Crosswalk of Intern Survey Items to Research Questions and Uses in Analysis

Survey Item	Research Questions[1]			Analysis[2]
	RQ 1e	RQ 2e	RQ 4a	
A. Background Information				
Background information (name, IHE)				A
Noyce scholarship recipient				A
B. Current Status				
Undergraduate status				M
Major/area of concentration				M
Noyce influence choice of major/area of concentration?				M
C. Initial Status when applied for the Noyce Internship				
Undergraduate status				M
D. Reasons for applying for a Noyce Internship				
Reasons for applying for a Noyce Internship				M
E. Characteristics of the Noyce Internship Program				
When did Internship experience take place?				D
Setting of Noyce Internship experience	•			D
Types of activities conducted as part of Internship experience	•			D
Did internship experience include seminars or workshops with other Noyce inters/faculty members?				M
Did internship experience include interactions with STEM graduates/faculty/teachers etc?				M
F. Interest in pursuing Education in STEM				
When did you first become interested in STEM?				D
Before Noyce, had you already considered being a K-12 teacher?		•	•	D,P
G. Perceived impact of Noyce Internship Program				
Influence of Noyce Internship program on interest in STEM teaching			•	D,P
Likelihood to work as K-12 teacher in the future			•	D,P,O
Perception of impact of Noyce				M
Applying for a Noyce Teacher Scholarship?				M
E. Respondent Background and Demographic Information				
Gender, race/ethnicity, and age			•	C,D

[1]Research Questions Answered by STEM Faculty Survey

RQ1e: What activities do teacher preparation programs that have Noyce awards use to introduce Noyce interns to teaching mathematics and science as a career option?

RQ2e: How do Noyce recipients perceive the preparation they received from their teacher preparation program in preparing them for teaching? When did Noyce recipients first become interested in teaching? What are the reasons Noyce recipients give for leaving the program or for teaching or not teaching in high-need districts?

RQ4a: What activities do teacher preparation programs that have Noyce awards use to support Noyce completers once they are teaching in high-need schools/districts?

[2]Analysis 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

Intern Survey Items

Dear [name of respondent],

As a current or former recipient of 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 the implementation and effectiveness of the Robert Noyce Teacher Scholarship program. It is part of a comprehensive evaluation, the results of which will be used to make recommendations regarding the future of the Noyce program.

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. You will not be identified by name, and information from the study will be reported only in the aggregate at the program level.

Completing the Survey

We estimate that it will take approximately 20 minutes to complete the survey. If you have questions about the study, please contact us at NoyceEval@abtassoc.com. Or you may contact the study director, Ellen Bobronnikov, of Abt Associates Inc. at (617) 349-2718. Additionally, you may contact Connie Kubo Della-Piana (cdellapi@nsf.gov) who is a Program Director in the Division of Undergraduate Education of the National Science Foundation and is the program officer for the program evaluation.

How to complete this survey
This is a trial version of the survey. The final version will be administered online. We have done our best to adapt the survey to a paper format. Throughout the survey, we use **royal blue text** to indicate instructions for you to follow based on responses that you select. For example, on some items, your response will determine

which item you should answer next.   Sometimes, you may be instructed to "skip" some items because they are not relevant to you.   If you find any of these instructions confusing, we would appreciate your comments about what you found confusing. If you are ever in doubt about what question to answer next, simply go to the very next question listed in sequence.

Programming Instructions:

- Programming instructions are indicated in blue text.

- Terms that require rollover definitions are highlighted in blue. See Glossary at end of survey 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.

Please go to the next page

SECTION A: BACKGROUND INFORMATION

A1. Our records indicate you are [name of respondent], who was enrolled at [Institution] during the academic
   year [year of data on which PI is basing identification of Noyce recipients: e.g., 2009-10]?

**If this information is not correct, please check the box below and explain, to the best of your ability, what
information is incorrect:**

❑   This is incorrect. Please explain:

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Otherwise, if this information is correct, please check below and continue to the next item.
❑   This is correct.

