

**Chicago Longitudinal Study:
Motivation Mediators**

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CLS Motivation Variables Overview

The following report describes the motivation variables in the Chicago Longitudinal Study (CLS). Data sources include student reports to a survey administered to them during grades 3-6. These motivation variables include overall perceived competence, cognitive competence, social competence, intrinsic motivation, and expectations to attend college. In addition, select motivation items that were hypothesized to carry their own predictive weight were analyzed (see Appendix A for a detailed description of the motivation variables).

Mean Comparisons of Motivation Indicators

Table 1 reports unadjusted descriptive statistics and the mean values of motivation indicators by gender, CPC Preschool, involvement in the school-age program, and involvement in the extended intervention program. Results are summarized below:

- **Gender:** Females reported significantly more overall and cognitive competence than males during grades 3-6. Additionally, their intrinsic motivation, expectations to attend college, and levels of school commitment were similarly higher than that of males. Females were also less likely to report feeling bored in school, getting in trouble in school, and giving up when school work gets hard (marginally significant) and more likely to believe that school is important and report getting good grades in school compared to boys (see Appendix A for the item analysis coding scheme).
- **CPC Preschool:** Children who attended CPC programs reported significantly more perceived overall competence and cognitive competence during grades 3-4, and significantly more perceived overall competence (marginal), cognitive competence, social competence, and intrinsic motivation (marginal) during grades 5-6 than children who did not attend CPC programs. The CPC group also reported higher expectations to attend college as assessed by the general measure, but this difference only reached marginal significance. In addition, the CPC group reported significantly higher levels of school commitment during grades 5-10. Finally, the mean comparisons revealed that children participating in the CPC program were less likely than the comparison group to report feeling bored in school, getting in trouble in school, and giving up when school work gets hard. CPC children were also more likely to perceive themselves as smart, believe that school is important, and report getting good grades in school (marginally significant).
- **School-Age Program:** School-age program comparisons evidenced significant differences in respect to overall perceived competence (grades 5-6), cognitive competence (grades 3-6), expectations to attend college (early and general measure), and school commitment (grades 5-6), with the group receiving the intervention reporting higher levels of the aforementioned variables. In addition, children participating in the school-age program were less likely than the comparison group to report getting in trouble in school and giving up when school work gets hard and were more likely to perceive themselves as smart, believe that school is important, and report getting good grades in school (marginally significant).
- **Extended Intervention:** The extended intervention offered additional benefits to children across several of the domains, including overall perceived competence, cognitive

competence, and expectations to attend college. Children participating in the extended intervention for 4-6 years were more likely to believe that school is important and to perceive themselves as smart than those in the comparison groups. These children were less likely to report getting in trouble at school and giving up when school work gets hard.

Dichotomous Variables

Table 1b displays the descriptive statistics and the mean values of the dichotomized motivation indicators by gender, CPC Preschool, involvement in the school-age program, and involvement in the extended intervention program (see Appendix A for a description of how these variables were created).

- **Gender:** Gender differences did emerge in the analysis, such that females scoring one standard deviation above the mean generally reported significantly higher overall perceived competence, cognitive competence, intrinsic motivation, and school commitment than did males in this category. School commitment was also dichotomized one standard deviation below the mean, and results show that males in this group reported lower school commitment than did females.
- **CPC Preschool:** Within the above average group, children who participated in the CPC preschool program reported significantly more overall perceived competence and cognitive competence at grades 3-6 compared to those who did not. These children also reported higher intrinsic motivation (grades 5-6) and school commitment (grades 5-10).
- **School-Age Program:** Significant differences were found between children (1 SD above the mean) participating in the school-age program and those who did not at grades 5-6 on overall perceived competence, cognitive competence, intrinsic motivation and school commitment. Differences also emerged between these groups during grades 3-6 on overall perceived competence (marginal) and cognitive competence and during grades 5-10 on school commitment.
- **Extended Program:** Mean scores during grades 5-6 on overall perceived competence, cognitive competence, and school commitment were significantly higher for children (1 SD above the mean) participating in the extended program compared to children in the comparison groups. A similar pattern was found for grades 3-6 cognitive competence, as well as the grades 5-10 school commitment.

Motivation Indicators and Correlates

Table 2a lists correlations between select explanatory variables and the following motivation variables averaged for grades 3-6: cognitive competence, social competence, intrinsic motivation, and school commitment. Correlations were also examined between these variables and several individual items, including student ratings of boredom, the importance of school, and task persistence (i.e., I give up when school work gets hard).

The motivation variables seem to be only weakly associated with several of the risk index factors, but quite strongly related to such educational outcomes as kindergarten and first grade reading achievement, high school completion, and college attendance. For example, possessing

high levels of cognitive competence seems to be positively related to kindergarten and first grade reading achievement (interestingly, stronger correlations exist for the first grade measures, than for the kindergarten measures) and high school completion, and negatively related to school retention and incarceration.

A similar pattern emerged between the individual items and outcomes. At times, the individual item correlations were found to be significantly stronger than the scales from which they came. For example, there was a significantly higher correlation between the item “school is important” and several of the risk factors (i.e., overall risk index and mother employment) compared to the school commitment scale. Similarly, a significant correlation was found between the item “I get bored at school” and several of the educational outcomes including kindergarten and first grade reading achievement and grade retention, whereas the correlation was non-significant between these outcomes and the intrinsic motivation scale.

Table 2b reports correlations solely between the motivation variables. Significant correlations in expected direction between these variables indicate good discriminant and convergent validity.

Subgroup Comparisons

Tables 3 shows the mean rates of cognitive competence in the CLS sample, as they vary by important background characteristics. One of the main trends seems to be that the high risk groups (e.g., mother not employed FT/PT, free/reduced lunch, AFDC receipt) tended to benefit more from the preschool program than their low-risk group counterparts in respect to gains in cognitive competence (see attached charts). Another trend is that females regardless of being under high risk or not, showed higher perceived cognitive competence.

Table 1a Motivation Variables from the Chicago Longitudinal Study

Measure	Reliability		Total Sample Mean	Males	Females	CPC Preschool		School-age program		CPC Extended Intervention		
	(alpha)	N				Any	None	Any	None	4-6 years	1-3 years	None
Overall Perceived Competence												
Perceived Competence Grades 3-4	.70-.74	1227	0	-.12**	.11	-.04+	-.08	.04	-.05	.08+	-.07	-.04
Perceived Competence Grades 5-6	.70-.74	1054	0	-.10**	.10	.08**	-.14	.09**	-.12	.19**	-.10	-.14
Perceived Competence Grades 3-6	.70-.74	1332	0	-.12**	.12	.04+	-.07	.01	-.01	.05	-.04	-.02
Cognitive Competence												
Cognitive Competence Grades 3-4	.65-.72	1224	-.02	-.12**	.06	.03**	-.12	.03**	-.11	.08**	-.07	-.13
Cognitive Competence Grades 5-6	.68-.72	1055	-.00	-.03**	.02	.01**	-.03	.02**	-.03	.03**	-.02	-.04
Cognitive Competence Grades 3-6	.65-.72	1332	-.02	-.13**	.09	.03**	-.11	.04**	-.10	.10**	-.08	-.11
Social Competence												
Social Competence Grades 3-4	.50-.52	1224	-.01	-.03	.00	-.02	-.00	-.03	.02	.01*	-.09	.07
Social Competence Grades 5-6	.56	1050	.00	.00	-.00	.01*	-.02	.01+	-.01	.01+	.00	-.03
Social Competence Grades 3-6	.50-.56	1331	-.01	-.01	-.01	.00	-.04	-.02	-.01	.02	-.06	.00
Intrinsic Motivation												
Intrinsic Motivation Grades 3-4	.59-.61	1224	.00	-.07**	.08	.01	.00	.01	-.00	.01	.01	-.01
<i>Intrinsic Motivation Grades 3-4 (im3_4b)</i>	.066	1224	-.00	-.09**	.08	-.00	-.00	.01	-.02	.01	-.00	-.02
Intrinsic Motivation Grades 5-6	.42-.56	1055	.00	-.03**	.03	.01*	-.02	.01	-.01	.01+	.01	-.03
<i>Intrinsic Motivation Grades 5-6 (im5_6b)</i>	.51-.62	1055	-.00	-.10**	.10	.04+	-.07	.02	-.03	.04	.01	-.07
Grades 3-6 Intrinsic Motivation	.42-.61	1332	.00	-.09**	.09	.02	-.02	.01	-.01	.00	.03	-.04
<i>Intrinsic Motivation Grades 3-6 (im3_6b)</i>	.51-.66	1332	-.00	-.10**	.09	.00	-.02	.00	-.02	.02	-.01	-.03
Expectations to Attend College												
College Expectations (early)	N/A	1205	.81	.78**	.84	.82	.78	.84**	.76	.86**	.77	.78
College Expectations (late)	N/A	1102	.85	.82*	.87	.86	.83	.86	.84	.87	.83	.84
College Expectations (general)	N/A	1163	.81	.77**	.84	.82+	.78	.83**	.77	.83+	.80	.77
School Commitment												
School Commitment Grades 5-6	.76-.78	1052	50.72	49.80**	51.59	51.19**	49.87	51.07*	50.23**	51.50**	50.47	49.90
School Commitment Grades 6-10	.78-.79	1117	49.89	49.20**	50.52	50.21*	49.28	50.02	49.70	50.41+	49.54	49.54
School Commitment Grades 5-10	.76-.79	1228	50.67	49.79**	51.49	51.06**	49.93	50.92+	50.33	51.30**	50.42	50.04
Item Analyses												
I get bored in school (3-6)	N/A	1329	2.50	2.46*	2.55	2.53*	2.46	2.52	2.47	2.51*	2.55	2.42
I get in trouble in school (5-10)	N/A	1223	2.82	2.61**	3.01	2.86*	2.74	2.86*	2.76	2.91*	2.77	2.75
I am smart (5-10)	N/A	1225	3.35	3.34	3.52	3.39**	3.27	3.39**	3.28	3.44**	3.31	3.25
School is important (5-10)	N/A	1226	3.78	3.74**	3.82	3.81**	3.72	3.08*	3.75	3.83**	3.78	3.72
I get good grades (5-10)	N/A	1223	2.94	2.85**	3.03	2.97+	2.90	2.97+	2.91	2.98	2.92	2.91
I give up when school work gets hard (5-10)	N/A	1227	3.13	3.08+	3.17	3.18**	3.02	3.18**	3.06	3.24**	3.07	3.04

