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A cross-national analysis of the educational expectations of eighth-grade boys and girls

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This cross-national analysis explores students' educational expectations using data from countries that participated at grade 8 in the two most recent administrations of TIMSS (2003 and 2007). This paper examines differences between the educational expectations of males and females, changes over time in eighth-graders' educational expectations, and the relationship between students' educational expectations and their mathematics and science achievement. Eighth-graders who expected to finish at least a bachelor's degree scored about 86 points higher in both mathematics and science than their peers who expected to finish no higher than secondary school. In most countries, a greater percentage of girls than boys expected to finish a bachelor's degree or higher. Multivariate analyses showed that students' sex was a significant predictor of their educational expectations, even when controlling for SES and mathematics/science achievement.

Keywords: educational expectations, gender differences, mathematics achievement, science achievement, adolescence

This cross-sectional analysis examines student educational expectations from an international perspective. This paper explores associations between educational expectations and students' academic achievement as well as variation in that relationship by sex and over time (from 2003 to 2007). This work contributes to an understanding of (1) differences between the educational expectations of males and females, (2) changes over time in eighth-graders' educational expectations, and (3) the relationship between students' educational expectations and their performance on mathematics and science assessments. Attention will be given to cross-national differences.

Theoretical Framework and Review of Empirical Literature

The construct of achievement expectations has been prominent in achievement motivation research. There is ample research showing that students' achievement expectations are a key component of achievement motivation and are related to achievement outcomes (Eccles & Wigfield, 2002; Graham & Weiner, 1996; Wigfield & Eccles, 2000). According to cognitive motivation theorists, a motivated person is someone with cognitions or beliefs that lead to constructive achievement behavior, such as exerting effort or persisting in the face of difficulty. According to Bandura's social cognitive theory (1986, 1997), people with high self-efficacy (that is, having the confidence to organize and execute a given course of action to solve a problem or accomplish a task) are more likely to view difficult tasks as something to be mastered rather than something to be avoided. Locus of control theory adds that self-efficacy is stronger in situations where individuals feel they have control over their success or failure (Connell, 1985; Connell & Wellborn, 1991; Findley & Cooper, 1983; Weisz, 1984). For example, Connell (1985) demonstrated that not knowing the cause of one's successes or failures was associated with loss of motivation for students of all ages. Knowing the criteria and steps necessary to achieve a task was associated with student motivation and high achievement expectations.

The relationship between educational expectations and academic success is at least partially confounded by the strong, positive relationship between socioeconomic status and academic success (U.S. Department of Education, 2006). Students whose parents are highly educated and have sufficient financial resources tend to have higher levels of academic achievement than their peers from low-income, less educated families. Evidence for the strong association between socio-economic status and student achievement has been found over time (Coleman, 1966; Blau & Duncan 1967; Orfield & Lee 2004), within racial groups (Jencks & Philips 1998; Conley, 2009), at every level of schooling (Raftery & Hout, 1993; Lucas, 2001; Hout & DiPrete, 2006) and around the world (Shavit & Blossfeld, 1993). While evidence supporting the relationship between wealth and academic success is strong, scholars do not fully understand the mechanism through which parental wealth confers advantages upon school children. Economists argue that wealthy families are able to access plentiful and superior quality childcare services and educational opportunities. However, this does not explain why some students from low-income backgrounds excel and some students from privileged backgrounds fail. Sociologists and psychologists have argued that parents from differing socioeconomic backgrounds approach child-rearing in qualitatively different ways (Lareau, 2003; Stevens, 2007; Anderson, 1999). While wealthy parents may actively cultivate their children's talents, encourage a sense of entitlement, and train children to participate in adult conversations as equals, working-class parents may have neither the time nor resources to do so. Furthermore, working-class parents may assert that parents' main responsibilities are to provide love, food, clothing, and shelter, and to develop obedience and independence in their children. It is argued that children reared with these very different norms would likely develop different expectations about their future achievement (Lareau, 2003; Stevens, 2007). While previous research demonstrates a strong correlation between socioeconomic background and

educational achievement, there is variation in educational achievement that is independent of SES and that may be partially accounted for by students' achievement expectations.

Our research is also framed by empirical work on gender differences in student achievement. In the United States, girls, on average, earn better grades than boys at every educational level—from kindergarten through university; however, boys, on average tend to score higher on standardized tests (Buchmann, DiPrete, & McDaniel, 2008). Teachers report that girls pay more attention and are more persistent when challenged with a difficult academic task. By 2019, women in the United States are expected to account for 59 percent of university enrollment and 61 percent of enrollment in graduate programs (U.S. Department of Education, 2010). Prior research has documented cross-national gender differences on various measures of academic achievement as well as in the completion of secondary school, tertiary enrollment, and degree completion (Martin, Mullis, & Foy, 2008; Mullis, Martin, & Foy, 2008; Miller, Sen, Malley, & Burns, 2009; OECD, 2009). On average across the OECD countries, the gap in attainment of tertiary education between 25- to 34-year old males and females has increased from 1.9 percentage points in 1999 (24.9 percent of males vs. 26.8 percent of females) to 7.4 percentage points in 2007 (30.5 percent of males vs. 37.9 percent of females) (OECD, 2001, 2009).

In sum, there is ample research showing that students' achievement expectations are a key component of achievement motivation and are related to achievement outcomes. However, educational expectations are at least partially confounded by SES. That is, students who come from families that are more highly educated and that have greater financial resources would tend to achieve academically at higher levels compared to their peers from lower SES families. While prior research has documented cross-national and subgroup differences pertaining to a number of achievement outcomes—including achievement scores, completion of secondary school, and tertiary enrollment and degree completion—research has not adequately tracked differences that may exist with respect to educational expectations, including differences by sex.

Methods and Data Source

Data are from the Trends in International Mathematics and Science Study (TIMSS). We selected the 33 countries that participated at grade 8 in both TIMSS 2003 and TIMSS 2007.

On the TIMSS eighth-grade student background questionnaire, participants were asked "How far in school do you expect to go?" Response choices included: (1) Finish <ISCED 3>; (2) Finish <ISCED 4>; (3) Finish <ISCED 5B>; (4) Finish <ISCED 5A, first degree>; (5) Beyond <ISCED 5A, first degree>; and (6) I don't know. For most analyses in this paper, the second and third categories were combined and the fourth and fifth categories were combined. Thus, the groups generally discussed in this paper are as follows: (1) Finish secondary school, (2) Finish vocational/technical school or community college, (3) Finish at least a first university degree (i.e., a bachelor's degree or higher), and (4) Do not know.

For the above question on student educational expectations, each country made modifications to the international response categories to reflect its education system. For example, corresponding with response categories 2 and 3 (ISCED levels 4 and 5B), students in the United States were given the response categories of "Vocational/technical certificate after high school" and "Community or junior college degree." The wording of these responses categories was examined in the student questionnaires for all 33 countries in TIMSS 2003 and 2007. See the TIMSS 2003 and 2007 user guides (supplement 2) to access this information. Upon close examination of the wording, it was found that there were 10 countries where some changes in the wording across survey years might lead to inappropriate trend

comparisons. Thus, data for only 23 countries are presented when 2003 to 2007 trend comparisons are being shown.

To assess academic achievement, we used scores in both mathematics and science (five plausible values for each). As a proxy for SES, we used two measures from the student background questionnaire: (1) the item in which students were asked to report how many books were in their home, which ranges from none or very few (0-10 books) to more than 200 books; and (2) the composite variable on the TIMSS student data file that reports the highest education level of the parents.

In the results that follow, descriptive analyses, including several data tables, are presented showing students' educational expectations by student sex. Analyses are repeated showing results at two time points (2003 and 2007). Using the 2007 data, average scores on the TIMSS mathematics and science assessment are presented by levels of educational expectations. Besides showing country-level results, an international average of the 33 selected countries is also reported (or 23 countries when 2003 and 2007 trend comparisons are shown).

All analyses were run using the IEA International Database Analyzer (IDB Analyzer) or AM Statistical Software, both of which provide results representative of the populations through the use of weights and both of which account for the complex sampling design in the calculation of standard errors. *T*-tests were calculated to test for differences in percentages and mean scores for groups and subgroups. In most instances, independent samples *t*-tests were used. Consistent with analyses of TIMSS data by IEA and the National Center for Education Statistics (NCES), dependent *t*-tests were calculated when testing for differences by sex and for differences between a country's estimate and the estimate for the international average. In addition, two sets of regression analyses were run. The first assesses whether there is a relationship between students' sex and educational expectations, controlling for SES and mathematics/science achievement. The second assesses the relationship between students' educational expectations and mathematics/science achievement, controlling for sex and SES.

Results

Eighth-grade students' educational expectations: 2007

On average across the 33 selected countries in 2007, 12 percent of eighth-grade students reported that they expected to finish no higher than secondary school, with a range from 2 percent in Singapore to about one-quarter of students in Botswana, Hungary, Italy, Serbia, and Romania (table 1a). On average, 15 percent of students expected to finish vocational/technical school or community college, with a range from 2 percent in Cyprus to about one-third of students in Australia and Ghana (table 1b). On average, 56 percent of students expected to finish a bachelor's degree or higher, with 14 countries below the international average of the 33 countries (Italy, Hungary, Serbia, Palestinian National Authority, Norway, Botswana, Ghana, Japan, Romania, Lithuania, Scotland, Slovenia, Sweden, and Australia) and 12 countries above the international average (Malaysia, Indonesia, Israel, Jordan, Cyprus, Singapore, Lebanon, Hong Kong, Saudi Arabia, Chinese Taipei, the United States, and Korea) (table 1c). For example, about one-third of students in Australia, Sweden, and Slovenia expected to finish at least a bachelor's degree, compared to about three-quarters of students in Hong Kong, Saudi Arabia, Chinese Taipei, the United States, and Korea (table 1c). On average, 18 percent of students reported not knowing their educational expectations, with a range from 5 percent in Ghana to about one-third of students in Sweden, Scotland, and Norway (table 1d).

