

Crosswalk of STEM Faculty Survey Items to Research Questions and Uses in Analysis

Survey Item	Research Questions ¹				Analysis ²
	RQ 1b	RQ 1d	RQ 2a	RQ 2d	
A. Respondent Characteristics					
Number of years the respondent has held current position					M
Current position					M
Tenure Status					M
Content area discipline of department					M
B. Respondent's Relationship with the Noyce Program					
Respondent's familiarity with the Noyce program					A,M
C. Teacher Preparation Activities of Respondent and Department					
Was STEM K-12 teaching designated career track or major in respondent's department?					M
Number of years the respondent had responsibilities for preparing K-12 STEM teachers				•	D
Responsibilities for preparing K-12 STEM teachers outside of teaching STEM content courses/and before Noyce				•	D
Activities other faculty members had responsibilities for in preparing K-12 STEM teachers outside of teaching				•	D
Proportion of faculty members in the respondent's department involved with the teacher certification program				•	D
D. Respondent's Involvement with Noyce					
Noyce related activities that the respondent participated in	•	•		•	D,M
Noyce related activities that other faculty members participated in	•	•		•	D
E. Respondent's Opinions of the Noyce Program					
Did the Noyce respondent make any changes in their own teaching or courses that they would attribute to their participation in or exposure to the Noyce program?				•	D
Most important changes made that they would attribute to participation in or exposure to the Noyce program (open-ended text response)?				•	D
Respondent's agreement with statements about how their institution may or may not have changed as a result of receiving Noyce funding or participating in Noyce program activities			•	•	D
Respondent's opinions on anything else that may have changed as a result of receiving Noyce funding or participating in Noyce program activities				•	D

¹Research Questions Answered by STEM Faculty Survey

RQ1b: What strategies do Noyce awardees use to recruit and select Noyce candidates?

RQ1d: What activities do teacher preparation programs that have Noyce awards use to support Noyce completers once they are teaching in high-need schools/districts?

RQ2a: What effects do PIs and STEM faculty believe the Noyce award has had on recruitment of STEM teachers, in terms of quantity, quality, and diversity, the retention of those teachers? How do they perceive the burdens imposed by the Noyce award?

RQ2d: What are STEM departmental/faculty responsibilities for preparing K-12 mathematics and science teachers? What are STEM faculty/departments perceptions of the effects of the Noyce award on their departments?

²Analysis Notes

A: indicates that the variable from this item is used for administrative purposes (e.g., background information, to drive skip patterns)

D: indicates that the variable from this item is used in descriptive analysis

P: indicates that the variable from this item is used as a predictor for relational/impact analysis

O: indicates that the variable from this item is used as an outcome

C: indicates that the variable from this item is used as a control variable

M: indicates that the variable from this item could be used to describe the teaching certification program but it is not tied to a particular research question

STEM Faculty Survey Items

Dear [\[Respondent Name\]](#),

As a STEM Faculty member at a college or university participating in the **Robert Noyce Teacher Scholarship program**, you are invited to participate in a short survey about your experiences.

This survey is being conducted by [Abt Associates Inc.](#), an independent social research firm, for the [National Science Foundation](#) (NSF) to gain a better understanding of how institutions of higher education are implementing activities associated with the Noyce award, and how the program as a whole is attracting and retaining science and math teachers. It is part of a comprehensive evaluation, the results of which will be used to make recommendations regarding the Noyce Program.

OMB Clearance Number: XXXX-XXXX	Expiration Date: XX/XX/XXXX
<i>Burden Disclosure Statement</i> According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection is XXXX-XXXX. Public reporting burden for this collection of information is estimated to average 30 minutes, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.	

Confidentiality and Participation

Participation in the survey is voluntary and nonparticipation will have no impact on you or your institution. You may skip questions on the survey or discontinue participation at any time. Your responses to this survey will be protected under the Privacy Act. There is minimal risk of breach of confidentiality. Procedures are in place to minimize this risk. All information that would permit identification of an individual respondent will be held in strict confidence, will be used by only persons engaged in and for the purpose of the survey, and will not be disclosed or released to others for any purpose except as required by law. Your responses will be combined with about 500 others.

If you have questions about the study, please contact the Project Director at Abt Associates, Ellen Bobronnikov, by e-mailing NoyceEval@abtassoc.com or calling (617) 349-2718. You may also contact Connie Kubo Della-Piana, the Program Evaluation Officer at the Division of Undergraduate Education within the National Science Foundation, by e-mailing cdellapi@nsf.gov.

Completing the Survey

Please use the survey's navigation buttons (not your browser buttons) to move through the questionnaire. You may exit the survey by closing your browser window and returning to the survey to finish at a later time; simply click the link below and you will return to the point where you left off.