**Significant at the 0.01 level *Significant at the 0.05 level +Significant at the 1.0 level

Table 1b Dichotomous Motivation Variables from the Chicago Longitudinal Study

Measure	Reliability		Total Sample Mean	Males	Females	CPC Preschool		School-age program		CPC Extended Intervention		
	(alpha)	N				Any	None	Any	None	4-6 years	1-3 years	None
Overall Perceived Competence												
Perceived Competence 3-4 (1 SD above \bar{X})	.70-.74	1227	.15	.13	.16	.14	.15	.15	.15	.15	.13	.16
Perceived Competence 5-6 (1 SD above \bar{X})	.70-.74	1054	.16	.13**	.19	.18+	.14	.19**	.13	.21**	.14	.13
Perceived Competence 3-6 (1 SD above \bar{X})	.70-.74	1332	.14	.11**	.18	.16*	.12	.16+	.12	.16	.14	.11
Cognitive Competence												
Cognitive Competence 3-4 (1 SD above \bar{X})	.65-.72	1224	.15	.12**	.18	.16	.14	.17+	.13	.17	.14	.14
Cognitive Competence 5-6 (1 SD above \bar{X})	.68-.72	1055	.17	.15+	.16	.18+	.14	.19*	.14	.20*	.16	.12
Cognitive Competence 3-6 (1 SD above \bar{X})	.65-.72	1332	.16	.13**	.19	.18**	.12	.18*	.14	.20*	.15	.12
Social Competence												
Social Competence 3-4 (1 SD above \bar{X})	.50-0.52	1224	.16	.15	.18	.16	.16	.17	.16	.17	.15	.17
Social Competence 5-6 (1 SD above \bar{X})	.56	1050	.19	.18	.19	.18	.19	.20	.17	.19	.20	.17
Social Competence 3-6 (1 SD above \bar{X})	.50-.56	1331	.15	.14	.16	.15	.14	.15	.15	.16	.15	.14
Intrinsic Motivation												
Intrinsic Motivation 3-4 ((1 SD above \bar{X})	.59-.61	1224	.17	.14+	.19	.17	.16	.17	.15	.18	.15	.17
<i>New Intrinsic Motivation 3-4 1 SD above \bar{X}</i>	.066	1224	.14	.12*	.17	.15	.14	.15	.14	.16	.12	.15
Intrinsic Motivation 5-6 (1 SD above \bar{X})	.42-.56	1055	.16	.12**	.19	.17*	.13	.18*	.13	.18	.16	.12
<i>New Intrinsic Motivation 5-6 (1 SD above \bar{X})</i>	.51-.62	1055	.13	.10*	.16	.14	.12	.15*	.10	.14	.14	.10
Intrinsic Motivation 3-6 (1 SD above \bar{X})	.42-.61	1332	.16	.13**	.19	.17	.14	.17	.14	.17	.17	.13
<i>New Intrinsic Motivation 3-6 (1 SD above \bar{X})</i>	.51-.66	1332	.16	.13**	.20	.17	.14	.18	.15	.18	.17	.13
School Commitment												
School Commitment 5-6 (1 SD above \bar{X})	.76-.78	1052	.16	.12**	.20	.18*	.12	.89**	.12	.21**	.15	.11
School Commitment 5-6 (1 SD below \bar{X})	.76-.78	1052	.84	.80**	.87	.85	.81	.84	.83	.86	.81	.84
School Commitment 6-10 (1 SD above \bar{X})	.78-.79	1117	.18	.15**	.21	.20**	.14	.18	.17	.20	.18	.14
School Commitment 6-10 (1 SD below \bar{X})	.78-.79	1117	.84	.81*	.86	.85+	.81	.84	.83	.86	.83	.83
School Commitment 5-10 (1 SD above \bar{X})	.76-.79	1228	.16	.13**	.19	.18*	.13	.18*	.13	.20**	.15	.12
School Commitment 5-10 (1 SD below \bar{X})	.76-.79	1228	.85	.81**	.89	.87*	.82	.85	.86	.87	.83	.85

**Significant at the 0.01 level

*Significant at the 0.05 level

+Significant at the 1.0 level

Table 2a Correlation Matrix for Motivation Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Family risk index																									
2. Single parent status	.47																								
3. Mother is less than 18	.40	.23																							
4. Mother did not complete HS	.56	.12	.33																						
5. Mother not employed	.70	.19	.07	.19																					
6. 4 or more children in household	.12	-.23	-.21	.04	-.00																				
7. TANF/AFDC participation	.73	.25	.11	.19	.68	-.05																			
8. Eligible for free lunch	.56	.14	.06	.16	.35	.00	.41																		
9. 60% or greater poverty in school area	.32	.05	-.02	.04	.09	.02	.07	.06																	
10. Kinderg. SS Reading (Word Analysis)	-.16	-.03	-.06	-.16	-.08	-.02	-.09	-.09	-.06																
11. Year 1 SS Reading Comprehension	-.20	-.04	-.10	-.19	-.11	-.03	-.13	-.12	-.04	.57															
12. Grade retention (k-year 8)	.13	.07	.05	.13	.11	-.02	.10	.11	-.01	-.32	-.41														
13. Highest grade completed	-.22	-.09	-.06	-.20	-.15	-.03	-.20	-.10	-.00	.23	.29	-.28													
14. High School completion (by Aug. 2003)	-.20	-.07	-.08	-.17	-.13	-.04	-.20	-.08	.01	.20	.22	-.25	.80												
15. College attendance (by Aug. 2003)	-.19	-.10	-.04	-.19	-.13	-.00	-.17	-.10	-.02	.15	.22	-.21	.64	.46											
16. Incarceration	.07	.03	.03	.08	.01	.00	.06	.02	-.01	-.08	-.13	.14	-.36	-.37	-.22										
17. Cognitive Competence (3-6)	-.09	-.01	.05	-.06	-.06	-.04	-.06	-.09	-.05	.26	.34	-.24	.26	.20	.19	-.18									
18. Social Competence (3-6)	-.09	-.04	.01	-.08	-.04	.03	-.08	-.08	-.06	.10	.12	-.05	.12	.08	.12	-.10	.32								
19. Intrinsic Motivation (im3_6b)	-.00	.01	.02	.02	-.01	-.04	-.01	.01	.01	.02	.05	-.02	.10	.10	.06	-.12	.43	.18							
20. School Commitment (6-10)	-.04	-.01	.02	-.01	-.05	.01	-.04	-.00	-.04	.12	.20	-.13	.24	.18	.17	-.18	.50	.36	.40						
21. I get bored in school (3-6)	-.08	-.05	.01	-.07	-.04	-.04	-.05	-.04	-.03	.06	.11	-.10	.12	.10	.09	-.05	.27	.12	.57	.32					
22. I get in trouble in school (5-10)	-.13	-.08	-.05	-.08	-.10	-.00	-.13	-.05	.01	.14	.22	-.15	.29	.22	.24	-.28	.26	.19	.16	.43	.21				
23. I am smart (5-10)	-.09	-.03	.01	-.07	-.06	.01	-.05	-.07	-.06	.27	.27	-.17	.15	.12	.12	-.11	.51	.16	.19	.41	.12	.14			
24. School is important (5-10)	-.08	-.02	-.02	-.05	-.06	-.02	-.05	-.05	-.01	.14	.15	-.12	.16	.13	.08	-.12	.25	.10	.20	.40	.09	.13	.25		
25. I get good grades (5-10)	-.06	-.05	.04	-.04	-.03	.02	-.05	-.05	-.03	.11	.18	-.14	.27	.21	.19	-.21	.53	.24	.25	.52	.19	.31	.38	.18	
26. I give up when school gets hard (5-10)	-.09	-.03	.00	-.06	-.06	-.02	-.07	-.09	-.04	.21	.29	-.18	.19	.17	.16	-.06	.47	.09	.22	.48	.22	.24	.29	.18	.27