Trends in eighth-grade students' educational expectations: 2003 to 2007

On average across the 23 selected countries, the percentage of eighth-grade students who reported that they expected to finish a bachelor's degree or higher increased by about 2 percentage points from 2003 to 2007 (from 56 to 58 percent) (table 2). There were twice as many countries with an increase from 2003 to 2007 in the percentage of students who expected to finish a bachelor's degree or higher compared to those with a decrease. In the following four countries the percentage of students who expected to finish a bachelor's degree or higher decreased from 2003 to 2007: Australia, from 39 to 31 percent; Bahrain, from 65 to 56 percent; the Russian Federation, from 63 to 58 percent; Scotland, from 46 to 39 percent. In the following eight countries the percentage of students who expected to finish at least a bachelor's degree increased from 2003 to 2007: Botswana, from 43 to 49 percent; Bulgaria, from 49 to 55 percent; Indonesia, from 55 to 62 percent; Iran, from 44 to 59 percent; Israel, from 59 to 66 percent; Jordan, from 60 to 67 percent; Saudi Arabia, from 67 to 72 percent; and the United States, from 73 to 76 percent.

Differences by sex in eighth-grade students' educational expectations: 2007

On average across the 33 selected countries in 2007, a greater percentage of eighth-grade boys than girls reported that they expected to finish no higher than secondary school (15 vs. 9 percent) or reported not knowing their educational expectations (19 vs. 17 percent), while a greater percentage of girls than boys expected to finish a bachelor's degree or higher (60 vs. 52 percent) (tables 3a-3d). In 27 of the 33 countries, a greater percentage of girls than boys expected to finish a bachelor's degree or higher, with differences of 10 percentage points or more in Armenia, Bulgaria, Cyprus, Hong Kong, Hungary, Indonesia, Iran, Italy, Lithuania, Malaysia, Norway, Romania, the Russian Federation, Serbia, and Tunisia. Only in Ghana and Japan did a greater percentage of boys than girls expect to finish at least a bachelor's degree.

Trends in eighth-grade students' educational expectations by sex: 2003 to 2007

On average across the 23 selected countries, the percentage of eighth-grade girls who reported that they expected to finish a bachelor's degree or higher increased by about 3 percentage points from 2003 to 2007 (from 60 to 63 percent); the corresponding increase for boys was about 1 percentage point (from 53 to 54 percent) (table 4). In three countries (Australia, Bahrain, and Scotland) there were decreases from 2003 to 2007 in the percentage of girls who expected to finish at least a bachelor's degree, and in four countries (Australia, Bahrain, the Russian Federation, and Scotland) there were corresponding decreases for boys during this time period. In seven countries (Botswana, Indonesia, Iran, Israel, Jordan, Saudi Arabia, and the United States) there were increases from 2003 to 2007 in the percentage of girls who expected to finish at least a bachelor's degree, and in seven countries (Armenia, Bulgaria, Chinese Taipei, Indonesia, Iran, Jordan, and Lebanon) there were corresponding increases for boys.

Eighth-grade students' mathematics and science achievement in relation to educational expectations: 2007

On average across the 33 selected countries in 2007, the correlation between eighth-grade students' educational expectations (with the 'Do not know' category excluded from the analysis in order to make the variable continuous) and their academic performance on TIMSS was .29 ($p < .001$) for mathematics and .30 for science ($p < .001$). Eighth-grade students who expected to finish a bachelor's degree or

higher scored about 48 points higher in both mathematics and science than their peers who expected to finish vocational/technical school or community college (table 5). Furthermore, eighth-graders who expected to finish a bachelor's degree or higher scored about 86 points higher in both mathematics and science than their peers who expected to finish no higher than secondary school; in mathematics, this difference was 100 score points or more in 11 countries (Bulgaria, Chinese Taipei, Cyprus, Hong Kong, Hungary, Jordan, Korea, Lithuania, Romania, Serbia, and Singapore), and in science, this difference was 100 score points or more in 13 countries (Botswana, Chinese Taipei, Cyprus, Ghana, Hong Kong, Jordan, Korea, Lithuania, Malaysia, Palestinian National Authority, Scotland, Singapore, and Slovenia).

Multivariate analyses

A first set of multivariate analyses examined the relationship between the sex of eighth-grade students and their educational expectations in 2007. Multinomial logistic regression analyses showed that, for the average of the 33 countries, students' sex was a significant predictor of their educational expectations, even when controlling for SES and mathematics/science achievement as assessed in TIMSS (tables 6a and 6b). That is, relative to students who expected to finish a bachelor's degree or higher, students with alternative educational expectations were more likely to be boys, even when controlling for SES and mathematics/science achievement.

A second set of multivariate analyses examined the relationship between students' educational expectations and their academic performance on TIMSS in 2007. Linear regression analyses using the five plausible values as a dependent variable showed that students' educational expectations was a significant predictor of their mathematics/science achievement, even when controlling for students' sex and SES (tables 7a and 7b). That is, students with higher mathematics/science achievement were more likely to expect to finish at least a bachelor's degree, even when controlling for SES and sex. Moreover, sex was not a significant predictor of mathematics or science achievement in the models. Together, the predictors explained about 20 percent of the variation in students' mathematics/science performance.

Discussion

This research study examined student educational expectations from an international perspective, contributing to an understanding of (1) differences between the educational expectations of males and females, (2) changes over time in eighth-graders' educational expectations, and (3) the relationship between students' educational expectations and their performance on mathematics and science assessments. Although when interpreting the results of this analysis there is a tendency to think of educational expectations as a causal factor and academic achievement as an outcome, it is plausible to believe that this relationship may be characterized by bi-directionality. High educational expectations may be a motivating factor to achieve at a high level, while past academic successes may serve to foster high educational expectations. It is important to bear in mind that the results of this study are strictly correlational. Longitudinal datasets would be helpful in better evaluating the causal nature of this relationship.

While it may be easy to understand why expectations might play a role in subsequent achievement, it is more difficult to understand how expectations get formed and how they can be transformed. However, the fact that educational expectations show some variation by individual characteristics such as sex and SES suggests that a person's environment and socialization play a role. These findings are consistent with cross-national data showing a growing gap between males and females in the attainment of tertiary education. On average across the OECD countries, the gap in attainment of tertiary education

between 25- to 34-year old males and females has increased from 1.9 percentage points in 1999 (24.9 percent of males vs. 26.8 percent of females) to 7.4 percentage points in 2007 (30.5 percent of males vs. 37.9 percent of females) (OECD, 2001, 2009). Thus, the finding that there are differences by sex in eighth-graders educational expectations are cause for concern and warrant further study with respect to intervention efforts. Moreover, the finding that educational expectations and academic achievement varied considerably across countries suggests the need for further research in this area both within and across countries. Although the results of regression analyses were presented that included several key variables of analytic interest, it is possible that the inclusion of alternative or additional control variables would lead to alternative explanations of the findings.

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Table 1a. Percent of eighth-grade students, by county and student-reported educational expectations: 2007

Finish high school			
Country	n	Percent	SE
Singapore	79	1.72	0.23
Tunisia	141	3.52	0.34
Korea, Republic of	147	3.54	0.26
Malaysia	200	4.29	0.55
Hong Kong, SAR	139	4.40	0.57
Lebanon	189	5.69	0.60
Iran, Islamic Republic of	193	5.71	0.54
Jordan	342	6.38	0.60
Egypt	281	6.75	0.96
United States	517	6.90	0.42
Chinese Taipei	336	8.40	0.71
Russian Federation	337	8.53	0.67
Slovenia	337	8.81	0.57
Norway	402	9.87	0.53
Scotland	410	10.24	0.57
Saudi Arabia	393	10.29	0.64
Israel	326	10.60	0.64
Palestinian National Authority	469	11.32	0.79
Bulgaria	334	11.34	0.98
Ghana	599	12.74	0.93
Lithuania	461	13.08	0.71
Indonesia	525	13.29	0.96
Australia	501	13.35	0.73
Armenia	546	13.66	0.94
Cyprus	598	13.79	0.67
Bahrain	578	14.23	0.57
Sweden	827	17.33	0.71
Japan	808	19.42	0.82
Botswana	965	23.83	0.84
Hungary	886	24.32	1.37
Italy	1,112	25.48	1.08
Serbia	1,034	27.17	0.98
Romania	1,045	27.82	1.34
International avg		12.06	0.13

Table 1b. Percent of eighth-grade students, by county and student-reported educational expectations: 2007