A2. Did you ever participate in an internship program that was funded by the National Science Foundation's
   Robert Noyce Teacher Scholarship program? (Check only one response)

☐₁ Yes   **[Go to the section B]**

☐₂ No   **[Please see the note below and STOP the survey]**

☐₃ I don't know   **[Go to the Section B]**

SECTION B: YOUR STATUS ON FEBRUARY 1, 2010

The following questions ask about your education status as of February 1, 2010.

B1.   What was your undergraduate status **as of February 1, 2010**? *(Check only one response)*

☐₁ I was a freshman in college (or had an equivalent number of credits)

☐₂ I was a sophomore in college (or had an equivalent number of credits)

☐₃ Other (please specify): _____

B2.   **As of February 1, 2010,** did you select a major/area of concentration in your undergraduate program? *(Check only one response)*

☐₁ Yes [Continue to Question B2a]

☐₂ No   [SKIP to Question B2b]

B2a. If YES, what was your major/area of concentration? (*Check all that apply*)

☐₁ Biological sciences

☐₂ Chemistry

☐₃ Computer science

☐₄ Education

☐₅ Engineering

☐₆ Geosciences/Environmental sciences

☐₇ Mathematics

☐₈ Physical sciences

☐₉ Physics

☐₁₀ Other (Please specify): _____

B2b. If NO, what is your most likely choice? (*Check all that apply*)

- ☐₁ Biological sciences
- ☐₂ Chemistry
- ☐₃ Computer science
- ☐₄ Education
- ☐₅ Engineering
- ☐₆ Geosciences/Environmental sciences
- ☐₇ Mathematics
- ☐₈ Physical sciences
- ☐₉ Physics
- ☐₁₀ Other (Please specify): _____
- ☐₉₉ Undecided

B3c. Did the Noyce internship experience influence your choice or most likely choice of major/area of concentration? *(Check only one response)*

- ☐₁ Yes
- ☐₂ No

SECTION C. INITIAL STATUS WHEN YOU APPLIED FOR THE NOYCE INTERNSHIP

When answering this question, please refer to the time when you first participated in the Robert Noyce Internship Program. This information may have changed, but for this question, we are interested in your initial status – i.e., when you just start receiving Noyce funding or just prior to this time point.

C1. What was your undergraduate status when you applied to the Noyce internship program?

- ☐₁ Freshman (or had an equivalent number of credits)
- ☐₂ Sophomore (or had an equivalent number of credits)
- ☐₃ Other (please specify): _____

SECTION D. REASONS FOR APPLYING FOR A NOYCE INTERNSHIP

D1.   Why did you apply to the Noyce internship program? *Check all that apply*.

I wanted to….

☐₁ gain exposure in the field of Education

☐₂ explore the possibility of a career in teaching mathematics and/or science

☐₃ help school-age children learn about mathematics and science

☐₄ become more active in the community

☐₅ have hands-on research experiences to reinforce what I am learning in class

☐₆ apply my mathematics and/or science knowledge in real world settings

☐₇ gain confidence in my potential to be a K-12 teacher

☐₈ Other (Please specify)_____

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SECTION E. CHARACTERISTICS OF THE NOYCE INTERNSHIP PROGRAM

Questions in this section refer to your Noyce Internship program and experiences while in this program.

E1.   When did you participate in the Noyce internship program? *Check all that apply*

	2009	2010
Summer		
Spring Break		
Other times during the academic year		

E2.   Which of the following best describes the setting for your Noyce internship experience? *Check all that apply*

☐₁ K-12 School(s) [Go to Question E2a and E2a1]

☐₂ Math/Science Camps [Go to Question E2b and E2b1]

☐₃ Museums (e.g. Science, Aquarium, Nature Centers) [Go to Question E2c]

☐₄ Science research laboratory at your university and/or industry [Go to Question E2d]