We estimate that it will take approximately 30 minutes to complete the survey. If you need help accessing the survey or navigating the screens, you may contact Paul Schroeder, the survey director at Abt SRBI, at p.schroeder@srbi.com. Or, call us toll-free at 1-888 772-4269 between 9:00 a.m. and 9:00 p.m. EDT, and ask to speak to someone about Study XXXX.

Throughout this survey, key terms will be underlined and include definitions as you roll-over the text with your mouse. For a complete list of these key terms, click here. [\[Add Hyperlink to Glossary\]](#).

For answers to commonly asked questions about this study, click here [\[Add Hyperlink\]](#).

Consent

If you agree to participate in this study, please press “Next” to continue with the survey.

Programming Instructions:

- Programming instructions are indicated in blue text.
- Terms that require rollover definitions are highlighted in blue. See Glossary document for full list of definitions.
- A text box should appear whenever a respondent selects a response option with the text “Other (Specify)”, “Other (Explain)” or something similar.
- Unless otherwise indicated, only one response is allowed per question.
- If response list includes “None of the above,” only allow this to be checked if all the other items are unchecked.

A. Respondent Characteristics

First, we are going to ask you a few questions about your faculty position at [IHE] and the types of activities you participated in during the most recently completed academic year (2009-2010).

- A1. **Up to and including** the most recently completed academic year (2009-2010), for how many years have you held a faculty position at [IHE]?

I have been teaching here for a total of: dropdown menu
<input type="checkbox"/> Less than 1 year (2010-2011 is my 1 st year as a faculty member at this institution)
<input type="checkbox"/> 1 year (2009-2010 was my 1 st year as a faculty member at this institution)
<input type="checkbox"/> 2 years
<input type="checkbox"/> 3 years
<input type="checkbox"/> 4 years
<input type="checkbox"/> [Programming Instruction: List individual years through 20]
<input type="checkbox"/> Over 20 years

[\[Programming Instructions: This is a required question. If “less than 1 year” is checked, go to “Thank You Script” and end the survey\]](#)

- A2. What was your academic position at [IHE] during the most recently completed academic year (2009-2010)? (Check one)

- ₁ Full Professor
- ₂ Associate Professor
- ₃ Assistant Professor
- ₄ Instructor
- ₅ Lecturer
- ₆ Adjunct Faculty
- ₇ Visiting Faculty
- ₈ Emeritus Faculty
- ₉ Postdoctoral Fellow
- ₁₀ Teaching Fellow
- ₉₅ Other faculty position (Specify)
- ₉₆ Non-faculty position (Specify)

[\[Programming Instructions:](#)

- [• This is a required question.](#)
- [• If respondent is in a non-faculty position, go to “Thank You Script” and end the survey.](#)
- [• Insert roll-over or hyperlink definition for each title.\]](#)

A3. What was your tenure status *during the 2009-2010 academic year*?

- ₁ Tenured
- ₂ Tenure-Track, Not-Tenured
- ₃ Not in a tenure-track position

A4. Which of the following disciplines listed below were most closely aligned with the content area of your department *during the 2009-2010 academic year*? (Select all that apply)

- Biological sciences
- Chemistry
- Computer science
- Education
- Geosciences/environmental sciences
- Mathematics
- Physics
- K-12 mathematics education
- K-12 science education
- Other STEM discipline (Specify)
- Non-STEM discipline (Specify)

[Programming Instructions: A4 is a required question. If respondent chooses “Non-STEM discipline”, go to “Thank You Script” and end the survey.]

B. Respondent's Involvement in the Noyce Program

- B1. The National Science Foundation's **Robert Noyce Teacher Scholarship Program** awards grants to teacher preparation programs in higher educational institutions to provide scholarships and stipends to talented Science, Technology, Engineering and Mathematics (STEM) undergraduates who commit to teaching in K-12 settings, particularly in high-need districts.

How familiar are you with the Noyce Program?

- ₁ I have never heard of it
- ₂ I am aware of it, but I know little about it.
- ₃ I am familiar with the Noyce Program, but I have not been involved with any activities associated with the award in our institution.
- ₄ I used to be involved with activities associated with the Noyce award in our institution, but I was not involved in it during the most recently completed academic year (2009-2010).
- ₅ I was involved with activities associated with the Noyce award in our institution during the most recently completed academic year (2009-2010).

[Programming Instruction: This is a required question. If B1=1 or 2, go to "Thank You Script" and end the survey]

C. Teacher Preparation Activities of Respondent and Department

Questions in this section ask about your department within [IHE] and academic activities during the most recently completed academic year (2009-2010).