Finish vocational/technical/community college			
Country	n	Percent	SE
Cyprus	95	2.13	0.24
Chinese Taipei	171	4.14	0.32
Israel	157	4.82	0.36
Korea, Republic of	209	5.01	0.35
Jordan	283	5.44	0.48
Iran, Islamic Republic of	246	6.50	0.49
Italy	291	6.72	0.51
Norway	303	7.55	0.43
Indonesia	313	7.79	0.64
Bahrain	334	8.16	0.51
Lebanon	258	8.26	0.89
United States	621	8.39	0.45
Palestinian National Authority	405	9.46	0.50
Tunisia	481	11.86	0.57
Serbia	507	12.59	0.68
Hong Kong, SAR	423	12.76	0.79
Romania	601	15.45	0.90
Armenia	635	16.40	0.95
Lithuania	627	16.63	0.68
Hungary	676	17.09	0.80
Scotland	701	17.71	0.88
Sweden	874	17.90	0.74
Botswana	793	19.91	0.70
Bulgaria	662	20.98	1.17
Japan	879	21.37	0.66
Malaysia	1,001	21.60	1.03
Egypt	1,288	21.80	0.95
Russian Federation	1,053	24.94	1.06
Slovenia	990	25.45	0.88
Singapore	1,355	28.57	1.08
Australia	1,401	36.29	1.21
Ghana	1,822	36.80	1.31
International avg		15.01	0.14

Table 1c. Percent of eighth-grade students, by county and student-reported educational expectations: 2007

Bachelor's degree (ISCED 5A) or higher			
Country	n	Percent	SE
Australia	1,170	31.09	1.48
Sweden	1,759	33.56	1.10
Slovenia	1,416	35.81	0.85
Scotland	1,558	38.84	1.39
Lithuania	1,761	42.20	1.12
Romania	1,990	42.40	1.74
Japan	1,971	44.49	1.13
Ghana	2,470	45.49	1.63
Botswana	1,963	48.79	1.09
Norway	2,196	49.10	1.06
Palestinian National Authority	2,252	51.58	1.34
Serbia	2,177	51.61	1.15
Hungary	2,240	52.20	1.51
Italy	2,358	52.81	1.29
Armenia	2,280	54.55	1.16
Bulgaria	2,511	55.21	1.55
Bahrain	2,310	55.53	0.92
Egypt	3,520	56.20	1.24
Tunisia	2,291	56.89	1.17
Russian Federation	2,700	58.18	1.34
Iran, Islamic Republic of	2,495	58.88	1.66
Malaysia	2,677	61.22	1.72
Indonesia	2,623	62.45	1.52
Israel	2,111	66.36	1.03
Jordan	3,486	67.17	1.40
Cyprus	3,028	69.37	0.86
Singapore	3,154	69.71	1.15
Lebanon	2,666	70.39	1.71
Hong Kong, SAR	2,507	71.87	1.37
Saudi Arabia	2,974	72.39	0.93
Chinese Taipei	2,934	72.83	1.21
United States	5,518	76.00	0.86
Korea, Republic of	3,364	78.88	0.78
International avg		56.18	0.22

Table 1d. Percent of eighth-grade students, by county and student-reported educational expectations: 2007

Do not know			
Country	n	Percent	SE
Ghana	232	4.98	0.39
Hungary	255	6.38	0.46
Botswana	328	7.48	0.57
Russian Federation	323	8.36	0.64
Serbia	305	8.62	0.61
United States	639	8.71	0.39
Hong Kong, SAR	373	10.97	0.64
Bulgaria	459	12.47	0.82
Korea, Republic of	517	12.57	0.61
Malaysia	563	12.90	0.93
Romania	512	14.33	1.08
Chinese Taipei	590	14.63	0.65
Cyprus	638	14.71	0.61
Japan	624	14.71	0.65
Italy	647	14.99	0.71
Egypt	806	15.25	1.07
Armenia	666	15.39	0.72
Lebanon	503	15.66	1.24
Indonesia	665	16.47	1.22
Saudi Arabia	627	17.32	0.78
Israel	588	18.22	0.87
Australia	806	19.27	0.78
Jordan	1,026	21.01	0.97
Bahrain	926	22.08	0.70
Palestinian National Authority	1,158	27.64	1.46
Tunisia	1,124	27.73	1.01
Lithuania	1,088	28.09	0.89
Iran, Islamic Republic of	1,033	28.92	1.36
Slovenia	1,149	29.92	0.92
Sweden	1,525	31.21	0.90
Scotland	1,285	33.21	0.94
Norway	1,425	33.47	0.78
International avg		17.74	0.15

Table 2. Trends in eighth-grade students' reported educational expectations, by country: 2003 and 2007

Country	Educ. expectations	2003		2007		Difference 2007 - 2003
		Percent	SE	Percent	SE	
Armenia	finish high school	23.95	0.99	13.66	0.94	-10.29
Armenia	finish voc/tech/commu	14.84	0.83	16.40	0.95	1.56
Armenia	bachelor's or higher	51.14	1.45	54.55	1.16	3.41
Armenia	do not know	10.07	0.55	15.39	0.72	5.32
Australia	finish high school	16.21	0.82	13.35	0.73	-2.86
Australia	finish voc/tech/commu	28.86	1.00	36.29	1.21	7.44
Australia	bachelor's or higher	39.01	1.34	31.09	1.48	-7.92
Australia	do not know	15.93	0.84	19.27	0.78	3.34
Bahrain	finish high school	11.74	0.49	14.23	0.57	2.50
Bahrain	finish voc/tech/commu	4.40	0.33	8.16	0.51	3.76
Bahrain	bachelor's or higher	64.94	0.81	55.53	0.92	-9.41
Bahrain	do not know	18.92	0.64	22.08	0.70	3.16
Botswana	finish high school	26.36	0.83	23.83	0.84	-2.54
Botswana	finish voc/tech/commu	18.38	0.74	19.91	0.70	1.52
Botswana	bachelor's or higher	42.86	1.00	48.79	1.09	5.93
Botswana	do not know	12.39	0.62	7.48	0.57	-4.91
Bulgaria	finish high school	10.01	0.82	11.34	0.98	1.33
Bulgaria	finish voc/tech/commu	26.32	1.24	20.98	1.17	-5.34
Bulgaria	bachelor's or higher	49.48	1.48	55.21	1.55	5.73
Bulgaria	do not know	14.20	0.82	12.47	0.82	-1.73
Chinese Taipei	finish high school	9.21	0.67	8.40	0.71	-0.81
Chinese Taipei	finish voc/tech/commu	6.54	0.41	4.14	0.32	-2.39
Chinese Taipei	bachelor's or higher	69.57	1.23	72.83	1.21	3.26
Chinese Taipei	do not know	14.68	0.62	14.63	0.65	-0.06
Hong Kong, SAR	finish high school	5.98	0.51	4.40	0.57	-1.58
Hong Kong, SAR	finish voc/tech/commu	12.76	0.61	12.76	0.79	0.00
Hong Kong, SAR	bachelor's or higher	71.90	1.00	71.87	1.37	-0.02
Hong Kong, SAR	do not know	9.36	0.46	10.97	0.64	1.60
Indonesia	finish high school	13.43	0.96	13.29	0.96	-0.14
Indonesia	finish voc/tech/commu	10.25	0.56	7.79	0.64	-2.46
Indonesia	bachelor's or higher	54.63	1.40	62.45	1.52	7.82
Indonesia	do not know	21.69	0.90	16.47	1.22	-5.22
Iran, Islamic Republ	finish high school	6.77	0.45	5.71	0.54	-1.06
Iran, Islamic Republ	finish voc/tech/commu	9.57	0.53	6.50	0.49	-3.07
Iran, Islamic Republ	bachelor's or higher	44.38	1.07	58.88	1.66	14.49
Iran, Islamic Republ	do not know	39.28	1.06	28.92	1.36	-10.36
Israel	finish high school	9.28	0.53	10.60	0.64	1.32
Israel	finish voc/tech/commu	14.07	0.58	4.82	0.36	-9.24
Israel	bachelor's or higher	59.26	0.84	66.36	1.03	7.10
Israel	do not know	17.40	0.66	18.22	0.87	0.82
Italy	finish high school	29.68	1.17	25.48	1.08	-4.20
Italy	finish voc/tech/commu	7.93	0.50	6.72	0.51	-1.21
Italy	bachelor's or higher	49.75	1.44	52.81	1.29	3.06
Italy	do not know	12.64	0.62	14.99	0.71	2.35
Japan	finish high school	17.04	0.66	19.42	0.82	2.39
Japan	finish voc/tech/commu	19.18	0.70	21.37	0.66	2.19
Japan	bachelor's or higher	42.29	1.07	44.49	1.13	2.21
Japan	do not know	21.50	0.67	14.71	0.65	-6.78

Table 2. Trends in eighth-grade students' reported educational expectations, by country: 2003 and 2007 -- Continued

