizen	
Non-US Citizen	
_₃ With a Permanent U.S. Resident Visa ("Green Card")	
\square_4 With a Temporary U.S. Visa	

{Source: SED C7}

P6. Has anyone in your family earned a Ph.D. degree in a Science, Technology, Engineering, or Mathematics field? (Check all that apply)
\square_1 Any parent or guardian
☐₁ Any sibling
□ ₁ Spouse/Partner
Other, specify:
\square_1 None of the above
[Programming note: For IGERT who are Employed in the Research sector only—This question is OPTIONAL] 27. In a few brief sentences, please describe how you would explain to someone who is not an expert in your field the scientific or technical problem on which you are currently working, highlighting the importance of the question and /or any innovative methodologies you are using.
[TEXTBOX]

[Programming note: End of survey, show "Thank You" note below]

Thank you for taking the time to respond to this survey. Your responses will help the National Science Foundation plan support for graduate education in the future.

Appendix

Survey should be programmed so that questions B10, B11, and I1 have one or more follow up questions that appear based on the discipline(s) the respondents check in each question. The follow up question stem is different for each of the three questions.

The "Field Name" should be filled into each question stem.

• Any follow up questions for B10 should have the following question stem:

Which [Field Name] discipline(s) did you use for your dissertation research? (check all that apply)

Response choices are the sub-fields (that correspond with the Field Names) listed in the table below.

• Any follow up questions for B11 should have the following question stem:

Which [Field Name] discipline(s) are most closely aligned to what you studied during your graduate education? (check all that apply)

Response choices are the sub-fields (that correspond with the Field Names) listed in the table below.

Any follow up questions for I1 should have the following question stem:

Which [Field Name] discipline(s) do you use in your current work? (check all that apply)

Response choices are the sub-fields (that correspond with the Field Names) listed in the table below.

Field Names	Sub-Fields
Agricultural Sciences/Natural Resources	Agricultural Economics Agriculture Business & Mgmt. Agricultural Animal Breeding Animal Nutrition Dairy Science Animal Science, Poultry (or Avian) Animal Science, Other Agronomy and Crop Science Agricultural & Horticultural Plant Breeding Food Science, & Technology, Other Soil Chemistry/Microbiology Soil Sciences, Other Horticulture Science Fishing & Fisheries Sciences/Management Forest Sciences & Biology Forest Engineering Forest/Resources Management Wood Science & Pulp/Paper Technology Natural Resources/Conservation Forestry & Related Sciences, Other Wildlife/Range Management Environmental Sciences Agricultural Sciences, General or Other

Field Names	Sub-Fields
Biological/Biomedical Sciences	Biochemistry Bioinformatics Biomedical Sciences Biophysics Biotechnology Bacteriology Plant Genetics Plant Pathology/Phytopathology Plant Physiology Botany/Plant Biology Anatomy Biometrics & Biostatistics Cell/Cellular Biology & Histology Evolutionary Biology Ecology Developmental Biology/Embryology Endocrinology Entomology Immunology Molecular Biology Microbiology Cancer Biology Microbiology Cancer Biology Neurosciences Nutrition Sciences Parasitology Toxicology Genetics/Genomics, Human & Animal Pathology, Human & Animal Pharmacology Physiology, Human & Animal Zoology
	Biology/Biomedical Sciences, General or Other
Health Sciences	Speech Language Pathology and Audiology Environmental Health Environmental Toxicology Health Systems/Services Administration Public Health Epidemiology Kinesiology/Exercise Science Nursing Science Medicinal/Pharmaceutical Sciences Rehabilitation/Therapeutic Services Veterinary Sciences Health Sciences, General or Other

Field Names	Sub-Fields
Engineering	Aerospace, Aeronautical & Astronautical Engineering Agricultural Engineering Bioengineering & Biomedical Engineering Ceramic Sciences Engineering Chemical Engineering Civil Engineering Communications Engineering Computer Engineering Electrical, Electronics, & Communications Engineering Engineering Mechanics Engineering Physics Engineering Science Environmental Health Engineering Industrial & Manufacturing Engineering Material Science Engineering Mechanical Engineering Mechanical Engineering Metallurgical Engineering Mining & Mineral Engineering Nuclear Engineering Ocean Engineering Operations Research Petroleum Engineering Polymer & Plastics Engineering Systems Engineering Engineering Management & Administration
Computer & Information Sciences	Engineering, General or Other Computer Science Information Sciences & Systems Computer and Information Science, Other
Mathematics	Applied Mathematics Algebra Analysis & Functional Analysis Geometry/Geometric Analysis Logic Number Theory Statistics Topology/Foundations Computing Theory & Practice Operations Research Mathematics/Statistics, General or Other
Astronomy	Astronomy Astrophysics
Atmospheric Science & Meteorology	Atmospheric Chemistry & Climatology Atmospheric Physics & Dynamics Meteorology Atmospheric Science/Meteorology, General or Other