- C1. Was STEM K-12 teaching a designated career track or major in your department during the 2009-2010 academic year?

- ₁ Yes
₀ No
₉₈ Don't Know

- C2. **Excluding** the current 2010-2011 academic year, for approximately how many years have you had responsibilities for preparing K-12 STEM teachers?

Note: This includes teaching courses on K-12 STEM teaching; mentoring or supervising students in the teacher preparation program; advising the teacher preparation program on STEM-related issues; and helping to place graduates into K-12 STEM teaching positions.

I have prepared K-12 STEM teachers for a total of: [dropdown menu]
<input type="checkbox"/> I have never had responsibilities for preparing K-12 STEM teachers
<input type="checkbox"/> 1 year (2009-2010 was my 1 st year with this responsibility)
<input type="checkbox"/> 2 years
<input type="checkbox"/> 3 years
<input type="checkbox"/> [Programming Instruction: List individual years through 30]
<input type="checkbox"/> Over 30 years

- C3. Please check all of the activities below that you participated in during the most recently completed academic year (2009-2010) at [IHE]. (Select all that apply)

- I **discussed the possibility** of being a K-12 STEM teacher with a student.
- I **taught a course** designed specifically for students majoring in STEM disciplines preparing to be K-12 educators.
- I **helped find K-12 STEM teaching positions** for former students.
- I **supervised, advised, or mentored** future K-12 STEM teachers during their teaching practicum, field experiences, or first years of teaching.
- I advised or consulted with the **teacher preparation program** on issues related to teaching STEM disciplines in K-12 schools.
- Other (Specify)
- I did not participate in any of these activities

[Programming Instruction: Prompt if none are selected. At least 1 response is required.]

C4. You mentioned that you participated in the following activities during the 2009-2010 academic year. Which of these activities did you participate in before the Noyce award was received at your institution? (Choose one response in each row)

Before the Noyce award was received in our institution ...	Yes	No	DK
a. I discussed the possibility of being a K-12 STEM teacher with a student.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. I taught a course designed specifically for students majoring in STEM disciplines preparing to be K-12 educators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I helped find K-12 STEM teaching positions for former students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. I advised or consulted with the teacher preparation program on issues related to teaching STEM disciplines in K-12 schools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. [Other Response from C4]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[\[Programming Instruction: Limit response list to those that were selected under C3.\]](#)

C5. Did any other faculty members in your department have responsibilities for preparing K-12 STEM teachers?

Note: This includes teaching courses on K-12 STEM teaching; mentoring or supervising students in the teacher preparation program; advising the teacher preparation program on STEM-related issues; and helping to place graduates into K-12 STEM teaching positions.

- _1 Yes
- _0 No [\[Skip to D1\]](#)
- _98 Don't Know [\[Skip to D1\]](#)

C6. As far as you know, approximately what proportion of the faculty members in your department were involved with preparing K-12 STEM teachers?

- _1 1-25% of the faculty members in my department were involved
- _2 26-50%
- _3 51-75
- _4 76-100%
- _98 Don't Know

D. Respondent's Involvement with Noyce

The following questions concern involvement in activities associated with the Noyce award at [IHE] and activities associated with it *during the most recently completed academic year (2009-2010)*.

[Programming Instruction: If B1 ≠ 5, SKIP to D2.]

D1. Please check all the Noyce-related activities below that you participated in during the 2009-2010 academic year. (Select all that apply)

- I mentioned to a STEM class or a student majoring in a STEM discipline about the availability of Noyce support for STEM majors who are interested in getting teacher certification.
- I recommended a student majoring in a STEM discipline for receipt of a Noyce scholarship or stipend.
- I participated in deciding which applicants would receive Noyce support (e.g., this could include interviewing candidates, reviewing applications, and/or making award decisions).
- I taught a class, seminar, or other educational activity designed specifically for Noyce recipients.
- I mentored Noyce recipient(s) during teacher certification preparation.
- I mentored Noyce recipient(s) during their first few years of teaching.
- I helped Noyce recipients find teaching positions.
- I attended meetings developing or managing activities associated with the Noyce award. [Ask D1a]
- I was a member of an advisory board or otherwise provided advice or oversight to the Noyce award.
- Other (specify)

[Programming Instruction: If R checks "I attended meetings developing or managing activities associated with the Noyce award" for D1, ask D1a.]

D1a. Which of the following best describes your attendance at Noyce meetings?