Country	Educ expectations	2003		2007		Difference 2007 - 2003
		Percent	SE	Percent	SE	
Jordan	finish high school	7.66	0.63	6.38	0.60	-1.28
Jordan	finish voc/tech/commu	5.82	0.41	5.44	0.48	-0.37
Jordan	bachelor's or higher	60.06	1.22	67.17	1.40	7.11
Jordan	do not know	26.47	1.02	21.01	0.97	-5.46
Korea, Republic of	finish high school	1.84	0.21	3.54	0.26	1.70
Korea, Republic of	finish voc/tech/commu	9.28	0.44	5.01	0.35	-4.28
Korea, Republic of	bachelor's or higher	78.58	0.67	78.88	0.78	0.30
Korea, Republic of	do not know	10.30	0.46	12.57	0.61	2.27
Lebanon	finish high school	6.68	0.53	5.69	0.60	-0.99
Lebanon	finish voc/tech/commu	9.84	0.58	8.26	0.89	-1.58
Lebanon	bachelor's or higher	66.89	1.28	70.39	1.71	3.50
Lebanon	do not know	16.58	0.91	15.66	1.24	-0.93
Malaysia	finish high school	3.87	0.44	4.29	0.55	0.42
Malaysia	finish voc/tech/commu	21.96	1.05	21.60	1.03	-0.37
Malaysia	bachelor's or higher	62.97	1.63	61.22	1.72	-1.76
Malaysia	do not know	11.19	0.76	12.90	0.93	1.71
Norway	finish high school	12.06	0.65	9.87	0.53	-2.19
Norway	finish voc/tech/commu	7.70	0.45	7.55	0.43	-0.15
Norway	bachelor's or higher	47.79	0.91	49.10	1.06	1.31
Norway	do not know	32.45	0.84	33.47	0.78	1.03
Palestinian National	finish high school	10.79	0.61	11.32	0.79	0.53
Palestinian National	finish voc/tech/commu	8.01	0.44	9.46	0.50	1.45
Palestinian National	bachelor's or higher	52.75	0.97	51.58	1.34	-1.18
Palestinian National	do not know	28.45	0.76	27.64	1.46	-0.81
Romania	finish high school	26.40	1.37	27.82	1.34	1.42
Romania	finish voc/tech/commu	14.52	0.77	15.45	0.90	0.92
Romania	bachelor's or higher	40.72	2.06	42.40	1.74	1.68
Romania	do not know	18.36	1.30	14.33	1.08	-4.03
Russian Federation	finish high school	6.81	0.62	8.53	0.67	1.71
Russian Federation	finish voc/tech/commu	14.59	0.78	24.94	1.06	10.35
Russian Federation	bachelor's or higher	63.32	1.47	58.18	1.34	-5.14
Russian Federation	do not know	15.28	0.58	8.36	0.64	-6.92
Saudi Arabia	finish high school	12.70	0.99	10.29	0.64	-2.41
Saudi Arabia	bachelor's or higher	66.99	1.47	72.39	0.93	5.40
Saudi Arabia	do not know	20.32	1.67	17.32	0.78	-2.99
Scotland	finish high school	12.11	0.85	10.24	0.57	-1.87
Scotland	finish voc/tech/commu	16.36	0.91	17.71	0.88	1.36
Scotland	bachelor's or higher	46.05	1.57	38.84	1.39	-7.21
Scotland	do not know	25.49	0.98	33.21	0.94	7.72
United States	finish high school	6.78	0.50	6.90	0.42	0.13
United States	finish voc/tech/commu	9.52	0.47	8.39	0.45	-1.13
United States	bachelor's or higher	72.61	0.86	76.00	0.86	3.39
United States	do not know	11.09	0.39	8.71	0.39	-2.38
International avg	finish high school	12.49	0.16	11.68	0.16	-0.82
International avg	finish voc/tech/commu	13.21	0.15	13.17	0.16	-0.05
International avg	bachelor's or higher	56.43	0.26	58.30	0.28	1.87
International avg	do not know	18.44	0.17	17.42	0.19	-1.01

Table 3a. Percent of eighth-grade girls and boys, by country and student-reported educational expectations:
2007

Finish high school						
Country	Girls			Boys		
	n	Percent	SE	n	Percent	SE
Armenia	193	9.55	0.95	353	18.09	1.45
Australia	174	11.44	1.33	327	15.13	1.02
Bahrain	195	10.63	0.74	383	17.75	0.83
Botswana	477	22.15	1.11	488	25.71	0.93
Bulgaria	121	8.25	1.18	213	14.45	1.63
Chinese Taipei	128	6.68	0.76	208	10.01	0.88
Cyprus	121	5.64	0.68	477	21.99	1.06
Egypt	119	5.94	0.90	162	7.57	1.33
Ghana	241	11.45	1.12	358	13.80	1.07
Hong Kong, SAR	42	2.62	0.58	97	6.18	0.75
Hungary	330	18.61	1.38	556	29.96	1.82
Indonesia	224	11.30	1.39	301	15.36	1.04
Iran, Islamic Republic of	50	3.22	0.46	143	7.79	0.88
Israel	135	8.31	0.68	191	13.26	0.91
Italy	429	20.77	1.24	683	29.85	1.51
Japan	334	16.12	0.97	474	22.75	1.25
Jordan	140	4.95	0.66	202	7.70	0.97
Korea, Republic of	51	2.60	0.38	96	4.41	0.41
Lebanon	90	5.08	0.75	99	6.43	0.93
Lithuania	131	7.43	0.66	330	18.67	1.15
Malaysia	77	2.99	0.49	123	5.77	0.87
Norway	146	7.07	0.66	256	12.67	0.86
Palestinian National Authority	206	8.84	0.87	263	13.92	1.30
Romania	381	21.32	1.80	664	34.18	1.96
Russian Federation	171	8.60	0.75	166	8.45	1.06
Saudi Arabia	130	5.47	0.66	263	14.89	1.16
Scotland	132	6.15	0.59	278	14.51	0.91
Serbia	363	19.85	1.16	671	34.30	1.36
Singapore	34	1.55	0.27	45	1.88	0.30
Slovenia	116	5.98	0.70	221	11.71	0.85
Sweden	316	13.84	0.87	511	20.53	0.83
Tunisia	49	2.35	0.40	92	4.80	0.50
United States	215	5.63	0.41	302	8.20	0.62
International avg		9.16	0.16		14.93	0.19

Table 3b. Percent of eighth-grade girls and boys, by country and student-reported educational expectations:
2007

Finish vocational/technical/community college						
Country	Girls			Boys		
	n	Percent	SE	n	Percent	SE
Armenia	356	18.39	1.37	279	14.26	1.08
Australia	705	40.47	1.81	696	32.39	1.60
Bahrain	155	8.13	0.81	179	8.18	0.61
Botswana	391	18.92	0.88	402	21.02	0.95
Bulgaria	287	18.33	1.44	375	23.65	1.52
Chinese Taipei	85	4.29	0.40	86	4.00	0.43
Cyprus	26	1.21	0.25	69	3.06	0.40
Egypt	679	22.30	1.21	609	21.29	1.46
Ghana	1,059	46.87	1.67	763	28.47	1.49
Hong Kong, SAR	199	11.67	1.01	224	13.84	1.01
Hungary	317	16.25	1.01	359	17.92	1.19
Indonesia	134	6.40	0.72	179	9.23	0.87
Iran, Islamic Republic of	115	6.48	0.66	131	6.51	0.70
Israel	79	4.58	0.46	78	5.10	0.54
Italy	144	7.19	0.71	147	6.29	0.59
Japan	625	30.29	1.12	254	12.41	0.85
Jordan	143	4.91	0.60	140	5.94	0.73
Korea, Republic of	97	4.90	0.48	112	5.10	0.50
Lebanon	129	7.61	1.10	129	9.06	0.95
Lithuania	282	14.58	0.82	345	18.67	1.13
Malaysia	481	19.44	1.24	520	24.07	1.21
Norway	103	5.49	0.55	200	9.61	0.76
Palestinian National Authority	246	10.55	0.72	159	8.32	0.78
Romania	292	15.25	1.17	309	15.64	1.37
Russian Federation	376	16.78	1.03	677	33.74	1.53
Scotland	380	19.24	1.21	321	16.13	0.88
Serbia	247	12.29	1.12	260	12.89	0.79
Singapore	567	24.49	1.15	788	32.47	1.38
Slovenia	410	21.48	1.13	580	29.51	1.27
Sweden	486	20.79	1.10	388	15.25	0.80
Tunisia	209	9.52	0.68	272	14.40	0.90
United States	286	7.45	0.48	335	9.36	0.61
International avg		14.89	0.18		15.24	0.18

Table 3c. Percent of eighth-grade girls and boys, by country and student-reported educational expectations:
2007

Finish bachelor's degree (ISCED 5A) or higher

Country	Girls			Boys		
	n	Percent	SE	n	Percent	SE
Armenia	1,263	59.33	1.66	1,017	49.41	1.59
Australia	528	30.68	2.33	642	31.46	1.74
Bahrain	1,177	60.09	1.45	1,133	51.07	1.14
Botswana	1,117	53.13	1.38	846	43.91	1.35
Bulgaria	1,397	61.34	1.88	1,114	49.04	2.08
Chinese Taipei	1,500	77.44	1.18	1,434	68.49	1.63
Cyprus	1,719	78.94	1.05	1,309	59.74	1.28
Egypt	1,765	57.83	1.58	1,755	54.56	1.66
Ghana	952	37.68	1.84	1,518	51.94	1.76
Hong Kong, SAR	1,357	77.41	1.47	1,150	66.36	1.87
Hungary	1,259	59.01	1.77	981	45.50	1.78
Indonesia	1,468	67.38	1.87	1,155	57.32	1.69
Iran, Islamic Republic of	1,230	66.05	2.33	1,265	52.87	2.35
Israel	1,162	68.82	1.49	949	63.51	1.45
Italy	1,262	58.79	1.59	1,096	47.25	1.76
Japan	884	39.99	1.50	1,087	49.01	1.50
Jordan	1,956	70.42	1.90	1,530	64.15	2.06
Korea, Republic of	1,647	81.06	1.17	1,717	76.88	0.90
Lebanon	1,526	74.26	1.65	1,140	65.64	2.35
Lithuania	1,037	49.59	1.40	724	34.89	1.24
Malaysia	1,523	66.16	1.87	1,154	55.56	1.98
Norway	1,250	56.06	1.47	946	42.16	1.38
Palestinian National Authority	1,278	52.67	2.07	974	50.43	1.78
Romania	1,180	51.14	2.09	810	33.85	1.86
Russian Federation	1,615	67.86	1.66	1,085	47.73	1.52
Saudi Arabia	1,673	76.35	1.50	1,301	68.60	1.33
Scotland	861	42.81	1.84	697	34.70	1.50
Serbia	1,248	60.28	1.50	929	43.17	1.48
Singapore	1,642	73.97	1.24	1,512	65.65	1.45
Slovenia	781	38.98	1.21	635	32.58	1.08
Sweden	863	34.19	1.39	896	32.99	1.29
Tunisia	1,311	62.70	1.49	980	50.58	1.49
United States	2,929	79.80	0.92	2,589	72.10	1.09
International avg		60.37	0.28		51.91	0.28