☐₅ For-credit summer courses in science, technology, engineering, mathematics or education at your university or in a K-12 district or school [Go to Question E3]

☐₆ Other (please specify) _____ [Go to Question E3]

E2a. Please indicate the types of activities that you conducted as part of your internship experience in a K-12 school. *Check all that apply*

☐₁ Conducted classroom observations in a K-12 classroom

☐₂ Modified existing lessons, activities, or modules for use with K–12 students

☐₃ Designed new lessons, activities, or modules for use with K–12 students

☐₄ Presented lessons/lectures to K–12 students

☐₅ Led small group activities/discussions with K–12 students

☐₆ Planned, coordinated, and/or led field trips/excursions for K–12 students

☐₇ Planned, coordinated, and/or facilitated hands-on learning activities for K–12 students

☐₈ Demonstrated scientific procedures, tools, and techniques in a K–12 classroom

☐₉ Set up laboratory equipment

☐₁₀ Helped K–12 students understand and use technology (e.g., computer software)

☐₁₁ Assisted a K-12 teacher, school, or school district with administrative tasks (e.g., grading, gathering lab supplies, photocopying)

☐₁₂ Other (please specify): _____

E2a1. Was this experience in a high-need school?

☐₁ Yes

☐₂ No

☐₉₈ I don't know

E2b.   Please indicate the types of activities that you conducted as part of your internship experience in a mathematics or science camp. *Check all that apply*

☐₁ Modified existing lessons, activities, or modules for use with K–12 students

☐₂ Designed new lessons, activities, or modules for use with K–12 students

☐₃ Presented lessons/lectures to K–12 students

☐₄ Led small group activities/discussions with K–12 students

☐₅ Planned, coordinated, and/or led student field trips/excursions for K–12 students

☐₆ Planned, coordinated, and/or facilitated hands-on learning activities for K–12 students

☐₇ Demonstrated scientific procedures, tools, and techniques

☐₈ Helped K–12 students understand and use technology (e.g., computer software)

☐₉ Assisted with administrative tasks (e.g., gathering lab supplies, photocopying)

☐₁₀ Other (please specify): _____

E2b1.   Did you work with students from disadvantaged backgrounds?

☐₁ Yes

☐₂ No

E2c.   Please indicate the types of activities that you conducted as part of your internship experience in museums. *Check all that apply*

☐₁ Led visitors through the exhibit (e.g. tour/exhibit guide)

☐₂ Presented lessons/lectures to K–12 students

☐₃ Led small group activities/discussions with K–12 students

☐₄ Planned, coordinated, and/or facilitated hands-on learning activities for K–12 students

☐₅ Demonstrated scientific procedures, tools, and techniques

☐₆ Helped K–12 students understand and use technology (e.g., computer software)

☐₇ Assisted with administrative tasks (e.g., gathering exhibit supplies, photocopying)

☐₈ Other (please specify): _____

E2d. Please indicate the types of activities that you conducted as part of your internship experience in a science research laboratory. *Check all that apply*

$\square_1$ Conducted hands-on research activities under supervision

$\square_2$ Conducted independent research

$\square_3$ Set up laboratory equipment

$\square_4$ Modified existing instructional materials, activities, or modules for use with undergraduate students

$\square_5$ Developed instructional materials, activities, or modules for use with undergraduate students

$\square_6$ Wrote papers and reports about my work

$\square_7$ Presented my work at a professional conference

$\square_8$ Assisted with administrative tasks (e.g., gathering lab supplies, inventory of lab supplies/materials)

$\square_9$ Other (please specify): _____

E3. As part of your internship experience, did you participate in seminars or workshops with other Noyce interns and faculty members? *(Check only one response)*

$\square_1$ Yes

$\square_2$ No

E4. As part of your internship experience, did you interact with any of the following individuals? *(Check all that apply)*

$\square_1$ Graduate mathematics and science students

$\square_2$ Faculty members in a science, technology, engineering, or mathematics department

$\square_3$ Education faculty members

$\square_4$ Non-faculty researchers

$\square_5$ Mathematics and Science K-12 teachers

$\square_6$ Other K-12 teachers

$\square_7$ Other (please specify) _____

Please go to the next page

SECTION F. INTEREST IN PURSUING EDUCATION IN SCIENCE, TECHNOLOGY, ENGINEERING, OR MATHEMATICS AND INTEREST IN TEACHING IN MATHEMATICS OR SCIENCE

F1.   When did you first become interested in science and/or mathematics teaching?