- ₁ I attended only one meeting
- ₂ I attended meetings occasionally, but not regularly
- ₃ I attended meetings regularly

D2. Please check the Noyce-related activities below that **other faculty members** in your department participated in (**besides yourself**) during the 2009-2010 academic year. (Select all that apply)

	Yes	No	Don't Know
a. Making presentations (or allowing presentations to be made) in STEM classes introducing students to the Noyce award.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
b. Recommending students majoring in STEM disciplines to apply for a Noyce scholarship.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
c. Participating in deciding which applicants would receive Noyce scholarships or stipends (e.g., this could include interviewing candidates, reviewing applications, and/or making award decisions).	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
d. Teaching or leading a class, seminar, or other educational activity designed specifically for Noyce recipients.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
e. Mentoring a Noyce recipient during teacher certification preparation.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
f. Mentoring a Noyce recipient during their first few years of teaching.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
g. Helping find Noyce recipients teaching positions.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
h. Attending meetings developing or managing activities associated with the Noyce award.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
i. Participating in an advisory board or providing advice or oversight to the Noyce award.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈
j. Other (Specify)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₀	<input type="checkbox"/> ₉₈

Programming Instruction: If Respondent skipped D1 because B1 ≠ 5, use the following wording for this question:

D2. Please check the Noyce-related activities below that **any faculty members** in your department participated in during the 2009-2010 academic year. (Select all that apply)

E. Respondent's Perceived Impacts of The Noyce Award

The questions in this section ask what you perceive the impacts of the Noyce award to be on the STEM teacher preparation program. When answering the questions, please consider all of the years that your institution has received Noyce funding up through the most recently completed academic year (2009-2010).

E1. Have you made any changes in your own teaching or courses that you would attribute to your participation in or exposure to activities associated with the Noyce award?

₁ Yes

₀ No [[Skip to E3](#)]

E2. What are the most important changes you have made?

[Programming Instruction: Open-ended text response]

E3. Please review the list below and indicate whether or not you agree with each statement about how [IHE] may have changed as a result of receiving Noyce funding or participating in activities associated with the Noyce award. When answering the questions, please consider all of the years that your institution has received Noyce funding up through the most recently completed academic year (2009-2010).

<i>As a result of receiving Noyce funding or participating in activities associated with the Noyce award ...</i>		Agree	Disagree	Don't Know
a.	A greater proportion of STEM teacher certification candidates are from STEM undergraduate programs.	1	2	98
b.	A greater proportion of STEM teacher certification candidates are recruited from STEM fields of employment.	1	2	98
c.	A greater proportion of undergraduates from STEM departments are becoming K-12 STEM teachers.	1	2	98
d.	The diversity of K-12 STEM teachers trained in our teacher preparation program has increased.	1	2	98
e.	The quality of candidates recruited to be K-12 STEM teachers has increased.	1	2	98
f.	New K-12 STEM teachers trained in our institution begin teaching with more skills and preparation than they did before Noyce funding began.	1	2	98
g.	New K-12 STEM teachers trained in our institution begin teaching with more STEM knowledge than they did before Noyce funding began.	1	2	98
h.	STEM Faculty members are more involved in recruiting STEM K-12 teaching candidates.	1	2	98
i.	STEM Faculty members are more involved in training STEM K-12 teachers.	1	2	98
j.	STEM content has strengthened in STEM K-12 teacher certification courses.	1	2	98
k.	Noyce recipients receive more support than most new STEM teachers when they begin teaching.	1	2	98
l.	Noyce recipients are more prepared to meet the needs of students in high-need schools than most new STEM teachers.	1	2	98
m.	Noyce recipients are more likely to remain as K-12 STEM teachers for many years than most new STEM teachers.	1	2	98
n.	The number of faculty members in my department participating in STEM K-12 teacher preparation has increased.	1	2	98
o.	The number of faculty members in my department that have relationships with or that participate in activities in K-12 schools has increased.	1	2	98
p.	Faculty members in my department have become more actively involved in STEM K-12 teacher preparation.	1	2	98

- E4. Are there any other ways that your students or institution have changed as a result of receiving Noyce funding? If there are, please describe them in the space below.

[Programming Instruction: The response will be in a text box with space for a large amount of text].

Thank you for completing this survey!

Glossary

Throughout this survey, the following terms are used.

Alternative teacher certification program

In these programs, preparation for teaching is typically accelerated, to get individuals employed as full-time teachers as quickly as possible, and is followed by ongoing support to help the individual achieve full or regular certification/licensing.

Clinical Supervisor

A “clinical supervisor” is someone from your higher education institution who supervised your student teaching (practicum) experience.

Cooperating Teacher

A “cooperating teacher” is the teacher of record in the classroom where you completed student teaching (practicum).