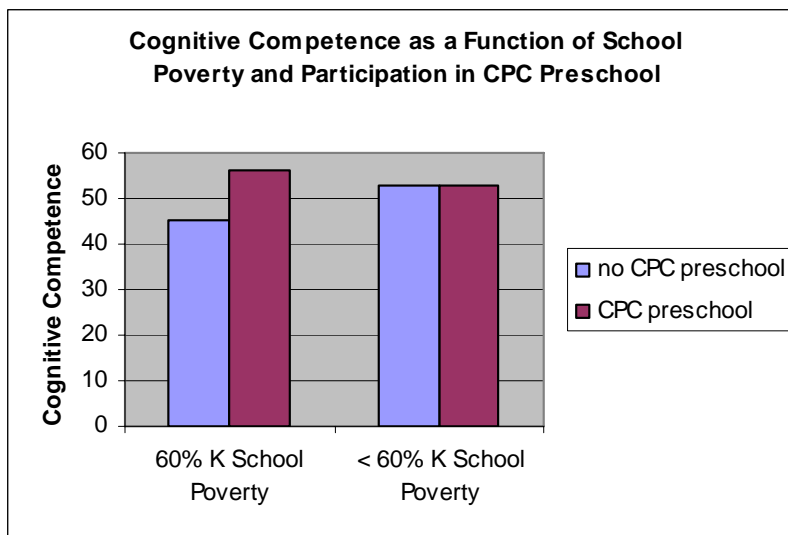
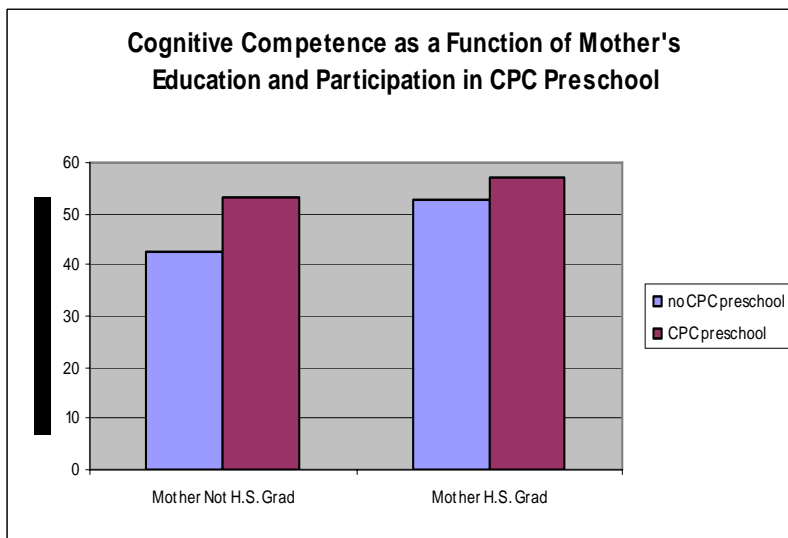
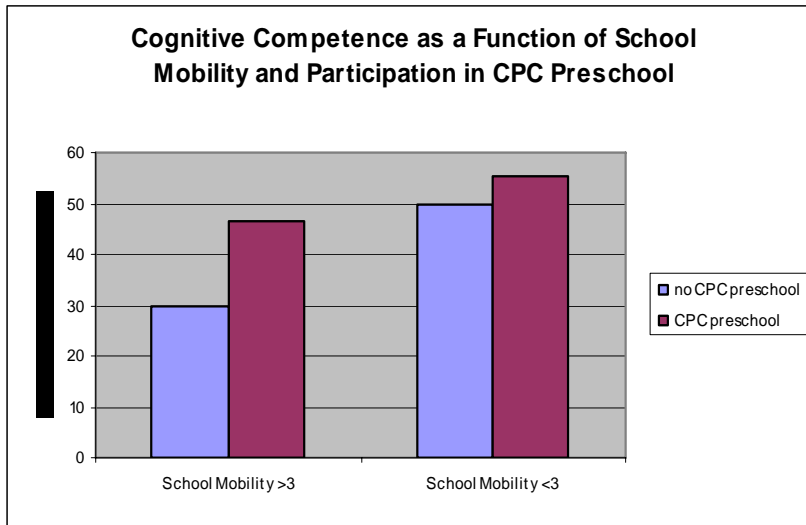
Table 2b Correlation Matrix for Motivation Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Cognitive Competence Grades 3-4														
2. Cognitive Competence Grades 5-6	.37													
3. Cognitive Competence Grades 3-6	.87	.84												
4. Social Competence Grades 3-4	.32	.14	.29											
5. Social Competence Grades 5-6	.15	.26	.24	.25										
6. Social Competence 3-6	.31	.25	.32	.84	.79									
7. Intrinsic Motivation Grades 3-4 (im3_4b)	.36	.20	.36	.16	.06	.16								
8. Intrinsic Motivation Grades 5-6 (im5_6b)	.19	.43	.37	.04	.19	.14	.29							
9. Intrinsic Motivation Grades 3-6 (im3_6b)	.35	.38	.43	.15	.15	.18	.85	.81						
10. Perceived Competence grades 3-4	.81	.38	.75	.54	.23	.50	.34	.17	.33					
11. Perceived Competence grades 5-6	.29	.72	.62	.20	.42	.39	.14	.36	.30	.34				
12. Perceived Competence grades 3-6	.59	.65	.66	.41	.38	.44	.28	.31	.31	.74	.82			
13. School Commitment grades 5-6	.34	.77	.68	.18	.45	.39	.22	.71	.58	.36	.67	.61		
14. School Commitment grades 6-10	.26	.63	.50	.19	.42	.35	.18	.53	.40	.32	.67	.47	.78	
15. School Commitment grades 5-10	.31	.77	.61	.18	.45	.36	.22	.71	.52	.35	.67	.52	1.0	.81

Table 3. Proportions of CLS Sample with Cognitive Competence above Average during Grades 3-6

Factor Age 0-3	Total Sample N=1413	Mean	Gender		CPC Preschool		School Age		CPC Extended Intervention		
			Males	Females	Any	None	Any	None	4 to 6	1 to 3	0
Black	1233	52.7	47.4	57.8	55.0	48.4	55.6	48.6	57.9	50.0	48.1
Other	93	49.5	35.3	66.8	58.3	33.3	55.8	41.5	63.2	42.3	37.9
Male	650	46.5	--	--	49.5	41.2	49.2	42.6	53.2	42.4	42.1
Female	676	58.3	--	--	60.4	53.9	61.6	53.5	62.7	57.1	52.2
Single-Parent Family	987	52.7	45.9	59.2	55.1	48.1	55.9	48.2	57.6	50.1	47.6
Other Family Structure	304	51.3	49.0	53.6	54.6	45.4	54.6	46.3	59.5	45.6	45.3
Mother Not H.S. Graduate	698	49.3	41.3	57.4	53.2	42.8	53.6	43.8	57.1	47.5	41.0
Mother H.S. Graduate	586	55.6	52.5	58.6	56.9	52.8	57.3	52.9	58.9	52.0	54.5
Mother Not Employed FT/PT	795	51.1	45.5	55.9	54.4	44.2	54.1	46.8	56.8	49.7	42.9
Mother Employed FT/PT	442	56.1	49.1	63.7	59.6	50.0	61.1	48.9	64.1	50.4	50.4
Mother Teen Parent < 18	222	56.8	47.4	67.0	60.7	50.0	64.8	45.7	65.4	58.2	41.5
Mother Not Teen Parent < 18	1077	51.4	46.2	56.4	53.9	46.7	53.7	48.2	56.7	47.5	48.1
Four or More Children	221	49.3	43.6	54.2	50.1	47.0	51.6	46.3	51.7	49.4	45.6
Less Than Four Children	1070	53.0	47.2	58.7	55.8	47.5	56.4	48.0	59.4	49.5	47.4
Free/Reduced Lunch	1124	51.0	43.8	57.1	52.9	46.5	54.1	46.1	56.7	47.7	45.5
No Free/Reduced Lunch	202	62.4	59.3	66.3	68.2	51.4	63.5	60.5	65.9	62.7	55.8
60% K School Poverty	1008	52.4	45.5	58.6	56.0	45.2	56.9	45.9	59.2	49.9	44.4
< 60% K School Poverty	318	52.8	49.1	57.1	52.8	52.9	51.3	55.0	55.3	48.6	54.7
AFDC Receipt	838	51.4	44.4	57.9	54.7	45.1	54.0	47.7	56.3	51.1	43.4
No AFDC Receipt	487	54.2	49.8	58.8	56.2	50.6	58.3	48.5	61.5	46.5	52.3
Four or More Risks	974	50.5	43.3	57.1	53.3	45.2	53.5	46.3	55.6	49.3	43.7
Less Than Four Risks	352	58.0	54.3	62.1	60.7	52.9	61.2	53.2	64.9	50.5	55.2
SEMAT16D < avg.	690	34.5	33.9	35.4	36.5	31.2	36.5	32.0	38.3	33.6	30.9
SEMAT16D > avg.	634	72.1	69.1	73.8	73.4	69.1	73.8	69.2	74.1	71.9	68.1
ITBS6 Read < 88 norms	566	35.0	31.4	40.0	37.5	30.9	38.9	30.4	42.1	32.1	30.3
ITBS6 Read > 88 norms	<u>600</u>	<u>68.2</u>	<u>65.6</u>	<u>70.0</u>	<u>68.4</u>	<u>67.6</u>	<u>68.2</u>	<u>68.1</u>	<u>68.3</u>	<u>68.3</u>	<u>67.8</u>
ITBS8 Read < 88 norms	<u>632</u>	<u>35.6</u>	<u>31.6</u>	<u>40.1</u>	<u>39.2</u>	<u>30.1</u>	<u>40.3</u>	<u>30.1</u>	<u>43.2</u>	<u>34.1</u>	<u>28.7</u>
ITBS8 Read > 88 norms	<u>658</u>	<u>68.1</u>	<u>64.3</u>	<u>70.1</u>	<u>67.7</u>	<u>69.1</u>	<u>67.7</u>	<u>68.8</u>	<u>67.7</u>	<u>67.9</u>	<u>69.1</u>
School mobility (age 4-8), > 3	<u>118</u>	<u>37.3</u>	<u>27.5</u>	<u>51.0</u>	<u>46.3</u>	<u>29.7</u>	<u>48.0</u>	<u>29.4</u>	<u>50.0</u>	<u>44.4</u>	<u>25.5</u>
School mobility (age 4-8), < 3	<u>1179</u>	<u>53.7</u>	<u>48.1</u>	<u>58.9</u>	<u>55.5</u>	<u>50.0</u>	<u>56.0</u>	<u>50.1</u>	<u>58.5</u>	<u>49.8</u>	<u>50.8</u>