☐₁ I am really not very interested in science and/or mathematics teaching

☐₂ I have been interested since childhood

☐₃ Before college

☐₄ During college

☐₉₈ I don't remember

F2.   Before you first learned about the Noyce program or had the opportunity to apply for a Noyce internship, had you already considered being a K-12 teacher?

☐₁ Yes

☐₂ No

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SECTION G. PERCEIVED IMPACT FROM PARTICIPATING IN THE NOYCE INTERNSHIP PROGRAM

G1.　Which of the following statements most accurately describes the influence of your participation in the Noyce internship program on your interest in science and/or mathematics teaching? *Please check one*.

☐₁ My interest in teaching mathematics and/or science increased

☐₂ My interest in teaching mathematics and/or science decreased

☐₃ My interest in teaching math/science remained the same

G2.　How likely is it that you will work as a K-12 teacher in the future?

☐₁ Very unlikely

☐₂ Unlikely

☐₃ Likely

☐₄ Very likely

[If respondent checked 'Likely' or 'Very Likely' in Question G2, please go to Question G2a. Else, SKIP to Question G3]

G2a.　Which of the following statements most accurately describes the influence of your participation in the Noyce internship program on your decision to enter teaching? *Please check one.*

☐₁ Not a factor in my decision

☐₂ Slightly influenced my decision

☐₃ Moderately influenced my decision

☐₄ Greatly influenced my decision

G3.   Please indicate whether you agree or disagree with the following statements about your participation in the Noyce Internship program. *(Check one response for each row)*

The Noyce Internship program:	Disagree	Agree
Clarified or affirmed my career goal	$\square_1$	$\square_2$
Provided me with an opportunity to work with students of diverse (e.g., cultural, racial/ethnic, socio-economic) backgrounds	$\square_1$	$\square_2$
Increased my understanding of the value of teamwork	$\square_1$	$\square_2$
Increased my understanding of the role of science and technology in everyday life	$\square_1$	$\square_2$
Increased my ability to solve problems independently	$\square_1$	$\square_2$
Increased my ability to think critically and analytically	$\square_1$	$\square_2$

G4.   Which specific feature, if any, of the Noyce Internship Program do you believe has had the greatest impact on you?

G5.   Have you received or are you applying for a Robert Noyce Teacher <u>Scholarship</u> to support your education in a teacher certification program?

$\square_1$ Yes [Go to Question G5a]

$\square_2$ No [Go to Section H]

$\square_{98}$ I don't know [Go to Section H]

G5a. If YES, did your participation in the Noyce Internship Program motivate you to apply for the Robert Noyce Teacher Scholarship?

$\square_1$ Yes

$\square_2$ No

SECTION H. RESPONDENT BACKGROUND

We would like to conclude by asking some questions about your background. The following questions help us understand how different groups of individuals perceive the Robert Noyce Teacher Scholarship program and K-12 teaching as a career.

H1.   How old are you? _____years

H2.   What is your gender? *(check one)*

☐₁ Male

☐₂ Female

H3.   What is your ethnicity? *(check one)*

☐₁   Hispanic or Latino/a

☐₂   Not Hispanic or Latino/a

H4.   What is your race? *(check all that apply)*

☐₁   American Indian or Alaska Native

☐₂   Asian

☐₃   Black or African-American

☐₄   Native Hawaiian or Other Pacific Islander

☐₅   White

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

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 **S**cience, **T**echnology, **E**ngineering and/or **M**athematics.

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.