Elementary school

Schools that offer any of grades K-4, and no grade higher than 8.

Ethnicity

A classification indicating general ethnic heritage based on self-identification, as in data collected by the U.S. Census Bureau. These categories are in accordance with the Office of Management and Budget standard classification scheme presented below:

- Hispanic or Latino—A person of Cuban, Mexican, Puerto Rican, Central or South American, or other Spanish culture or origin, regardless of race
- Not Hispanic or Latino—A person whose ethnicity is not Hispanic or Latino
- Not Reported—The data are unavailable or the participant has indicated that he or she does not want to provide this information.

High-Need District

A school district that serves an elementary or secondary school located in an area in which there is:

1. a high percentage of individuals from families with incomes below the poverty line;
2. a high percentage of secondary school teachers not teaching in the content area in which the teachers were trained to teach; or
3. a high teacher turnover rate.

High School

Schools that have at least one grade higher than 8 and no grade in K–6.

Intern

An undergraduate student (freshman or sophomore) who participated in a Noyce summer internship to introduce them to STEM K-12 education as a career option

K-12

This acronym refers to the grades kindergarten (K) through 12th grade (12). It indicates that an individual has experience working with students or teachers in one or more of these grade levels.

Major

A field of study in which an individual has taken substantial academic coursework at the postsecondary level, implying that the individual has substantial knowledge of the academic discipline or subject area.

Mentoring

When an individual serves as a student's counselor or advisor, especially in a direct, one-on-one setting

Middle school

Schools that have any of grades 5–8, and no grade lower than 5 and no grade higher than 8.

Noyce Program

The Robert Noyce Teacher Scholarship Program, funded by the National Science Foundation (NSF), awards grants to institutions to provide scholarships, stipends, fellowships, and internships to recruit and prepare talented Science, Technology, Engineering and Mathematics (STEM) professionals and students who commit to teaching in K-12 settings, particularly in high-need districts.

Practicum: see entry for **student teaching**.

Pre-Service

A "pre-service" is an individual enrolled in a post-baccalaureate teacher preparation program.

Race

A classification indicating general racial or ethnic heritage based on self-identification. The following descriptions should be used:

- American Indian or Alaska Native—A person having origins in any of the original peoples of North or South America (including Central America), and who maintains tribal affiliation or community attachment
- Asian—A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Indonesia, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- Black or African American—A person having origins in any of the black racial groups of Africa
- Native Hawaiian or Other Pacific Islander—A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands
- White—A person having origins in any of the original peoples of Europe, the Middle East, or North Africa
- Not Reported—The data are unavailable or the participant has indicated that he or she does not want to provide this information.

Robert Noyce Teacher Scholarship Program: see entry for **Noyce Program**.

STEM

This acronym "STEM," stands for **Science, Technology, Engineering and/or Mathematics**.

Stipend Recipient

An individual who:

- First began receiving Noyce funding as a post-baccalaureate (i.e., someone already holding a baccalaureate, master's, or doctoral degree);
- Is enrolled in a teacher preparation or teacher certification program;
- Has received Noyce funding during the current reporting period.

This includes career changers.

Student Teaching

"Student teaching," sometimes called "practicum teaching," is a period of apprenticeship during which you have responsibility for teaching and day-to-day instruction under supervision by a host/cooperating teacher. You are not considered the "teacher-of-record," nor are you employed (paid) as a teacher-of-record. Student teaching generally occurs after you have completed coursework, fieldwork, or other teacher preparation activities.

Teaching certification

A license or certificate awarded to teachers by the state to teach in a public school. Types of certification include: regular or standard state certification or advanced professional certificate; probationary certificate issued to persons who satisfy all requirements except the completion of a probationary period; provisional certificate issued to persons who are still participating in what the state calls an "alternative certification program;" temporary certificate issued to persons who need some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained; and emergency certificate issued to persons with insufficient teacher preparation who must complete a regular certification program in order to continue teaching.

Teacher Preparation Program

A program designed to prepare college students or college graduates to obtain a license or certificate to teach in a public school. In a traditional program, coursework and pre-practicum field experiences are followed by supervised student teaching--also called a practicum--before an individual assumes full-time teaching responsibilities. In alternative certification programs, preparation for teaching is typically accelerated, to get individuals employed as full-time teachers as quickly as possible, and is followed by ongoing support to help the individual achieve full or regular certification/licensing

Teacher-of-record

The teacher-of-record is the "official" teacher in charge of a classroom, not a student teacher.

Traditional teacher education program

In a traditional program, coursework and pre-practicum field experiences are followed by supervised student teaching--also called a practicum--before an individual assumes full-time teaching responsibilities.