<u>Retained > 1 grade</u>	<u>358</u>	<u>34.9</u>	<u>30.1</u>	<u>42.2</u>	<u>37.9</u>	<u>31.0</u>	<u>37.7</u>	<u>32.5</u>	<u>37.9</u>	<u>37.2</u>	<u>29.7</u>
<u>Not retained</u>	<u>968</u>	<u>59.0</u>	<u>55.0</u>	<u>62.0</u>	<u>60.5</u>	<u>55.6</u>	<u>60.4</u>	<u>56.5</u>	<u>62.7</u>	<u>55.0</u>	<u>57.5</u>
<u>Child welfare case history</u>	<u>49</u>	<u>44.9</u>	<u>43.5</u>	<u>46.2</u>	<u>53.6</u>	<u>33.3</u>	<u>44.8</u>	<u>45.0</u>	<u>46.7</u>	<u>49.6</u>	<u>47.1</u>
<u>No child welfare case history</u>	<u>1255</u>	<u>52.7</u>	<u>46.6</u>	<u>58.5</u>	<u>55.4</u>	<u>47.4</u>	<u>56.0</u>	<u>47.9</u>	<u>58.6</u>	<u>49.6</u>	<u>47.1</u>
<u>Did not complete HS</u>	<u>400</u>	<u>40.1</u>	<u>35.5</u>	<u>48.3</u>	<u>46.0</u>	<u>32.1</u>	<u>44.8</u>	<u>34.6</u>	<u>48.9</u>	<u>39.1</u>	<u>31.5</u>
<u>Completed HS</u>	<u>848</u>	<u>59.2</u>	<u>55.7</u>	<u>61.7</u>	<u>60.4</u>	<u>56.6</u>	<u>61.6</u>	<u>55.5</u>	<u>63.1</u>	<u>56.3</u>	<u>56.0</u>
<u>Depression Symptoms</u>	<u>155</u>	<u>42.6</u>	<u>37.2</u>	<u>48.1</u>	<u>48.4</u>	<u>33.9</u>	<u>44.4</u>	<u>40.0</u>	<u>50.1</u>	<u>39.7</u>	<u>34.3</u>
<u>No Depression Symptoms</u>	<u>859</u>	<u>57.2</u>	<u>52.0</u>	<u>61.2</u>	<u>59.5</u>	<u>52.4</u>	<u>60.0</u>	<u>52.9</u>	<u>61.7</u>	<u>54.9</u>	<u>52.0</u>



**APPENDIX A:
MOTIVATION VARIABLE DESCRIPTIONS**

OVERALL PERCEIVED COMPETENCE

Overall Perceived Competence Grade 3 (s3fact):

Scale or continuous variable that adds the responses to the following 11 items: I get good grades in school (s3q7), My friends like me (s3q9), I get in trouble at school (s3q12), I get along well with others (s3q14), I answer questions in class (s3q20), I give up when school gets hard (s3q27), I try hard in school (s3q29), I do my homework (s3q30), I am smart (s3q31), Schoolwork is easy for me (s3q34), I do better in school than my classmates (s3q39). These items are from the Grade 3 Student Survey. Each item assesses the respondents' overall perceived competence on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. There are 1118 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.70. When calculated through pair-wise the reliability coefficient is equal to 0.66.

Overall Perceived Competence Grade 4 (s4fact):

Scale or continuous variable that adds the responses to the following 11 items: I get good grades in school (s4q7), My classmates like me (s4q9), I get in trouble in school (s4q12), I get along well with others (s4q14), I do my homework (s4q16), I answer questions in class (s4q20), I give up when school gets hard (s4q25), When I get bad grades I try even harder (s4q27), I try hard in school (s4q28), I am smart (s4q31), I do better in school than my classmates (s4q38). These items are from the Grade 4 Student Survey. Each item assesses the respondents' overall perceived competence on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. There are 805 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.74. When calculated through pair-wise the reliability coefficient is equal to 0.74.

Overall Perceived Competence Grade 5 (s5fact):

Scale or continuous variable that adds the responses to the following 11 items: I try hard in school (s5q2), My teacher expects me to do well in school (s5q3), I get in trouble in school (s5q6), I am smart (s5q10), I get good grades in school (s5q13), When in school, I would rather be somewhere else (s5q18), I give up when school gets hard (s5q21), I get along well with others (s5q22), I do better in school than my classmates (s5q23), I do my homework (s5q25r), I answer questions in class (s5q26r). These items are from the Grade 5 Student Survey. Items 1-24 assess the respondents' overall perceived competence on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree," 3 meaning "disagree," and 4 meaning "strongly disagree." Items 2-3, 10, 13 and 23 were reverse coded, such that 1 means "strongly disagree," 2 means "disagree," 3 means "agree," and 4 means "strongly agree." For items 25-34, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning "everyday," 2 meaning "2-3 times a week," 3 meaning "once a week," 4 meaning "once a month," and 5 meaning "never." The variables s5q25 and s5q26 were recoded as s5q25r and s5q26r respectively on a 5-point scale so that 1 means 1 "never", 2 means "once a month", 3 means "once a week", 4 means "2-3 times a week", and 5 means "every day." Missing values were coded -1. There are 793 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.70. When calculated through pair-wise the reliability coefficient is equal to 0.64.

Overall Perceived Competence Grade 6 (s6comp):

Scale or continuous variable that adds the responses to the following 12 items: I try hard in school (s6q1), I get in trouble in school (s6q3), I am smart (s6q5), I get good grades in school (s6q7), When in school, I would rather be someplace else (s6q8), My classmates like me (s6q9), I give up when school gets hard (s6q10), I get along well with others (s6q11), I do better in school than my classmates (s6q12), I do my homework (s6q14), My teacher expects me to do well in school (s6q15), I answer questions in class (s6q16). These items are from the Grade 6 Student Survey. Items 4-41 assess the respondents' overall perceived competence on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree," 3 meaning "disagree," and 4 meaning "strongly disagree." Items 1, 5, 7, 9, 11-12, 14-16 were reverse coded, such that 1 means "strongly disagree," 2 means "disagree," 3 means "agree," and 4 means "strongly agree." Missing values were coded -1. There are 788 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.74. When calculated through pair-wise the reliability coefficient is equal to 0.68.

Overall Perceived Competence Grade 3-4 (s34fact):

Mean student rating of cognitive competence in grades 3-4. This variable was created by taking the mean of responses to the following 22 items: I get good grades in school (s3q7, s4q7), My friends/classmates like me (s3q9, s4q9), I get in trouble at school (s3q12, s4q12), I get along well with others (s3q14, s4q14), I answer questions in class (s3q20, s4q20), I give up when school gets hard (s3q27, s4q25), I try hard in school (s3q29, s4q28), I do my homework (s3q30, s4q16), When I get bad grades I try even harder (s4q27), I am smart (s3q31, s4q31), Schoolwork is easy for me (s3q34), I do better in school than my classmates (s3q39, s4q38). These items are from the Grade 3 and Grade 4 Student Surveys. Each item assesses the respondents' overall perceived competence on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning

“not much” or “not often.” Missing values were coded -1. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.70-0.74. When calculated through pair-wise the reliability coefficient ranges from 0.66-0.74.

(s34factz): Standardization of **s34fact** (z-score), such that the scale has a mean of 0 and a standard deviation of 1.

(s34factda): Dichotomization of **s34factz**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Overall Perceived Competence Grade 5-6 (s56fact):

Mean student rating of cognitive competence in grades 5-6. This variable was created by taking the mean of responses to the following 23 items: I try hard in school (s5q2, s6q1), My teacher expects me to do well in school (s5q3, s6q15), I get in trouble in school (s5q6, s6q3), I am smart (s5q10, s6q5), I get good grades in school (s5q13, s6q7), When in school, I would rather be somewhere else (s5q18, s6q8), My classmates like me (s6q9), I give up when school gets hard (s5q21, s6q10), I get along well with others (s5q22, s6q11), I do better in school than my classmates (s523, s6q12), I do my homework (s5q25r, s6q14), I answer questions in class (s5q26r, s6q16). These items are from the Grade 5 and Grade 6 Student Surveys. Items 1-24 and 4-41 of the 5th and 6th grade student survey respectively assess the respondents’ overall perceived competence on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree,” 3 meaning “disagree,” and 4 meaning “strongly disagree.” Items 1, 5, 7, 9, 11-12, 14-16 of the 5th grade survey and items 1, 5, 7, 9, 11-12, 14-16 of the 6th grade survey were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree,” 3 means “agree,” and 4 means “strongly agree.” For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning “everyday,” 2 meaning “2-3 times a week,” 3 meaning “once a week,” 4 meaning “once a month,” and 5 meaning “never.” The variables s5q25 and s5q26 were recoded as s5q25r and s5q26r respectively on a 5-point scale so that 1 means 1 “never”, 2 means “once a month”, 3 means “once a week”, 4 means “2-3 times a week”, and 5 means “every day.” Missing values were coded -1. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.70-0.74. When calculated through pair-wise the reliability coefficient ranges from 0.64-0.68.

(s56factz): Standardization of **s56fact** (z-score), such that the scale has a mean of 0 and a standard deviation of 1.

(s56factda): Dichotomization of **s56factz**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Overall Perceived Competence Grade 3-6 (s36fact):

Mean student rating of cognitive competence in grades 3-6. This variable was created by taking the mean of responses to the following 45 items: My teacher expects me to do well in school (s5q3, s6q15), I get good grades in school (s3q7, s4q7, s5q13, s6q7), My friends/classmates like me (s3q9, s4q9, s6q9), I get in trouble at school (s3q12, s4q12, s5q6, s6q3), When in school, I would rather be somewhere else (s5q18, s6q8), I get along well with others (s3q14, s4q14, s5q22, s6q11), I answer questions in class (s3q20, s4q20, s5q26r, s6q16), I give up when school gets hard (s3q27, s4q25, s5q21, s6q10), I try hard in school (s3q29, s4q28, s5q2, s6q1), I do my homework (s3q30, s4q16, s5q25r, s6q14), When I get bad grades I try even harder (s4q27), I am smart (s3q31, s4q31, s5q10, s6q5), Schoolwork is easy for me (s3q34), I do better in school than my classmates (s3q39, s4q38, s523, s6q12). These items are from the Grade 3, 4, 5, and 6 Student Surveys. For grades 3 and 4, each item assesses the respondents’ overall perceived competence on a 3-point scale, with 3 meaning “a lot” or “often”, 2 meaning “some” or “sometimes”, and 1 meaning “not much” or “not often.” For grades 5 and 6, items 1-24 and 4-41 respectively assess the respondents’ overall perceived competence on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree,” 3 meaning “disagree,” and 4 meaning “strongly disagree.” Items 1, 5, 7, 9, 11-12, 14-16 of the 5th grade survey and items 1, 5, 7, 9, 11-12, 14-16 of the 6th grade survey were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree,” 3 means “agree,” and 4 means “strongly agree.” For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning “everyday”, 2 meaning “2-3 times a week”, 3 meaning “once a week”, 4 meaning “once a month”, and 5 meaning “never.” The variables s5q25 and s5q26 were recoded as s5q25r and s5q26r respectively on a 5-point scale so that 1 means 1 “never”, 2 means “once a month”, 3 means “once a week”, 4 means “2-3 times a week”, and 5 means “every day.” Missing values were coded -1. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.70-0.74. When calculated through pair-wise the reliability coefficient ranges from 0.64-0.74.