Table 3d. Percent of eighth-grade girls and boys, by country and student-reported educational expectations:
2007

Do not know						
Country	Girls			Boys		
	n	Percent	SE	n	Percent	SE
Armenia	288	12.74	0.84	378	18.24	1.08
Australia	359	17.41	1.13	447	21.02	1.14
Bahrain	429	21.14	1.11	497	22.99	0.92
Botswana	139	5.81	0.57	189	9.36	0.87
Bulgaria	219	12.08	1.09	240	12.85	1.25
Chinese Taipei	228	11.58	0.72	362	17.49	1.07
Cyprus	314	14.21	0.76	324	15.21	0.91
Egypt	391	13.92	0.98	415	16.58	1.81
Ghana	86	4.00	0.44	146	5.78	0.55
Hong Kong, SAR	144	8.30	0.81	229	13.62	1.01
Hungary	123	6.14	0.59	132	6.62	0.69
Indonesia	304	14.92	1.44	361	18.09	1.54
Iran, Islamic Republic of	388	24.25	2.23	645	32.83	1.67
Israel	324	18.29	1.16	264	18.14	1.30
Italy	279	13.24	0.87	368	16.61	1.00
Japan	285	13.60	0.96	339	15.83	0.81
Jordan	520	19.71	1.48	506	22.21	1.26
Korea, Republic of	219	11.43	0.98	298	13.62	0.78
Lebanon	230	13.04	1.13	273	18.87	1.73
Lithuania	538	28.41	1.13	550	27.78	1.15
Malaysia	272	11.41	1.11	291	14.60	1.25
Norway	664	31.38	1.00	761	35.56	1.13
Palestinian National Authority	612	27.94	2.32	546	27.33	1.78
Romania	221	12.29	1.11	291	16.33	1.43
Russian Federation	140	6.76	0.92	183	10.08	0.87
Saudi Arabia	343	18.18	1.24	284	16.51	0.90
Scotland	631	31.81	1.39	654	34.67	1.26
Serbia	134	7.59	0.69	171	9.64	0.93
Slovenia	652	33.57	1.31	497	26.20	1.15
Sweden	730	31.18	1.17	795	31.23	1.06
Tunisia	530	25.43	1.21	594	30.23	1.37
United States	259	7.12	0.47	380	10.34	0.52
International avg		16.53	0.20		18.95	0.21

Table 4. Trends in eighth-grade students' reported educational expectations, by country and sex: 2003 and 2007

Country	Sex	Educ. expectations	2003		2007		Difference SE 2007 - 2003
			Percent	SE	Percent	SE	
Armenia	GIRL	finish high school	19.76	1.01	9.55	0.95	-10.22
Armenia	BOY	finish high school	29.07	1.40	18.09	1.45	-10.98
Armenia	GIRL	finish voc/tech/commu	15.38	1.04	18.39	1.37	3.01
Armenia	BOY	finish voc/tech/commu	14.19	1.00	14.26	1.08	0.08
Armenia	GIRL	bachelor's or higher	56.69	1.42	59.33	1.66	2.64
Armenia	BOY	bachelor's or higher	44.36	1.81	49.41	1.59	5.05
Armenia	GIRL	do not know	8.17	0.70	12.74	0.84	4.57
Armenia	BOY	do not know	12.39	0.83	18.24	1.08	5.85
Australia	GIRL	finish high school	13.97	1.13	11.44	1.33	-2.53
Australia	BOY	finish high school	18.58	1.22	15.13	1.02	-3.45
Australia	GIRL	finish voc/tech/commu	30.97	1.48	40.47	1.81	9.50
Australia	BOY	finish voc/tech/commu	26.60	1.44	32.39	1.60	5.78
Australia	GIRL	bachelor's or higher	40.28	1.70	30.68	2.33	-9.59
Australia	BOY	bachelor's or higher	37.65	2.03	31.46	1.74	-6.19
Australia	GIRL	do not know	14.78	1.19	17.41	1.13	2.63
Australia	BOY	do not know	17.16	1.05	21.02	1.14	3.85
Bahrain	GIRL	finish high school	8.34	0.65	10.63	0.74	2.29
Bahrain	BOY	finish high school	15.39	0.76	17.75	0.83	2.36
Bahrain	GIRL	finish voc/tech/commu	3.20	0.34	8.13	0.81	4.93
Bahrain	BOY	finish voc/tech/commu	5.70	0.56	8.18	0.61	2.49
Bahrain	GIRL	bachelor's or higher	70.06	1.02	60.09	1.45	-9.97
Bahrain	BOY	bachelor's or higher	59.43	1.28	51.07	1.14	-8.35
Bahrain	GIRL	do not know	18.40	0.87	21.14	1.11	2.74
Bahrain	BOY	do not know	19.48	0.93	22.99	0.92	3.50
Botswana	GIRL	finish high school	26.26	0.93	22.15	1.11	-4.11
Botswana	BOY	finish high school	26.48	1.15	25.71	0.93	-0.76
Botswana	GIRL	finish voc/tech/commu	17.73	1.05	18.92	0.88	1.19
Botswana	BOY	finish voc/tech/commu	19.08	0.86	21.02	0.95	1.94
Botswana	GIRL	bachelor's or higher	43.37	1.39	53.13	1.38	9.75
Botswana	BOY	bachelor's or higher	42.33	1.29	43.91	1.35	1.58
Botswana	GIRL	do not know	12.64	0.80	5.81	0.57	-6.84
Botswana	BOY	do not know	12.12	0.82	9.36	0.87	-2.76
Bulgaria	GIRL	finish high school	7.90	0.97	8.25	1.18	0.35
Bulgaria	BOY	finish high school	11.97	1.04	14.45	1.63	2.49
Bulgaria	GIRL	finish voc/tech/commu	20.33	1.35	18.33	1.44	-2.00
Bulgaria	BOY	finish voc/tech/commu	31.88	1.57	23.65	1.52	-8.22
Bulgaria	GIRL	bachelor's or higher	56.77	1.92	61.34	1.88	4.57
Bulgaria	BOY	bachelor's or higher	42.70	1.81	49.04	2.08	6.34
Bulgaria	GIRL	do not know	15.00	1.15	12.08	1.09	-2.92
Bulgaria	BOY	do not know	13.45	1.15	12.85	1.25	-0.60
Chinese Taipei	GIRL	finish high school	7.06	0.68	6.68	0.76	-0.38
Chinese Taipei	BOY	finish high school	11.22	0.88	10.01	0.88	-1.21
Chinese Taipei	GIRL	finish voc/tech/commu	5.82	0.60	4.29	0.40	-1.53
Chinese Taipei	BOY	finish voc/tech/commu	7.21	0.52	4.00	0.43	-3.21
Chinese Taipei	GIRL	bachelor's or higher	75.95	1.35	77.44	1.18	1.49
Chinese Taipei	BOY	bachelor's or higher	63.60	1.56	68.49	1.63	4.89
Chinese Taipei	GIRL	do not know	11.17	0.74	11.58	0.72	0.41
Chinese Taipei	BOY	do not know	17.97	0.93	17.49	1.07	-0.48

Table 4. Trends in eighth-grade students' reported educational expectations, by country and sex: 2003 and 2007.
-Continued

