Appendix A5: Crosswalk of Student Survey Items

Crosswalk of SoI Student Survey 2012 Items

Survey Item	Research Question[1]	Purpose[2]	Source[3]
Respondent Background			
First and last name		A	A
Birthday		A	A
Today's date		A	A
Grade level in fall 2012	RQ1	C	A
Name of school in fall 2012		A	A
Education expectation	RQ 1	C	D
Reasons for participation	RQ 1	C	A
Previous SoI participation	RQ 1	C	A
Career goal	RQ 2	D	A
Attitude and Interest Toward Science			
Attitude toward science scale[5]			
Science is boring	RQ2	O	B
I enjoy my science class	RQ2	O	B
I like science a lot	RQ2	O	B
I think scientists are cool people	RQ2	O	B
Everyone should learn about science	RQ2	O	B
I have good feelings about science	RQ2	O	B
I would enjoy being a scientist	RQ2	O	B
Career interest in science scale[6]			
When I leave school, I would like to work with people who make discoveries in science	RQ2	O	C
I do not want a job in a science laboratory after I leave school	RQ2	O	C
Working in a science laboratory would be an interesting way to earn a living	RQ2	O	C
I would like to teach science when I leave school	RQ2	O	C
I would like to be a science teacher when I grow up	RQ2	O	C
A job as a scientist would be interesting	RQ2	O	C
I do not want to be a scientist when I leave school	RQ2	O	C
I do not want to be a scientist when I grow up	RQ2	O	C
A career in science would dull and boring	RQ2	O	C
A job as a scientist would be boring	RQ2	O	C
I do not want to become a scientist because it needs too much education	RQ2	O	C
I would like to be a scientist when I leave school	RQ2	O	C
I would like to be a scientist when I grow up	RQ2	O	C
Leisure interest in science scale[7]			
I would like to belong to a science club	RQ2	O	C
I get bored watching science programs on TV at home	RQ2	O	C
I would like to be given a science book or a piece of scientific equipment as a present	RQ2	O	C
I do not like reading books about science during my free time	RQ2	O	C
I would like to do science experiments at home	RQ2	O	C
I would enjoy having a job related to science during my summer vacation	RQ2	O	C
I do not like looking at websites about science	RQ2	O	C
I would enjoy visiting a science museum on the weekend	RQ2	O	C
Talking to friends about science after school would be boring	RQ2	O	C
Watching movies about science would be boring	RQ2	O	C

[1]**Research Questions Answered by Student Survey**

RQ1: Who participates in SoI?

RQ2: Does student interest in science change significantly between the baseline and follow-up surveys? If so, are these changes larger among students at some awardee/Center sites than others?

[2]**Purpose of Item**

A: indicates that the variable from this item is used for administrative purposes (e.g., longitudinal tracking, pre and post survey data linking)

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

[3]**Source of Item**

A: Program specific item developed for the national evaluation of SoI

B: School and Social Experiences Questionnaire from Singh, K., Chang, M., & Dika, S. (2006). Affective and motivational factors in engagement and achievement in science. *International Journal of Learning* 12(6), 1447-9540.

C: Test of Science Related Attitudes from Fraser, B.J. (1981). *TOSRA test of science related attitudes handbook*. Hawthorn, Victoria, Australia: Australia Council for Educational Research.

D: LoGerfo, L., Christopher, E.M., and Flanagan, K.D. (2011). *High School Longitudinal Study of 2009 (HSLS:09). A First Look at Fall 2009 Ninth-Graders' Parents, Teachers, School Counselors, and School Administrators* (NCES 2011-355). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

[5]**Attitude Toward Science Scale**

Modified original scale of a four-point Likert type where 1=strongly disagree to 4=strongly agree to a five-point Likert-type where 1=Really disagree to 5=Really agree.

Items had a Cronbach alpha of 0.93 in pilot tests with high school students in grades 9 through 12 (N=1589). Most of the students in the sample were White (94.7%), and in grades 9 (38.8%) and 10 (32.7%).

[6]**Career Interest in Science Scale**

Items had a Cronbach alpha of 0.72 for 7th grade and 0.70 for 8th grade in pilot tests with students in a metropolitan area of Sydney, Australia. N=1337 (n=340 7th grade students; n=335 8th grade students; n=338 9th grade students; n=324 10th grade students).

[7]**Leisure Interest in Science Scale**

Items had a Cronbach alpha of 0.93 for 7th grade and 0.92 for 8th grade in pilot tests with students in a metropolitan area of Sydney, Australia. N=1,337 (n=340 7th grade students; n=335 8th grade students; n=338 9th grade students; n=324 10th grade students).