(s36factz): Standardization of **s36fact** (z-score), such that the scale has a mean of 0 and a standard deviation of 1.

(s36factda): Dichotomization of **s36factz**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

COGNITIVE COMPETENCE

Cognitive Competence Grade 3 (cogcomp3):

Scale or continuous variable that adds the responses to the following 8 items: I get good grades in school (s3q7), I answer questions in class (s3q20), I give up when school gets hard (s3q27), I try hard in school (s3q29), I do my homework (s3q30), I am

smart (s3q31), Schoolwork is easy for me (s3q34), I do better in school than my classmates (s3q39). These items are from the Grade 3 Student Survey. Each item assesses the respondents' perceived cognitive capabilities on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. There are 1118 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.65. When calculated through pair-wise the reliability coefficient is equal to 0.65.

Cognitive Competence Grade 4 (cogcomp4):

Scale or continuous variable that adds the responses to the following 8 items: I get good grades in school (s4q7), I do my homework (s4q16), I answer questions in class (s4q20), I give up when school gets hard (s4q25), When I get bad grades I try even harder (s4q27), I try hard in school (s4q28), I am smart (s4q31), I do better in school than my classmates (s4q38). These items are from the Grade 4 Student Survey. Each item assesses the respondents' perceived cognitive capabilities on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. There are 795 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.72. When calculated through pair-wise the reliability coefficient is equal to 0.72.

Cognitive Competence Grade 5 (cogcomp5):

Scale or continuous variable that adds the responses to the following 7 items: I try hard in school (s5q2), I am smart (s5q10), I get good grades in school (s5q13), I give up when school gets hard (s5q21), I do better in school than my classmates (s523), I do my homework (s5q25r), I answer questions in class (s5q26r). These items are from the Grade 5 Student Survey. Items 1-24 assess the respondents' perceived cognitive capabilities on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree", 3 meaning "disagree", and 4 meaning "strongly disagree." Items 2, 10, 13 and 23 were reverse coded, such that 1 means "strongly disagree," 2 means "disagree", 3 means "agree", and 4 means "strongly agree." For items 25-34, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning "everyday", 2 meaning "2-3 times a week", 3 meaning "once a week", 4 meaning "once a month", and 5 meaning "never." The variables s5q25 and s5q26 were recoded as s5q25r and s5q26r respectively on a 5-point scale so that 1 means "never", 2 means "once a month", 3 means "once a week", 4 means "2-3 times a week", and 5 means "every day." There are 793 valid responses for this scale. Missing values were coded -1. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.68. When calculated through pair-wise the reliability coefficient is equal to 0.61.

Cognitive Competence Grade 6 (cogcomp6):

Scale or continuous variable that adds the responses to the following 7 items: I try hard in school (s6q1), I am smart (s6q5), I get good grades in school (s6q7), I give up when school gets hard (s6q10), I do better in school than my classmates (s6q12), I do my homework (s6q14), I answer questions in class (s6q16). These items are from the Grade 6 Student Survey. Items 4-41 assess the respondents' perceived cognitive capabilities on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree", 3 meaning "disagree", and 4 meaning "strongly disagree." Items 1, 5, 7, 12, 14, and 16 were reverse coded, such that 1 means "strongly disagree," 2 means "disagree", 3 means "agree", and 4 means "strongly agree." Missing values were coded -1. There are 788 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.72. When calculated through pair-wise the reliability coefficient is equal to 0.68.

Cognitive Competence Grades 3-4 (cog3_4):

Mean student rating of cognitive competence in grades 3-4. This variable was created by taking the mean of responses to the following 16 items: I get good grades in school (s3q7, s4q7), I answer questions in class (s3q20, s4q20), I give up when school gets hard (s3q27, s4q25), I try hard in school (s3q29, s4q28), I do my homework (s3q30, s4q16), I am smart (s3q31, s4q31), Schoolwork is easy for me (s3q34), I do better in school than my classmates (s3q39, s4q38), When I get bad grades I try even harder (s4q27). These items are from the Grade 3 and the Grade 4 Student Surveys. Each item assesses the respondents' perceived cognitive capabilities on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.65-0.72. When calculated through pair-wise the reliability coefficient ranges from 0.65-0.72.

(cog3_4da): Dichotomization of **cog3_4**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Cognitive Competence Grades 5-6 (cog5_6):

Mean student rating of cognitive competence in grades 5-6. This variable was created by taking the mean of responses to the following 14 items: I try hard in school (s5q2, s6q1), I am smart (s5q10, s6q5), I get good grades in school (s5q13, s6q7), I give up when school gets hard (s5q21, s6q10), I do better in school than my classmates (s523, s6q12), I do my homework (s5q25r, s6q14), I answer questions in class (s5q26r, s6q16). These items are from the Grade 5 and Grade 6 Student Surveys. Items 1-24 and 4-41 of the 5th and 6th grade student survey respectively assess the respondents' perceived cognitive capabilities on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree", 3 meaning "disagree", and 4 meaning "strongly disagree." Items 2, 10, 13 and 23 of the 5th grade survey and items 1, 5, 7, 12, 14, and 16 of the 6th grade survey were reverse coded, such that 1 means "strongly disagree," 2 means "disagree", 3 means "agree", and 4 means "strongly agree." For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning

“everyday”, 2 meaning “2-3 times a week”, 3 meaning “once a week”, 4 meaning “once a month”, and 5 meaning “never.” The variables s5q25 and s5q26 were recoded as s5q25r and s5q26r respectively on a 5-point scale so that 1 means 1 “never”, 2 means “once a month”, 3 means “once a week”, 4 means “2-3 times a week”, and 5 means “every day.” Missing values were coded -1. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.68-0.72. When calculated through pair-wise the reliability coefficient ranges from 0.61-0.68.

(cog5_6da): Dichotomization of **cog5_6**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Cognitive Competence Grades 3-6 (cog3_6):

Mean student rating of cognitive competence in grades 3-6. This variable was created by taking the mean of responses to the following 30 items: I get good grades in school (s3q7, s4q7, s5q13, s6q7), I answer questions in class (s3q20, s4q20, s5q26r, s6q16), I give up when school gets hard (s3q27, s4q25, s5q21, s6q10), I try hard in school (s3q29, s4q28, s5q2, s6q1), I do my homework (s3q30, s4q16, s5q25r, s6q14), When I get bad grades I try even harder (s4q27), I am smart (s3q31, s4q31, s5q10, s6q5), Schoolwork is easy for me (s3q34), I do better in school than my classmates (s3q39, s4q38, s523, s6q12). These items are from the Grade 3, 4, 5, and 6 Student Surveys. For grades 3 and 4, each item assesses the respondents’ perceived cognitive capabilities on a 3-point scale, with 3 meaning “a lot” or “often”, 2 meaning “some” or “sometimes”, and 1 meaning “not much” or “not often.” For grades 5 and 6, items 1-24 and 4-41 respectively assess how the respondent feels about school on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Items 2, 10, 13 and 23 of the 5th grade survey and items 1, 5, 7, 12, 14, and 16 of the 6th grade survey were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning “everyday”, 2 meaning “2-3 times a week”, 3 meaning “once a week”, 4 meaning “once a month”, and 5 meaning “never.” The variables s5q25 and s5q26 were recoded as s5q25r and s5q26r respectively on a 5-point scale so that 1 means 1 “never”, 2 means “once a month”, 3 means “once a week”, 4 means “2-3 times a week”, and 5 means “every day.” Missing values were coded -1. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.65-0.72. When calculated through pair-wise the reliability coefficient ranges from 0.61-0.72.

(cog3_6da): Dichotomization of **cog3_6**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

SOCIAL COMPETENCE

Social Competence Grade 3 (socom3):

Scale or continuous variable that adds the responses to the following 3 items: I have friends at school (s3q2), My friends like me (s3q9), I get along well with others (s3q14). These items are from the Grade 3 Student Survey. Each item assesses the respondents’ perceived social capabilities on a 3-point scale, with 3 meaning “a lot” or “often”, 2 meaning “some” or “sometimes”, and 1 meaning “not much” or “not often.” Missing values were coded -1. There are 1115 valid responses for this scale. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison is equal to 0.51. When calculated through pair-wise the reliability coefficient is equal to 0.48.

Social Competence Grade 4 (socom4):

Scale or continuous variable that adds the responses to the following 2 items: My classmates like me (s4q9), I get along well with others (s4q14). These items are from the Grade 4 Student Survey. Each item assesses the respondents’ perceived social capabilities on a 3-point scale, with 3 meaning “a lot” or “often”, 2 meaning “some” or “sometimes”, and 1 meaning “not much” or “not often.” Missing values were coded -1. There are 805 valid responses for this scale. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison is equal to 0.53. When calculated through pair-wise the reliability coefficient is equal to 0.49.