Country	Sex	Educ. expectations	2003		2007		Difference SE 2007 - 2003
			Percent	SE	Percent	SE	
Hong Kong, SAR	GIRL	finish high school	5.07	0.59	2.62	0.58	-2.46
Hong Kong, SAR	BOY	finish high school	6.89	0.71	6.18	0.75	-0.71
Hong Kong, SAR	GIRL	finish voc/tech/commu	10.92	0.73	11.67	1.01	0.75
Hong Kong, SAR	BOY	finish voc/tech/commu	14.59	0.87	13.84	1.01	-0.75
Hong Kong, SAR	GIRL	bachelor's or higher	76.70	1.27	77.41	1.47	0.72
Hong Kong, SAR	BOY	bachelor's or higher	67.11	1.44	66.36	1.87	-0.75
Hong Kong, SAR	GIRL	do not know	7.31	0.63	8.30	0.81	1.00
Hong Kong, SAR	BOY	do not know	11.42	0.61	13.62	1.01	2.20
Indonesia	GIRL	finish high school	11.49	0.96	11.30	1.39	-0.19
Indonesia	BOY	finish high school	15.41	1.25	15.36	1.04	-0.05
Indonesia	GIRL	finish voc/tech/commu	9.19	0.68	6.40	0.72	-2.79
Indonesia	BOY	finish voc/tech/commu	11.33	0.78	9.23	0.87	-2.10
Indonesia	GIRL	bachelor's or higher	58.11	1.58	67.38	1.87	9.28
Indonesia	BOY	bachelor's or higher	51.08	1.56	57.32	1.69	6.24
Indonesia	GIRL	do not know	21.21	1.15	14.92	1.44	-6.29
Indonesia	BOY	do not know	22.18	1.07	18.09	1.54	-4.09
Iran, Islamic Repub	GIRL	finish high school	4.28	0.60	3.22	0.46	-1.05
Iran, Islamic Repub	BOY	finish high school	8.44	0.61	7.79	0.88	-0.65
Iran, Islamic Repub	GIRL	finish voc/tech/commu	6.95	0.62	6.48	0.66	-0.48
Iran, Islamic Repub	BOY	finish voc/tech/commu	11.33	0.74	6.51	0.70	-4.82
Iran, Islamic Repub	GIRL	bachelor's or higher	48.50	1.75	66.05	2.33	17.55
Iran, Islamic Repub	BOY	bachelor's or higher	41.61	1.65	52.87	2.35	11.26
Iran, Islamic Repub	GIRL	do not know	40.27	1.54	24.25	2.23	-16.02
Iran, Islamic Repub	BOY	do not know	38.61	1.63	32.83	1.67	-5.78
Israel	GIRL	finish high school	8.74	0.73	8.31	0.68	-0.43
Israel	BOY	finish high school	9.86	0.66	13.26	0.91	3.40
Israel	GIRL	finish voc/tech/commu	14.94	0.93	4.58	0.46	-10.36
Israel	BOY	finish voc/tech/commu	13.11	0.75	5.10	0.54	-8.01
Israel	GIRL	bachelor's or higher	57.65	1.34	68.82	1.49	11.17
Israel	BOY	bachelor's or higher	61.01	1.07	63.51	1.45	2.49
Israel	GIRL	do not know	18.66	0.90	18.29	1.16	-0.37
Israel	BOY	do not know	16.02	1.01	18.14	1.30	2.12
Italy	GIRL	finish high school	22.31	1.28	20.77	1.24	-1.54
Italy	BOY	finish high school	36.99	1.63	29.85	1.51	-7.13
Italy	GIRL	finish voc/tech/commu	8.71	0.74	7.19	0.71	-1.52
Italy	BOY	finish voc/tech/commu	7.16	0.62	6.29	0.59	-0.87
Italy	GIRL	bachelor's or higher	56.74	1.84	58.79	1.59	2.05
Italy	BOY	bachelor's or higher	42.81	1.72	47.25	1.76	4.44
Italy	GIRL	do not know	12.23	0.91	13.24	0.87	1.01
Italy	BOY	do not know	13.04	0.83	16.61	1.00	3.57
Japan	GIRL	finish high school	14.61	0.92	16.12	0.97	1.50
Japan	BOY	finish high school	19.41	0.96	22.75	1.25	3.34
Japan	GIRL	finish voc/tech/commu	27.90	1.22	30.29	1.12	2.39
Japan	BOY	finish voc/tech/commu	10.65	0.76	12.41	0.85	1.76
Japan	GIRL	bachelor's or higher	38.71	1.70	39.99	1.50	1.28
Japan	BOY	bachelor's or higher	45.78	1.41	49.01	1.50	3.23
Japan	GIRL	do not know	18.77	0.85	13.60	0.96	-5.18
Japan	BOY	do not know	24.16	0.96	15.83	0.81	-8.33

Table 4. Trends in eighth-grade students' reported educational expectations, by country and sex: 2003 and 2007.
-Continued

Country	Sex	Educ. expectations	2003		2007		Difference SE 2007 - 2003
			Percent	SE	Percent	SE	
Jordan	GIRL	finish high school	5.70	0.63	4.95	0.66	-0.74
Jordan	BOY	finish high school	9.55	0.99	7.70	0.97	-1.85
Jordan	GIRL	finish voc/tech/commu	6.20	0.49	4.91	0.60	-1.29
Jordan	BOY	finish voc/tech/commu	5.44	0.66	5.94	0.73	0.50
Jordan	GIRL	bachelor's or higher	61.48	1.65	70.42	1.90	8.94
Jordan	BOY	bachelor's or higher	58.67	1.67	64.15	2.06	5.47
Jordan	GIRL	do not know	26.62	1.48	19.71	1.48	-6.90
Jordan	BOY	do not know	26.33	1.31	22.21	1.26	-4.12
Korea, Republic of	GIRL	finish high school	1.10	0.25	2.60	0.38	1.50
Korea, Republic of	BOY	finish high school	2.54	0.33	4.41	0.41	1.87
Korea, Republic of	GIRL	finish voc/tech/commu	9.05	0.60	4.90	0.48	-4.15
Korea, Republic of	BOY	finish voc/tech/commu	9.50	0.58	5.10	0.50	-4.40
Korea, Republic of	GIRL	bachelor's or higher	80.64	0.88	81.06	1.17	0.42
Korea, Republic of	BOY	bachelor's or higher	76.65	0.89	76.88	0.90	0.22
Korea, Republic of	GIRL	do not know	9.21	0.52	11.43	0.98	2.22
Korea, Republic of	BOY	do not know	11.31	0.73	13.62	0.78	2.30
Lebanon	GIRL	finish high school	4.64	0.64	5.08	0.75	0.44
Lebanon	BOY	finish high school	9.43	0.76	6.43	0.93	-3.00
Lebanon	GIRL	finish voc/tech/commu	7.20	0.73	7.61	1.10	0.41
Lebanon	BOY	finish voc/tech/commu	13.42	0.81	9.06	0.95	-4.36
Lebanon	GIRL	bachelor's or higher	72.49	1.55	74.26	1.65	1.77
Lebanon	BOY	bachelor's or higher	59.32	1.80	65.64	2.35	6.32
Lebanon	GIRL	do not know	15.66	1.14	13.04	1.13	-2.62
Lebanon	BOY	do not know	17.83	1.42	18.87	1.73	1.04
Malaysia	GIRL	finish high school	3.01	0.44	2.99	0.49	-0.02
Malaysia	BOY	finish high school	4.74	0.59	5.77	0.87	1.03
Malaysia	GIRL	finish voc/tech/commu	18.99	1.28	19.44	1.24	0.45
Malaysia	BOY	finish voc/tech/commu	24.94	1.31	24.07	1.21	-0.88
Malaysia	GIRL	bachelor's or higher	67.38	1.94	66.16	1.87	-1.21
Malaysia	BOY	bachelor's or higher	58.55	1.87	55.56	1.98	-2.99
Malaysia	GIRL	do not know	10.62	0.98	11.41	1.11	0.79
Malaysia	BOY	do not know	11.76	0.93	14.60	1.25	2.84
Norway	GIRL	finish high school	9.62	0.87	7.07	0.66	-2.55
Norway	BOY	finish high school	14.45	0.98	12.67	0.86	-1.78
Norway	GIRL	finish voc/tech/commu	5.31	0.64	5.49	0.55	0.18
Norway	BOY	finish voc/tech/commu	10.04	0.69	9.61	0.76	-0.44
Norway	GIRL	bachelor's or higher	53.03	1.18	56.06	1.47	3.02
Norway	BOY	bachelor's or higher	42.65	1.27	42.16	1.38	-0.49
Norway	GIRL	do not know	32.03	1.01	31.38	1.00	-0.65
Norway	BOY	do not know	32.86	1.46	35.56	1.13	2.70
Palestinian National	GIRL	finish high school	8.54	0.72	8.84	0.87	0.30
Palestinian National	BOY	finish high school	13.54	0.94	13.92	1.30	0.38
Palestinian National	GIRL	finish voc/tech/commu	7.73	0.56	10.55	0.72	2.81
Palestinian National	BOY	finish voc/tech/commu	8.34	0.71	8.32	0.78	-0.02
Palestinian National	GIRL	bachelor's or higher	55.76	1.15	52.67	2.07	-3.09
Palestinian National	BOY	bachelor's or higher	49.08	1.56	50.43	1.78	1.35
Palestinian National	GIRL	do not know	27.96	0.94	27.94	2.32	-0.02
Palestinian National	BOY	do not know	29.04	1.31	27.33	1.78	-1.72

Table 4. Trends in eighth-grade students' reported educational expectations, by country and sex: 2003 and 2007.
-Continued