Field Names	Sub-Fields
Chemistry	Analytical Chemistry Inorganic Chemistry Nuclear Organic Chemistry
	Medicinal/Pharmaceutical Physical Chemistry Polymer Chemistry Theoretical Chemistry Chemistry, General or Other
Geological & Earth Sciences	Geology Geochemistry Geophysics & Seismology Paleontology Mineralogy & Petrology Stratigraphy & Sedimentation Geomorphology & Glacial Geology
Physics	Geology & Earth Sciences, General or Other Acoustics Atomic/Molecular/Chemical Physics Particle (Elementary Physics) Biophysics Fluids Nuclear Physics Optics/Photonics Plasma/Fusion Physics Polymer Physics Condensed Matter/Low Temperature Physics Applied Physics Physics, General or Other
Ocean/Marine Sciences	Environmental Science Hydrology & Water Resources Oceanography, Chemical & Physical Marine Sciences Ocean/Marine, Other
Psychology	Clinical Psychology Cognitive Psychology & Psycholinguistics Comparative Psychology Counseling Developmental & Child Psychology Human Development & Family Studies Experimental Psychology Educational Psychology Family Psychology Industrial & Organizational Personality Psychology Physiological/Psychobiology Psychology Psychometrics & Quantitative Psychology School Psychology Social Psychology Psychology, General or Other

Field Names	Sub-Fields
Social Sciences	Anthropology Area/Ethnic/Cultural/Gender Studies Criminal Justice & Corrections Criminology Demography/Population Studies Economics Econometrics Geography International Relations/Affairs Linguistics Political Science & Government Public Policy Analysis Sociology
	Statistics Urban Affairs/Studies Urban/City, Community & Regional Planning Social Sciences, General or Other
Humanities	History Letters Foreign Languages & Literature Music Religion/Religious Studies Drama/Theater Arts Humanities, General or Other
Education	Curriculum & Instruction Educational Administration & Supervision Educational Leadership Educational/Instructional Media Design Educational Statistics/Research Methods Educational Assessment/Testing/Measurement Educational Psychology Social/Philosophical Foundations of Education Special Education Counseling Education/Counseling & Guidance Higher Education/Evaluation & Research Pre-elementary/Early Childhood Teacher Education Elementary Teacher Education Secondary Teacher Education Adult & Continuing Teacher Education Education, Other or General
Professional Fields/Business Management/Administration	Accounting Finance Banking/Financial Supportive Services Business Administration & Management Business/Managerial Economics International Business/Trade/Commerce Management Information Systems/Business Statistics Marketing Management & Research Human Resources Development Operations Research Organization Behavior Business Management/Administration, General or Other

Field Names	Sub-Fields
Communications	Communication Research Mass Communication/Media Studies Film, Radio, TV & Digital Communication Communication Theory Communication, General or Other
Other	Architecture/Environmental Design Home Economics Law Library Science Parks/Sports/Rec./Leisure/Fitness Public Adminstration Social Work Theology/Religious Education Professional Fields, General Other Fields

Examples:

♦ For survey question B10, if respondent checks Agricultural Sciences/Natural Resources, he/she should get the following sub-question:

Which Agricultural Sciences/Natural Resources discipline(s) did you use for your dissertation research? (check all that apply)

Agricultural Economics
Agriculture Business & Mgmt.
Agricultural Animal Breeding
Animal Nutrition
Dairy Science
Animal Science, Poultry (or Avian)
Animal Science, Other
Agronomy and Crop Science
Agricultural & Horticultural Plant Breeding
Plant Pathology/Phytopathology (also in Bio Sciences)
Plant Sciences, Other
Food Science
Food Science, & Technology, Other
Soil Chemistry/Microbiology
Soil Sciences, Other
Horticulture Science
Fishing & Fisheries Sciences/Management
Forest Sciences & Biology
Forest Engineering
Forest/Resources Management
Wood Science & Pulp/Paper Technology
Natural Resources/Conservation
Forestry & Related Sciences, Other
Wildlife/Range Management
Environmental Sciences
Agriculture, General
Agricultural Sciences, Other

*	For survey question B11, if respondent checks Mathematics, he/she should get the following sub-question:				
	Which Mathematics discipline(s) are most closely aligned to what you studied during your graduate education? (check all that apply)				
		Applied Mathematics			
	1	Algebra			
	1	Analysis & Functional Analysis			
		Geometry/Geometric Analysis			
		Logic			
		Number Theory			
		Statistics			
		Topology/Foundations			
		Computing Theory & Practice			
		Operations Research			
		Mathematics/Statistics, General or Other			
*	For survey question I1, if respondent checks Ocean/Marine Sciences, he/she should get the following sub-question:				
	Which Ocean/Marine Sciences discipline(s) do you use in your current work? (check all that apply)				
	1	Environmental Science			
	1	Hydrology & Water Resources			
	1	Oceanography, Chemical & Physical			
	1	Marine Sciences			
	1	Ocean/Marine, Other			