Social Competence Grade 5 (socom5):

Scale or continuous variable that included the following item: I get along well with others (s5q22). This item is from the Grade 5 Student Survey. Each item assess the respondents’ perceived social capabilities on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Item 22 was reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” Missing values were coded -1. There are 778 valid responses for this scale. The reliability coefficient (Cronbach’s alpha) could not be calculated as the scale only includes one item.

Social Competence Grade 6 (socom6):

Scale or continuous variable that adds the responses to the following 2 items: My classmates like me (s6q9), I get along well with others (s6q11). These items are from the Grade 6 Student Survey. Each item assess the respondents’ perceived social capabilities on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Items 9 and 11 were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” Missing values were coded -1. There are 787 valid responses for this scale. The

reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.56. When calculated through pair-wise the reliability coefficient is equal to 0.49.

Social Competence Grades 3-4 (soc3_4):

Mean student rating of social competence in grades 3-4. This variable was created by taking the mean of responses to the following 5 items: I have friends at school (s3q2), I get along well with others (s3q14, s4q14), My friends like me (s3q9), My classmates like me (s4q9). These items are from the Grade 3 and Grade 4 Student Surveys. Each item assesses the respondents' perceived social capabilities on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.50-0.52. When calculated through pair-wise the reliability coefficient ranges from 0.48-0.49.

(soc3_4da): Dichotomization of **soc3_4**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Social Competence Grades 5-6 (soc5_6):

Mean student rating of social competence in grades 5-6. This variable was created by taking the mean of responses to the following 3 items: I get along well with others (s5q22, s6q11), My classmates like me (s6q9). These items are from the Grade 5 and Grade 6 Student Surveys. For grades 5 and 6, the respondents' perceived social capabilities were assessed on a 4-point scale, with 1 meaning "strongly disagree," 2 meaning "disagree," 3 meaning "agree", and 4 meaning "strongly agree." Item 22 of the 5th grade survey and items 9 and 11 of the 6th grade survey were reverse coded, such that 1 means "strongly disagree," 2 means "disagree", 3 means "agree", and 4 means "strongly agree." Missing values were coded -1. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.56. When calculated through pair-wise the reliability coefficient is equal to 0.49.

(soc5_6da): Dichotomization of **soc5_6**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Social Competence Grades 3-6 (soc3_6):

Mean student rating of social competence in grades 3-6. This variable was created by taking the mean of responses to the following 8 items: I get along well with others (s3q14, s4q14, s5q22, s6q11), My friends like me (s3q9), My classmates like me (s4q9, s6q9), I have friends at school (s3q2). These items are from the Grade 3, 4, 5, 6 Student Surveys. For grades 3 and 4, each item assesses the respondents' perceived social capabilities on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." For grades 5 and 6, the respondents' perceived social capabilities were assessed on a 4-point scale, with 1 meaning "strongly disagree," 2 meaning "disagree", 3 meaning "agree", and 4 meaning "strongly agree." Item 22 of the 5th grade survey and items 9 and 11 of the 6th grade survey were reverse coded, such that 1 means "strongly disagree," 2 means "disagree", 3 means "agree", and 4 means "strongly agree." Missing values were coded -1. The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.50-0.56. When calculated through pair-wise the reliability coefficient is equal to 0.48-0.49.

(soc3_6da): Dichotomization of **soc3_6**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

INTRINSIC MOTIVATION

Intrinsic Motivation Grade 3 (im3):

Scale or continuous variable that adds the responses to the following 9 items: I like to learn things (s3q1), I like to write stories (s3q3), I get bored in school (s3q4), I like to read (s3q8), I like science (s3q10), I like to have books read to me (s3q15), Like to do math (s3q22), I have fun at school (s3q35), Learning is fun (s3q40). These items are from the Grade 3 Student Survey. Each item assesses the respondents' perceived intrinsic motivation on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. There are 1118 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.61. When calculated through pair-wise the reliability coefficient is equal to 0.65.

(im3b): Scale constructed same as above, with the addition of one item: I like school (s3q13). There are 1118 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using the list-wise method is equal to 0.66.

Intrinsic Motivation Grade 4 (im4):

Scale or continuous variable that adds the responses to the following 7 items: I like to learn things (s4q1), I like to write stories (s4q3), I get bored in school (s4q4), I like to read books (s4q8), I like to have books read to me (s4q15), Learning is fun (s4q23), I like to work on worksheets (s4q29). These items are from the Grade 4 Student Survey. Each item assesses the respondents' perceived intrinsic motivation on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. There are 795 valid responses for this scale. The reliability

coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.59. When calculated through pair-wise the reliability coefficient is equal to 0.59.

(im4b): Scale constructed same as above, with the addition of one item: I like school (s4q13). There are 795 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.66.

Intrinsic Motivation Grade 5 (im5):

Scale or continuous variable that adds the responses to the following 6 items: I like to learn things (s5q1), I get bored in school (s5q9), I like writing compositions in school (s5q14), Learning is fun (s5q16), I like to read (s5q17), I read books for fun (s5q27r). These items are from the Grade 5 Student Survey. Items 1-24 assess the respondents' perceived intrinsic motivation on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree," 3 meaning "disagree," and 4 meaning "strongly disagree." Items 1 and 14-17 were reverse coded, such that 1 means "strongly disagree," 2 means "disagree," 3 means "agree," and 4 means "strongly agree." For items 25-34, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning "everyday", 2 meaning "2-3 times a week", 3 meaning "once a week", 4 meaning "once a month", and 5 meaning "never." The variable s5q27 was recoded as s5q27r on a 5-point scale so that 1 means 1 "never", 2 means "once a month", 3 means "once a week", 4 means "2-3 times a week", and 5 means "every day." Missing values were coded -1. There are 793 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.56. When calculated through pair-wise the reliability coefficient is equal to 0.54.

(im5b): Scale constructed same as above, with the addition of one item: I like school (s5q5). There are 793 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.62.

Intrinsic Motivation Grade 6 (im6):

Scale or continuous variable that adds the responses to the following 2 items: I get bored in school (s6q4), I like writing compositions in school (s6q17). These items are from the Grade 6 Student Survey. Each item assess the respondents' perceived intrinsic motivation on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree," 3 meaning "disagree," and 4 meaning "strongly disagree." Item 17 was reverse coded, such that 1 means "strongly disagree," 2 means "disagree," 3 means "agree," and 4 means "strongly agree." Missing values were coded -1. There are 788 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.42. When calculated through pair-wise the reliability coefficient ranges from 0.34.

(im6b): Scale constructed same as above, with the addition of one item: I like school (s6q2). There are 788 valid responses for this scale. The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.51.

Intrinsic Motivation Grades 3-4 (im3_4):

Mean student rating of cognitive competence in grades 3-4. This variable was created by taking the mean of responses to the following 16 items: I like to learn things (s3q1, s4q1), I like to write stories (s3q3, s4q3), I get bored in school (s3q4, s4q4), I like to read (books) (s3q8, s4q8), I like science (s3q10), I like to have books read to me (s3q15, s4q15), Like to do math (s3q22), I have fun at school (s3q35), Learning is fun (s3q40, s4q23), I like to work on worksheets (s4q29). These items are from the Grade 3 and Grade 4 Student Surveys. Each item assesses the respondents' perceived intrinsic motivation on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." Missing values were coded -1. The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.59-0.61. When calculated through pair-wise the reliability coefficient ranges from 0.59-0.65.

(im3_4b): Scale constructed same as above, with the addition of two items: I like school (s3q13, s4q13). The reliability coefficient (Cronbach's alpha) using a list-wise comparison is equal to 0.66.

(im3_4da and im3_4bda): Dichotomization of **im3_4** and **im3_4b**, respectively. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Intrinsic Motivation Grades 5-6 (im5_6):

Mean student rating of cognitive competence in grades 5-6. This variable was created by taking the mean of responses to the following 8 items: I like to learn things (s5q1), I get bored in school (s5q9, s6q4), I like writing compositions in school (s5q14, s6q17), Learning is fun (s5q16), I like to read (s5q17), I read books for fun (s5q27r). These items are from the Grade 5 and Grade 6 Student Surveys. Items 1-24 and 4-41 of the 5th and 6th grade student survey respectively assess how the respondent feels about school on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree," 3 meaning "disagree," and 4 meaning "strongly disagree." Items 1 and 14-17 of the 5th grade survey and item 17 of the 6th grade survey were reverse coded, such that 1 means "strongly disagree," 2 means "disagree," 3 means "agree," and 4 means "strongly agree." For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning "everyday", 2 meaning "2-3 times a week", 3 meaning "once a week", 4 meaning "once a month", and 5 meaning "never." The variable s5q27 was recoded as s5q27r on a 5-point scale so that 1 means 1 "never", 2 means "once a month", 3 means "once a week", 4 means "2-3 times a week", and 5 means "every day." Missing values were coded -1. The reliability coefficient

(Cronbach's alpha) using a list-wise comparison ranges from 0.42- 0.56. When calculated through pair-wise the reliability coefficient ranges from 0.34-0.54.

(im5_6b): Scale constructed same as above, with the addition of two items: I like school (s5q5, s6q2). The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.51-0.62.