Country	Sex	Educ. expectations	2003		2007		Difference SE 2007 - 2003
			Percent	SE	Percent	SE	
Romania	GIRL	finish high school	22.56	1.66	21.32	1.80	-1.24
Romania	BOY	finish high school	30.57	1.56	34.18	1.96	3.61
Romania	GIRL	finish voc/tech/commu	11.89	1.01	15.25	1.17	3.36
Romania	BOY	finish voc/tech/commu	17.38	1.12	15.64	1.37	-1.74
Romania	GIRL	bachelor's or higher	48.61	2.48	51.14	2.09	2.53
Romania	BOY	bachelor's or higher	32.14	2.09	33.85	1.86	1.71
Romania	GIRL	do not know	16.93	1.66	12.29	1.11	-4.64
Romania	BOY	do not know	19.91	1.37	16.33	1.43	-3.58
Russian Federation	GIRL	finish high school	4.82	0.67	8.60	0.75	3.79
Russian Federation	BOY	finish high school	8.76	0.85	8.45	1.06	-0.31
Russian Federation	GIRL	finish voc/tech/commu	11.23	0.82	16.78	1.03	5.55
Russian Federation	BOY	finish voc/tech/commu	17.86	1.06	33.74	1.53	15.88
Russian Federation	GIRL	bachelor's or higher	70.17	1.33	67.86	1.66	-2.32
Russian Federation	BOY	bachelor's or higher	56.63	2.10	47.73	1.52	-8.90
Russian Federation	GIRL	do not know	13.78	0.81	6.76	0.92	-7.02
Russian Federation	BOY	do not know	16.74	1.07	10.08	0.87	-6.66
Saudi Arabia	GIRL	finish high school	11.01	1.84	5.47	0.66	-5.54
Saudi Arabia	BOY	finish high school	14.09	1.11	14.89	1.16	0.80
Saudi Arabia	GIRL	bachelor's or higher	67.86	2.75	76.35	1.50	8.49
Saudi Arabia	BOY	bachelor's or higher	66.27	1.61	68.60	1.33	2.33
Saudi Arabia	GIRL	do not know	21.13	3.40	18.18	1.24	-2.95
Saudi Arabia	BOY	do not know	19.64	1.27	16.51	0.90	-3.13
Scotland	GIRL	finish high school	9.09	0.94	6.15	0.59	-2.94
Scotland	BOY	finish high school	15.16	1.17	14.51	0.91	-0.66
Scotland	GIRL	finish voc/tech/commu	17.40	1.35	19.24	1.21	1.83
Scotland	BOY	finish voc/tech/commu	15.30	1.03	16.13	0.88	0.83
Scotland	GIRL	bachelor's or higher	49.14	1.96	42.81	1.84	-6.33
Scotland	BOY	bachelor's or higher	42.92	1.86	34.70	1.50	-8.23
Scotland	GIRL	do not know	24.37	1.22	31.81	1.39	7.44
Scotland	BOY	do not know	26.62	1.32	34.67	1.26	8.05
United States	GIRL	finish high school	5.47	0.59	5.63	0.41	0.16
United States	BOY	finish high school	8.18	0.68	8.20	0.62	0.02
United States	GIRL	finish voc/tech/commu	10.03	0.64	7.45	0.48	-2.58
United States	BOY	finish voc/tech/commu	8.98	0.58	9.36	0.61	0.38
United States	GIRL	bachelor's or higher	74.64	0.96	79.80	0.92	5.16
United States	BOY	bachelor's or higher	70.41	1.08	72.10	1.09	1.69
United States	GIRL	do not know	9.86	0.53	7.12	0.47	-2.74
United States	BOY	do not know	12.42	0.54	10.34	0.52	-2.09
International avg	GIRL	finish high school	10.23	0.19	9.12	0.19	-1.11
International avg	BOY	finish high school	14.81	0.21	14.24	0.23	-0.58
International avg	GIRL	finish voc/tech/comm	12.60	0.19	13.03	0.21	0.44
International avg	BOY	finish voc/tech/comm	13.82	0.19	13.36	0.21	-0.46
International avg	GIRL	bachelor's or higher	60.03	0.34	62.57	0.35	2.54
International avg	BOY	bachelor's or higher	52.73	0.34	53.98	0.35	1.25
International avg	GIRL	do not know	17.69	0.26	15.85	0.25	-1.84
International avg	BOY	do not know	19.24	0.23	19.01	0.25	-0.23

Table 5. Average scores of eighth-grade students in mathematics and science, by country and student-reported educational expectations: 2007

Country	Educational expectations	Math	Math SE	Science	Science SE
Armenia	finish high school	471.37	5.68	463.94	7.92
Armenia	finish voc/tech/community college	491.12	5.28	479.24	7.99
Armenia	bachelors or higher	513.54	4.16	502.92	7.32
Armenia	do not know	487.14	5.74	470.88	6.60
Australia	finish high school	452.88	4.12	469.22	4.82
Australia	finish voc/tech/community college	483.66	3.18	503.83	3.31
Australia	bachelors or higher	540.63	5.89	561.02	5.26
Australia	do not know	492.35	5.25	506.72	5.11
Bahrain	finish high school	340.88	4.55	409.72	4.82
Bahrain	finish voc/tech/community college	378.71	4.98	451.03	5.48
Bahrain	bachelors or higher	426.27	1.78	497.97	2.17
Bahrain	do not know	378.43	2.77	442.59	3.10
Botswana	finish high school	319.11	3.41	297.77	5.15
Botswana	finish voc/tech/community college	349.20	3.22	331.36	4.02
Botswana	bachelors or higher	400.17	2.39	405.35	3.15
Botswana	do not know	342.76	4.85	320.80	8.17
Bulgaria	finish high school	389.81	11.57	413.20	13.02
Bulgaria	finish voc/tech/community college	425.73	6.67	446.63	5.76
Bulgaria	bachelors or higher	501.89	4.63	508.45	5.77
Bulgaria	do not know	433.29	8.67	441.97	8.14
Chinese Taipei	finish high school	475.87	6.00	457.93	5.85
Chinese Taipei	finish voc/tech/community college	544.10	8.40	505.60	6.26
Chinese Taipei	bachelors or higher	623.67	3.81	583.96	3.04
Chinese Taipei	do not know	558.27	6.49	521.68	5.64
Cyprus	finish high school	380.88	3.99	372.88	4.01
Cyprus	finish voc/tech/community college	435.74	8.47	432.66	10.26
Cyprus	bachelors or higher	489.16	1.80	474.03	2.24
Cyprus	do not know	443.33	4.03	427.55	3.97
Egypt	finish high school	355.94	8.23	376.58	10.96
Egypt	finish voc/tech/community college	391.00	4.84	408.90	4.60
Egypt	bachelors or higher	412.01	3.78	428.76	3.82
Egypt	do not know	380.06	6.44	399.96	6.52
Ghana	finish high school	260.99	6.62	234.02	8.44
Ghana	finish voc/tech/community college	294.23	4.93	282.64	6.07
Ghana	bachelors or higher	342.49	4.68	350.49	5.36
Ghana	do not know	287.75	10.21	258.31	10.99
Hong Kong, SAR	finish high school	470.75	11.35	434.01	9.52
Hong Kong, SAR	finish voc/tech/community college	522.36	7.16	492.37	6.98
Hong Kong, SAR	bachelors or higher	591.53	4.78	546.05	4.07
Hong Kong, SAR	do not know	555.62	8.04	516.82	6.31
Hungary	finish high school	449.46	4.64	479.91	3.99
Hungary	finish voc/tech/community college	495.46	3.08	526.93	3.36
Hungary	bachelors or higher	558.78	3.10	573.58	2.80
Hungary	do not know	499.97	6.90	525.07	5.98
Indonesia	finish high school	374.59	6.22	406.72	5.66
Indonesia	finish voc/tech/community college	377.37	7.75	421.61	6.69
Indonesia	bachelors or higher	413.67	3.68	440.09	3.53
Indonesia	do not know	364.71	6.60	398.84	4.88

Table 5. Average scores of eighth-grade students in mathematics and science, by country and student-reported educational expectations: 2007--Continued

Country	Educational expectations	Math	Math SE	Science	Science SE
Iran, Islamic Republ	finish high school	341.24	7.47	403.58	7.66
Iran, Islamic Republ	finish voc/tech/community college	378.94	6.50	429.25	6.60
Iran, Islamic Republ	bachelors or higher	424.69	4.82	480.40	4.14
Iran, Islamic Republ	do not know	378.04	3.52	432.97	3.47
Israel	finish high school	399.53	6.28	394.48	7.32
Israel	finish voc/tech/community college	431.78	9.52	436.53	9.67
Israel	bachelors or higher	484.17	4.01	490.38	4.34
Israel	do not know	446.79	5.79	453.11	6.68
Italy	finish high school	452.29	4.10	468.95	4.12
Italy	finish voc/tech/community college	460.98	4.61	478.54	4.47
Italy	bachelors or higher	505.93	3.00	520.57	2.72
Italy	do not know	441.81	4.49	457.58	5.26
Japan	finish high school	512.86	3.57	505.74	3.48
Japan	finish voc/tech/community college	549.31	2.64	542.42	2.28
Japan	bachelors or higher	609.51	2.63	585.14	2.37
Japan	do not know	558.21	4.70	542.92	4.36
Jordan	finish high school	321.72	7.98	383.36	8.26
Jordan	finish voc/tech/community college	376.74	8.15	434.46	8.27
Jordan	bachelors or higher	454.42	3.67	508.77	3.44
Jordan	do not know	393.97	5.61	447.78	5.50
Korea, Republic of	finish high school	475.36	8.49	455.17	6.43
Korea, Republic of	finish voc/tech/community college	571.24	5.84	540.66	4.60
Korea, Republic of	bachelors or higher	611.43	2.61	563.84	1.98
Korea, Republic of	do not know	553.25	4.21	518.52	3.78
Lebanon	finish high school	411.31	6.30	360.28	9.04
Lebanon	finish voc/tech/community college	401.46	7.45	346.12	9.39
Lebanon	bachelors or higher	467.42	4.05	441.15	5.13
Lebanon	do not know	419.32	5.50	370.08	9.49
Lithuania	finish high school	436.05	4.44	457.35	5.22
Lithuania	finish voc/tech/community college	490.91	3.40	508.71	3.48
Lithuania	bachelors or higher	549.19	2.41	558.04	2.54
Lithuania	do not know	483.57	3.14	494.73	3.83
Malaysia	finish high school	414.29	9.64	393.28	11.38
Malaysia	finish voc/tech/community college	454.03	4.60	440.76	5.83
Malaysia	bachelors or higher	491.03	4.79	495.73	5.19
Malaysia	do not know	447.71	8.93	430.06	10.28
Norway	finish high school	430.99	4.29	440.72	6.59
Norway	finish voc/tech/community college	459.72	5.31	476.58	6.50
Norway	bachelors or higher	485.98	2.09	506.54	2.29
Norway	do not know	465.63	2.75	480.71	3.00
Palestinian National	finish high school	305.61	5.94	335.98	6.43
Palestinian National	finish voc/tech/community college	335.39	8.58	367.36	7.73
Palestinian National	bachelors or higher	403.73	3.75	445.40	3.59
Palestinian National	do not know	343.18	5.81	376.12	6.10
Romania	finish high school	412.03	5.41	423.22	5.63
Romania	finish voc/tech/community college	450.68	6.38	460.13	6.04
Romania	bachelors or higher	513.85	3.74	503.36	3.50
Romania	do not know	418.24	6.46	420.57	6.12

Table 5. Average scores of eighth-grade students in mathematics and science, by country and student-reported educational expectations: 2007--Continued

Russian Federation	finish high school	498.07	6.73	517.97	7.26
Russian Federation	finish voc/tech/community college	470.54	4.58	496.15	4.40
Russian Federation	bachelors or higher	538.20	4.42	551.60	4.17
Russian Federation	do not know	468.25	7.61	491.84	6.36
Saudi Arabia	finish high school	293.43	4.86	364.82	5.33
Saudi Arabia	bachelors or higher	341.92	2.93	416.45	2.43
Saudi Arabia	do not know	322.49	4.93	397.72	4.08
Scotland	finish high school	436.46	5.48	434.74	5.77
Scotland	finish voc/tech/community college	463.18	4.27	471.73	3.91
Scotland	bachelors or higher	527.36	3.69	536.60	3.41
Scotland	do not know	474.27	4.06	484.34	3.88
Serbia	finish high school	427.66	4.56	420.28	4.20
Serbia	finish voc/tech/community college	466.91	5.19	449.88	6.29
Serbia	bachelors or higher	527.76	3.65	508.62	3.31
Serbia	do not know	450.16	7.24	432.83	9.85
Singapore	finish high school	482.39	13.59	437.75	15.21
Singapore	finish voc/tech/community college	536.86	5.17	501.13	6.19
Singapore	bachelors or higher	618.71	2.96	597.87	3.38
Slovenia	finish high school	437.56	4.96	470.06	5.24
Slovenia	finish voc/tech/community college	475.18	2.81	512.92	3.27
Slovenia	bachelors or higher	536.93	2.37	574.20	2.42
Slovenia	do not know	505.60	2.35	540.63	2.55
Sweden	finish high school	455.84	2.96	477.29	3.62
Sweden	finish voc/tech/community college	500.87	2.91	525.72	3.40
Sweden	bachelors or higher	515.54	2.71	536.43	2.97
Sweden	do not know	483.16	3.16	497.52	3.42
Tunisia	finish high school	397.14	7.11	426.86	6.48
Tunisia	finish voc/tech/community college	397.66	4.38	427.87	4.93
Tunisia	bachelors or higher	431.39	2.74	452.69	2.24
Tunisia	do not know	411.74	3.32	439.64	2.96
United States	finish high school	442.52	3.09	453.29	4.27
United States	finish voc/tech/community college	476.54	3.75	484.46	4.03
United States	bachelors or higher	520.62	2.73	532.46	2.73
United States	do not know	486.74	5.36	500.72	5.21
International avg	finish high school	409.91	1.16	419.43	1.27
International avg	finish voc/tech/community college	448.05	1.02	456.69	1.06
International avg	bachelors or higher	496.17	0.63	505.42	0.65
International avg	do not know	442.99	1.02	451.30	1.08

Table 6a. Multinomial logistic regression predicting eighth-grade students' educational expectations from number of books in the home, parent education, mathematics achievement, and sex: 2007

Multinomial Logit (Generalized)

Selection: ☒ ALL

Observations: ☒ 115984

Strata Variable: ☒ JACKKNIFE ZONE

Cluster Variable: ☒ JACKKNIFE REPLICATE CODE

Weight Variable: ☒ SENATE WEIGHT

Iterations: 10

Log Likelihood: -13562.3

Adjusted Wald Test

F(12 64) = 463.112

p(F > f) = 0

Dependent Variable: Recode of EXPECT3

Parameter Name	Estimate	Standard Error	t-statistic	p > t
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Category finish high school

Constant	2.219	0.077	28.9	0
GEN\NR OF BOOKS IN YOUR HOME	-0.192	0.012	-16.464	0
Parent highest education	-0.322	0.012	-26.32	0
1ST PLAUSIBLE VALUE MATHEMATICS	-0.006	0	-38.576	0
ITSEX=BOY	0.697	0.026	27.006	0

Category finish voc/tech/community college

Constant	1.061	0.063	16.761	0
GEN\NR OF BOOKS IN YOUR HOME	-0.145	0.01	-14.478	0
Parent highest education	-0.179	0.01	-17.535	0
1ST PLAUSIBLE VALUE MATHEMATICS	-0.003	0	-27.274	0
ITSEX=BOY	0.215	0.023	9.314	0

Category do not know

Constant	1.455	0.064	22.818	0
GEN\NR OF BOOKS IN YOUR HOME	-0.126	0.01	-12.556	0
Parent highest education	-0.3	0.01	-29.505	0
1ST PLAUSIBLE VALUE MATHEMATICS	-0.004	0	-30.409	0
ITSEX=BOY	0.3	0.023	12.947	0

Variance parameters

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Table 6b. Multinomial logistic regression predicting eighth-grade students' educational expectations from number of books in the home, parent education, science achievement, and sex: 2007

Multinomial Logit (Generalized)

Selection: ☒ ALL

Observations: ☒ 115113

Strata Variable: ☒ JACKKNIFE ZONE

Cluster Variable: ☒ JACKKNIFE REPLICATE CODE

Weight Variable: ☒ SENATE WEIGHT

Iterations: 10

Log Likelihood: -13509.9

Adjusted Wald Test

F(12 64) = 491.283

p(F > f) = 0

Dependent Variable: Recode of EXPECT3

Parameter Name	Estimate	Standard Error	t-statistic	p > t
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Category finish high school

Constant	2.456	0.071	34.56	0
GEN\NR OF BOOKS IN YOUR HOME	-0.182	0.012	-14.965	0
Parent highest education	-0.325	0.012	-26.248	0
1ST PLAUSIBLE VALUE SCIENCE	-0.006	0	-42.976	0
ITSEX=BOY	0.694	0.026	26.976	0

Category finish voc/tech/community college

Constant	1.376	0.067	20.64	0
GEN\NR OF BOOKS IN YOUR HOME	-0.129	0.01	-12.851	0
Parent highest education	-0.171	0.01	-16.514	0
1ST PLAUSIBLE VALUE SCIENCE	-0.004	0	-30.699	0
ITSEX=BOY	0.212	0.023	9.331	0

Category do not know

Constant	1.47	0.072	20.457	0
GEN\NR OF BOOKS IN YOUR HOME	-0.129	0.01	-12.577	0
Parent highest education	-0.306	0.01	-30.754	0
1ST PLAUSIBLE VALUE SCIENCE	-0.004	0	-25.058	0
ITSEX=BOY	0.299	0.023	12.77	0

Variance parameters

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Table 7a. Linear regression predicting eighth-grade students' mathematics achievement from number of books in the home, parent education, student educational expectations, and sex: 2007

Plausible Value Regression

Selection: ☒ ALL

Observations: ☒ 115984

Strata Variable: ☒ JACKKNIFE ZONE

Cluster Variable: ☒ JACKKNIFE REPLICATE CODE

Weight Variable: ☒ SENATE WEIGHT

Adjusted Wald Test

F(6 70) = 892.612

p(F > f) = 0

Dependent Variable: 1ST PLAUSIBLE VALUE MATHEMATICS

R-Square = 0.202

Parameter Name	Estimate	Standard Error	z Score	p > z
Constant	375.678	2.198	170.927	0
GEN\NR OF BOOKS IN YOUR HOME	21.879	0.484	45.237	0
Parent highest education	15.544	0.397	39.16	0
EXPECT3=finish high school	-60.883	1.518	-40.105	0
EXPECT3=finish voc/tech/community college	-34.285	1.274	-26.915	0
EXPECT3=do not know	-38.458	1.23	-31.274	0
ITSEX=BOY	0.306	1.142	0.268	0.789
Root Mean Square Error	101.637	--	--	--

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Table 7b. Linear regression predicting eighth-grade students' science achievement from number of books in the home, parent education, student educational expectations, and sex: 2007

Plausible Value Regression

Selection: ☒ ALL

Observations: ☒ 115113

Strata Variable: ☒ JACKKNIFE ZONE

Cluster Variable: ☒ JACKKNIFE REPLICATE CODE

Weight Variable: ☒ SENATE WEIGHT

Adjusted Wald Test

F(6 70) = 956.25

p(F > f) = 0

Dependent Variable: 1ST PLAUSIBLE VALUE SCIENCE

R-Square = 0.205

Parameter Name	Estimate	Standard Error	z Score	p > z
Constant	392.689	2.023	194.074	0
GEN\NR OF BOOKS IN YOUR HOME	20.899	0.445	47.013	0
Parent highest education	13.861	0.347	39.944	0
EXPECT3=finish high school	-58.585	1.491	-39.287	0
EXPECT3=finish voc/tech/community college	-35.74	1.393	-25.663	0
EXPECT3=do not know	-30.942	1.278	-24.207	0
ITSEX=BOY	0.823	0.98	0.84	0.401
Root Mean Square Error	93.832	--	--	--

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