(im5_6da and im5_6bda): Dichotomization of **im5_6** and **im5_6b**, respectively. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

Intrinsic Motivation Grades 3-6 (im3_6):

Mean student rating of cognitive competence in grades 3-6. This variable was created by taking the mean of responses to the following 24 items: I like to learn things (s3q1, s4q1, s5q1), I like to write stories (s3q3, s4q3), I get bored in school (s3q4, s4q4, s5q9, s6q4), I like writing compositions in school (s5q14, s6q17), I like to read (books) (s3q8, s4q8, s5q17), I like science (s3q10), I like to have books read to me (s3q15, s4q15), I Like to do math (s3q22), I have fun at school (s3q35), Learning is fun (s3q40, s4q23, s5q16), I like to work on worksheets (s4q29), I read books for fun (s5q27r). These items are from the Grade 3, 4, 5, and 6 Student Surveys. For grades 3 and 4, each item assesses the respondents' perceived intrinsic motivation on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." For grades 5 and 6, items 1-24 and 4-41 respectively assess how the respondent feels about school on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree", 3 meaning "disagree", and 4 meaning "strongly disagree." Items 1 and 14-17 of the 5th grade survey and item 17 of the 6th grade survey were reverse coded, such that 1 means "strongly disagree," 2 means "disagree", 3 means "agree", and 4 means "strongly agree." For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning "everyday", 2 meaning "2-3 times a week", 3 meaning "once a week", 4 meaning "once a month", and 5 meaning "never." Missing values were coded -1. The variable s5q27 was recoded as s5q27r on a 5-point scale so that 1 means 1 "never", 2 means "once a month", 3 means "once a week", 4 means "2-3 times a week", and 5 means "every day." The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.42-0.61. When calculated through pair-wise the reliability coefficient ranges from 0.34-0.65.

(im3_6b): Scale constructed same as above, with the addition of 4 items: I like school (s3q13, s4q13, s5q5, s6q2). The reliability coefficient (Cronbach's alpha) using a list-wise comparison ranges from 0.51-0.66.

(im3_6da and im3_6bda): Dichotomization of **im3_6** and **im3_6b**, respectively. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

I get bored in school (bored36):

This variable was created by taking the mean of responses to the following 4 items: I get bored in school (s3q4, s4q4, s5q9, s6q4). These items are from the Grade 3, 4, 5, and 6 Student Surveys. The grades 3 and 4 items were measured on a 3-point scale, with 3 meaning "a lot" or "often", 2 meaning "some" or "sometimes", and 1 meaning "not much" or "not often." The items from grades 5 and 6 were measured on a 4-point scale, with 1 meaning "strongly agree," 2 meaning "agree", 3 meaning "disagree", and 4 meaning "strongly disagree."

EXPECTATIONS TO ATTEND COLLEGE

Expect College-Student- Early (STEXPECT):

Dichotomous variable with 0 meaning "does not expect to attend college," and 1 meaning "expects to attend college." The value is determined from the response to the following 4th grade student survey item: How far in school do you think you will get (s4q41)? Item s4q41 assesses the respondents' expectations to attend college on a 4-point scale, with 1 meaning "8th grade", 2 meaning "some high school", 3 meaning "finish high school", and 4 meaning "go to college." Values of 1, 2, or 3 are coded in STEXPECT with a value of 0. And a value of 4 is coded in STEXPECT as 1. If data from s4q41 was missing, it was supplemented by a similar item from 3rd Grade Student Survey (s3q25). Item s3q25 assesses the respondents' desire to attend college on a 3-point scale with 1 meaning "not much," and 2 meaning "some," and 3 meaning "a lot." A response of 3 is coded into STEXPECT with a value of 1, while a response of 1 or 2 is coded as 0. If data from both items were missing (s4q41, s3q25), missing values were coded -9.

If Expected to Attend College – Late (expcol0n):

Dichotomous variable with 0 meaning "does not expect to attend college," and 1 meaning "expects to attend college." Value is determined from the responses to the following 4 items from the 4th, 10th and 12th grade student surveys: How far in school do you think you will get (s4q41), How far in school do you think you will get (s10q2), Do you plan to attend a four year college or university (s12q1a), Do you plan to attend a two year college (s12q1a2). Item s4q41 assesses the respondents' expectations to attend college on a 4-point scale, with 1 meaning "8th grade", 2 meaning "some high school", 3 meaning "finish high school", and 4 meaning "go to college." Missing values were coded -1. A response of 4 is coded into expcol0n as 1. Item s10q2 assesses the respondents' expectations to attend college on a 7-point scale with 1 meaning "some high school," 2 meaning "high school graduation," 3 meaning "finish vocational or trade school," 4 meaning "1 or 2 years of college," 5 meaning "finish college," 6

meaning “Master’s degree,” and 7 meaning “Ph.D., M.D., or equivalent.” A response of 3 or higher is coded into expco10n as 1. Item s12q1a assesses the respondents’ expectations to attend a four year college or university on a dichotomous scale with 0 meaning “no,” and 1 meaning “yes.” A response of 1 earns expco10n a value of 1. Item s12q1a2 assesses the respondents’ expectations to attend a two year college on a dichotomous scale with 0 meaning “no,” and 1 meaning “yes.” A response of 1 earns expco10n a value of 1.

If Expected to Attend College (expcol):

Dichotomous variable with 0 meaning “does not expect to attend college,” and 1 meaning “expects to attend college.”

Determined from the following item from the 4th Grade Student Survey: How far in school do you think you will get (s4q41)?

The item assesses the respondents’ expectations to attend college on a 4-point scale, with 1 meaning “8th grade”, 2 meaning “some high school”, 3 meaning “finish high school”, and 4 meaning “go to college.” A response of 4 is coded into expcol as 1. If the response to this item is missing the value from a similar item in the 10th grade student survey is used (s10q2). Item s10q2 assesses the respondents’ expectations to attend college on a 7-point scale with 1 meaning “some high school,” 2 meaning “high school graduation,” 3 meaning “finish vocational or trade school,” 4 meaning “1 or 2 years of college,” 5 meaning “finish college,” 6 meaning “Master’s degree,” and 7 meaning “Ph.D., M.D., or equivalent.” A response of 3 or higher is coded into expcol as 1.

SCHOOL COMMITMENT

School Commitment Grade 5 (schcom5):

Scale or continuous variable that adds the responses to the following 16 items: I try hard in school (s5q2), My teacher expects me to do well in school (s5q3), I like school (s5q5), I get in trouble at school (s5q6), I get bored in school (s5q9), I am smart (s5q10), School is important (s5q12), I get good grades in school (s5q13), I like writing compositions in school (s5q14), Learning is fun (s5q16), When in school, I would rather be someplace else (s5q18), I give up when schoolwork gets hard (s5q21), I get along well with others (s5q22), I do better in school than my classmates (s5q23), I like myself (s5q24), I do my homework (s5q25r). These items come from the Grade 5 Student Survey. Items 1-24 assess the respondents’ school commitment a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Items 2-3, 5, 10, 12-14, 16, and 22-24 were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” For items 25-34, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning “everyday”, 2 meaning “2-3 times a week”, 3 meaning “once a week”, 4 meaning “once a month”, and 5 meaning “never.” The variable s5q25 was recoded as s5q25r on a 5-point scale so that 1 means “never”, 2 means “once a month”, 3 means “once a week”, 4 means “2-3 times a week”, and 5 means “every day.” Missing values were coded -1. There are 793 valid responses for this scale. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison is equal to 0.76. When calculated through pair-wise the reliability coefficient is equal to 0.71.

School Commitment Grade 6 (schcom6):

Scale or continuous variable that adds the responses to the following 16 items: I try hard in school (s6q1), I like school (s6q2), I get in trouble at school (s6q3), I get bored in school (s6q4), I am smart (s6q5), School is important (s6q6), I get good grades in school (s6q7), When in school, I would rather be someplace else (s6q8), My classmates like me (s6q9), I give up when schoolwork gets hard (s6q10), I get along well with others (s6q11), I do better in school than my classmates (s6q12), I like myself (s6q13), I do my homework (s6q14), My teacher expects me to do well in school (s6q15), I enjoy composition writing (s6q17). These items are from the Grade 6 Student Survey. Items 4-41 assess the respondents’ school commitment a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Items 1-2, 5-7, 9, 11-15, and 17 were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” Missing values were coded -1. There are 788 valid responses for this scale. The reliability coefficient (Cronbach’s alpha) is equal to 0.78. When calculated through pair-wise the reliability coefficient (Cronbach’s alpha) is equal to 0.73.

School Commitment Grade 10 (schcomm2):

Scale or continuous variable that adds the responses to the following 18 items: I try hard in school (s10q4r), I like school (s10q5r), I get in trouble at school (s10q6), I get bored in school (s10q7), I am smart (s10q8r), School is important (s10q9r), I get good grades in school (s10q10r), When in school, I would rather be someplace else (s10q11), My classmates like me (s10q12r), I give up when schoolwork gets hard (s10q13), I get along well with others (s10q14r), I do better in school than my classmates (s10q15r), I like myself (s10q16r), I do my homework (s10q17r), My teachers expect me to do well in school (s10q18r), I enjoy writing (s10q19r), I learn a lot at school (s10q20r), There are many things about school I don’t like (s10q21). These items are from the Grade 10 Student Survey. Items 4-41 assess the respondents’ school commitment a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Items 4-5, 8-10, 12, 14-20 were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” Missing values were coded 9. There are 853 valid responses for this category. The reliability coefficient (Cronbach’s alpha) is equal to 0.79. When calculated through pair-wise the reliability coefficient (Cronbach’s alpha) is equal to 0.78.

School Commitment Grades 5-6 (schcom56):

Mean student rating of school commitment in grades 5-6. This variable was created by taking the mean of responses to the following 32 items: I try hard in school (s5q2, s6q1), My teacher expects me to do well in school (s5q3, s6q15), I like school (s5q5, s6q2), I get in trouble at school (s5q6, s6q3), I get bored in school (s5q9, s6q4), I am smart (s5q10, s6q5), School is important (s5q12, s6q6), I get good grades in school (s5q13, s6q7), My classmates like me (s6q9), I like writing compositions in school (s5q14), Learning is fun (s5q16), I enjoy composition writing (s6q17), When in school, I would rather be someplace else (s5q18, s6q8), I get along well with others (s5q22, s6q11), I do better in school than my classmates (s5q23, s6q12), I like myself (s5q24, s6q13), I give up when schoolwork gets hard (s5q21, s6q10), I do my homework (s5q25r, s6q14). These items are from the Grade 5 and Grade 6 Student Surveys. Items 1-24 and 4-41 of the 5th and 6th grade student survey respectively assess how the respondent feels about school on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree,” 3 meaning “disagree,” and 4 meaning “strongly disagree.” Items 2-3, 5, 10, 12-14, 16, and 22-24 of the 5th grade survey and items 1-2, 5-7, 9, 11-15, and 17 of the 6th grade survey were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree,” 3 means “agree,” and 4 means “strongly agree.” For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning “everyday,” 2 meaning “2-3 times a week,” 3 meaning “once a week,” 4 meaning “once a month,” and 5 meaning “never.” The variable s5q25 was recoded as s5q25r on a 5-point scale so that 1 means “never,” 2 means “once a month,” 3 means “once a week,” 4 means “2-3 times a week,” and 5 means “every day.” Missing values were coded -1. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison is equal to 0.76-0.78. When calculated through pair-wise the reliability coefficient ranges from 0.71-0.73.

(schcom56da): Dichotomization of **schcom56**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

(schcom56db): Dichotomization of **schcom56**. All cases with scores 1 standard deviation below the mean were coded 1, while all other cases were coded 0.

School Commitment Grades 5-10 (schco510):

Mean student rating of school commitment in grades 5, 6 and 10. This variable was created by taking the mean of responses to the following 50 items: I try hard in school (s5q2, s6q1, s10q4r), My teacher expects me to do well in school (s5q3, s6q15, s10q18r), I like school (s5q5, s6q2, s10q5r), I get in trouble at school (s5q6, s6q3, s10q6), I get bored in school (s5q9, s6q4, s10q7), I am smart (s5q10, s6q5, s10q8r), School is important (s5q12, s6q6, s10q9r), I get good grades in school (s5q13, s6q7, s10q10r), My classmates like me (s6q9, s10q12r), I like writing compositions in school (s5q14), Learning is fun (s5q16), I enjoy composition writing (s6q17), When in school, I would rather be someplace else (s5q18, s6q8, s10q11), I get along well with others (s5q22, s6q11, s10q14r), I do better in school than my classmates (s5q23, s6q12, s10q15r), I like myself (s5q24, s6q13, s10q16r), I give up when schoolwork gets hard (s5q21, s6q10, s10q13), I do my homework (s5q25r, s6q14, s10q17r), I enjoy writing (s10q19r), I learn a lot at school (s10q20r), There are many things about school I don’t like (s10q21). These items are from the 5th, 6th, and 10th grade Student Surveys. Items 1-24 on the Grade 5 and Grade 6 Student Surveys and items 4-41 on the Grade 10 Student Survey assess how the respondent feels about school on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree,” 3 meaning “disagree,” and 4 meaning “strongly disagree.” Items 2-3, 5, 10, 12-14, 16, and 22-24 of the 5th grade survey, items 1-2, 5-7, 9, 11-15, and 17 of the 6th grade survey, and items 4-5, 8-10, 12, 14-20 of the 10th grade survey were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree,” 3 means “agree,” and 4 means “strongly agree.” For items 25-34 of the 5th grade student survey, students rated how often they performed certain school-related activities on a 5-point scale with 1 meaning “everyday,” 2 meaning “2-3 times a week,” 3 meaning “once a week,” 4 meaning “once a month,” and 5 meaning “never.” The variable s5q25 was recoded as s5q25r on a 5-point scale so that 1 means “never,” 2 means “once a month,” 3 means “once a week,” 4 means “2-3 times a week,” and 5 means “every day.” Missing values for grades 5 and 6 were coded -1, while missing values for grade 10 were coded 9. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.76-0.79. When calculated through pair-wise the reliability coefficient ranges from 0.71-0.78.

(schc510da): Dichotomization of **schc510**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

(schc510db): Dichotomization of **schc510**. All cases with scores 1 standard deviation below the mean were coded 1, while all other cases were coded 0.

School Commitment Grades 6-10 (schco610):

Mean student rating of school commitment in grades 6 and 10. This variable was created by taking the mean of responses to the following 34 items: I try hard in school (s6q1, s10q4r), My teacher expects me to do well in school (s6q15, s10q18r), I like school (s6q2, s10q5r), I get in trouble at school (s6q3, s10q6), I get bored in school (s6q4, s10q7), I am smart (s6q5, s10q8r), School is important (s6q6, s10q9r), I get good grades in school (s6q7 s10q10r), My classmates like me (s6q9, s10q12r), I enjoy composition writing (s6q17), When in school, I would rather be someplace else (s6q8, s10q11), I get along well with others (s6q11, s10q14r), I do better in school than my classmates (s6q12, s10q15r), I like myself (s6q13, s10q16r), I give up when schoolwork gets hard (s6q10, s10q13), I do my homework (s6q14, s10q17r), I enjoy writing (s10q19r), I learn a lot at school (s10q20r), There are many things about school I don’t like (s10q21). These items are from the 6th and 10th grade Student Surveys. Items 1-24 on the Grade 6 Student Survey and items 4-41 on the Grade 10 Student Survey assess how the respondent

feels about school on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.” Items 1-2, 5-7, 9, 11-15, and 17 of the 6th grade survey and items 4-5, 8-10, 12, 14-20 of the 10th grade survey were reverse coded, such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.” Missing values for grades 5 and 6 were coded -1, while missing values for grade 10 were coded 9. The reliability coefficient (Cronbach’s alpha) using a list-wise comparison ranges from 0.78-0.79. When calculated through pair-wise the reliability coefficient ranges from 0.73-0.78.

(schc610da): Dichotomization of **schc610**. All cases with scores 1 standard deviation above the mean were coded 1, while all other cases were coded 0.

(schc610db): Dichotomization of **schc610**. All cases with scores 1 standard deviation below the mean were coded 1, while all other cases were coded 0.

I get in trouble at school (trouble510):

This variable was created by taking the mean of responses to the following 4 items: I get in trouble at school (s5q6, s6q3, s10q6). These items are from the 5th, 6th, and 10th grade Student Surveys and are measured on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.”

I am smart (smart510):

This variable was created by taking the mean of responses to the following 3 items: I am smart (s5q10, s6q5, s10q8r). These items are from the 5th, 6th, and 10th grade Student Surveys and are measured on a 4-point scale (reverse coded), such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.”

School is important (schimport510):

This variable was created by taking the mean of responses to the following 3 items: School is important (s5q12, s6q6, s10q9r). These items are from the 5th, 6th, and 10th grade Student Surveys and are measured on a 4-point scale (reverse coded), such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.”

I get good grades in school (goodgrades510):

This variable was created by taking the mean of responses to the following 3 items: I get good grades in school (s5q13, s6q7, s10q10r). These items are from the 5th, 6th, and 10th grade Student Surveys and are measured on a 4-point scale (reverse coded), such that 1 means “strongly disagree,” 2 means “disagree”, 3 means “agree”, and 4 means “strongly agree.”

I give up when school work gets hard (giveup510):

This variable was created by taking the mean of responses to the following 3 items: I give up when school work gets hard (s5q21, s6q10, s10q13). These items are from the 5th, 6th, and 10th grade Student Surveys and are measured on a 4-point scale, with 1 meaning “strongly agree,” 2 meaning “agree”, 3 meaning “disagree”, and 4 meaning “strongly disagree.”

**APPENDIX B:
VARIABLE NAMES AND LOCATION**

Variables can be found in the Motivation Mediators data file.

The following variables were used in the creation of Table 1a:

- Overall Perceived Competence (sfact34z, sfact56z, sfact36z)
- Cognitive Competence (cogc3_4, cogc5_6, cogc3_6)
- Social Competence (soc3_4, soc5_6, soc3_6)
- Intrinsic Motivation (im3_4, im3_4b, im5_6, im5_6b, im3_6, im3_6b)
- Expectations to Attend College (stexpect, expco10n, expcol)
- School Commitment (schcom56, schco510, schco610)
- Individual Items (bored36, trouble510, smart510, schimport510, goodgrades510, giveup510)
- Gender (sex2kn)
- CPC Program (anyprek)
- School-age Program (anyfol)
- Extended Program (extv0)

The following variables were used in the creation of Table 1b:

- Overall Perceived Competence (sfact34zda, sfact56zda, sfact36zda)
- Cognitive Competence (cogc3_4da, cogc5_6da, cogc3_6da)
- Social Competence (soc3_4da, soc5_6da, soc3_6da)
- Intrinsic Motivation (im3_4da, im3_4bda, im5_6da, im5_6bda, im3_6da, im3_6bda)
- School Commitment (schcom56da, schcom56db, schco510da, schco510db, schco610da, schco610db)

The following variables were used in the creation of Table 2a:

- Family Risk Index (l8rsk0i)
- Single parent status (sp03)
- Mother is less than 18 (mage03)
- Mother did not complete High School (mnhs03)
- Mother not employed (mnemp03r)
- Four or more children in household (nch03d)
- TANF/AFDC participation (tf03)
- Eligible for free lunch (free03)
- 60% or greater poverty in school area (inc60)
- Kindergarten SS reading (sswordk)
- Year 1 SS reading comprehension (ssread1)
- Grade retention (retk8d)
- Highest grade completed (hgco803a)
- High school completion (hscm803r)
- College attendance (anyc803a)
- Incarceration (everinc2)
- Overall Perceived Competence (sfact36z)
- Cognitive Competence (cogc3_6)
- Social Competence (soc3_6)
- Intrinsic Motivation (im3_6b)
- School Commitment (schco610)
- Individual Items (bored36, trouble510, smart510, schimport510, goodgrades510, giveup510)

The following variables were used in the creation of Table 2a:

- Overall Perceived Competence (sfact34z, sfact56z, sfact36z)
- Cognitive Competence (cogc3_4, cogc5_6, cogc3_6)
- Social Competence (soc3_4, soc5_6, soc3_6)
- Intrinsic Motivation (im3_4b, im5_6b, im3_6b)
- School Commitment (schcom56, schco510, schco610)