

SUPPLEMENTARY APPENDIX

for

Stutter-Step Models of Performance in School

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Table S1. Coefficients for “Don’t Know” and “High School and College” for Models of Teacher Perceptions of Achievement-Relevant Behavior, With and Without Adjustments for Background and School Sector

Teacher perceptions	No Adjustments		Adjusted by Background and School Sector (see Table A1)	
	“High School and College”	“Don’t Know”	“High School and College”	“Don’t Know”
Does this student usually work hard for good grades in your class? (English Teacher) [logit]	-.23 (.15)	-.51 (.07)	-.14 (.06)	-.39 (.07)
Does this student usually work hard for good grades in your class? (Math Teacher) [logit]	-.42 (.14)	-.46 (.06)	-.37 (.15)	-.36 (.07)
How often does this student complete homework assignments for your class? (English Teacher) [ordered logit]	-.32 (.12)	-.45 (.06)	-.25 (.13)	-.34 (.06)
How often does this student complete homework assignments for your class? (Math Teacher) [ordered logit]	-.35 (.12)	-.14 (.05)	-.32 (.12)	-.08 (.05)
How often is this student attentive in class? (English Teacher) [ordered logit]	-.30 (.13)	-.41 (.05)	-.23 (.14)	-.32 (.06)
How often is this student attentive in class? (Math Teacher) [ordered logit]	-.10 (.12)	-.17 (.05)	-.08 (.12)	-.13 (.05)
Has this student fallen behind in school work? (English Teacher) [logit]	.37 (.14)	.47 (.06)	.30 (.15)	.37 (.07)
Has this student fallen behind in school work? (Math Teacher) [logit]	.37 (.14)	.37 (.06)	.29 (.15)	.27 (.06)
How often is this student absent from your class? (English Teacher) [ordered logit]	.19 (.13)	.16 (.07)	.12 (.14)	.13 (.06)
How often is this student absent from your class? (Math Teacher) [ordered logit]	-.11 (.12)	-.07 (.06)	-.06 (.12)	-.04 (.06)
How often is this student tardy to your class? (English Teacher) [ordered logit]	.31 (.13)	.19 (.06)	.24 (.13)	.17 (.06)
How often is this student tardy to your class? (Math Teacher) [ordered logit]	-.37 (.13)	-.27 (.06)	-.30 (.14)	-.24 (.06)

Source: See Table 1.

Notes: Data are weighted. Robust standard errors, with an adjustment for clustering in schools, are presented in parentheses. The reference category is “college only.” The type of model from which the coefficients are drawn is presented in brackets in the row labels. Coefficients are in bold if they are in the direction suggested by the stutter-step model.

Table S2. Coefficients for “Don’t Know” and “High School and College” for Models of Teacher Perceptions of Achievement-Relevant Behavior, With Additional Adjustments for Educational Expectations and for Comparison with Table S1

Teacher perceptions	Adjusted by Educational Expectations		Adjusted by Educational Expectations, Background, and School Sector	
	“High School and College”	“Don’t Know”	“High School and College”	“Don’t Know”
Does this student usually work hard for good grades in your class? (English Teacher) [logit]	-.14 (.16)	-.27 (.07)	-.07 (.16)	-.20 (.07)
Does this student usually work hard for good grades in your class? (Math Teacher) [logit]	-.35 (.15)	-.25 (.07)	-.32 (.15)	-.19 (.07)
How often does this student complete homework assignments for your class? (English Teacher) [ordered logit]	-.22 (.13)	-.18 (.06)	-.18 (.14)	.14 (.06)
How often does this student complete homework assignments for your class? (Math Teacher) [ordered logit]	-.33 (.12)	-.07 (.05)	-.30 (.16)	-.04 (.05)
How often is this student attentive in class? (English Teacher) [ordered logit]	-.23 (.14)	-.21 (.06)	-.19 (.14)	-.17 (.06)
How often is this student attentive in class? (Math Teacher) [ordered logit]	-.09 (.12)	-.13 (.06)	-.07 (.12)	-.11 (.06)
Has this student fallen behind in school work? (English Teacher) [logit]	.28 (.15)	.22 (.07)	.23 (.15)	.18 (.07)
Has this student fallen behind in school work? (Math Teacher) [logit]	.29 (.14)	.14 (.06)	.23 (.15)	.09 (.07)
How often is this student absent from your class? (English Teacher) [ordered logit]	.12 (.13)	-.02 (.06)	.08 (.14)	-.002 (.06)
How often is this student absent from your class? (Math Teacher) [ordered logit]	-.05 (.12)	.09 (.06)	-.01 (.12)	.08 (.06)
How often is this student tardy to your class? (English Teacher) [ordered logit]	.27 (.13)	.09 (.06)	.22 (.13)	.09 (.06)
How often is this student tardy to your class? (Math Teacher) [ordered logit]	-.32 (.13)	-.13 (.06)	-.27 (.14)	-.12 (.06)

Source: See Table 1.

Notes: See Table S1.

Table S3. Coefficients for “Don’t Know” and “High School and College” for Models of Student Reports of Achievement-Relevant Behavior, With and Without Adjustments for Background and School Sector

Student reports of achievement-related behavior	No Adjustments		Adjusted by Background and School Sector (see Table A1)	
	“High School and College”	“Don’t Know”	“High School and College”	“Don’t Know”
How many times did the following things happen to you in the first semester or term of this school year? [ordered logit]				
“I was late for school”	.29	.19	.23	.17
	(.11)	(.05)	(.11)	(.05)
“I cut or skipped class”	.29	.30	.22	.25
	(.13)	(.06)	(.13)	(.06)
“I got in trouble for not following school rules”	.27	.34	.22	.26
	(.11)	(.05)	(.11)	(.05)
“I was transferred to another school for disciplinary reasons”	- .85	1.00	-.91	.84
	(1.00)	(.32)	(1.04)	(.32)
How often do you spend time on the following activities outside of school? [ordered logit]				
“Visiting friends at a hangout”	.30	.03	.30	.02
	(.10)	(.05)	(.10)	(.05)
“Driving or riding around”	.15	-.05	.18	-.03
	(.10)	(.05)	(.11)	(.05)
How much do you like school? [ordered logit]				
	-.28	-.56	-.28	-.54
	(.13)	(.05)	(.13)	(.06)
How often do you come to class without these things [ordered logit]				
“Pencil/pen or paper”	.08	.38	.04	.31
	(.12)	(.05)	(.12)	(.05)
“Books”	.03	.30	-.02	.26
	(.12)	(.05)	(.12)	(.05)
“Homework done”	.13	.35	.10	.27
	(.11)	(.05)	(.11)	(.05)
How many times did the following things happen to you in the first semester or term of this school year?				
“I was absent from school” (Student in 10th Grade)	.15	.05	.15	.05
	(.10)	(.05)	(.10)	(.05)
“I was put on in-school suspension” (Student in 10th Grade)	.45	.60	.35	.52
	(.19)	(.09)	(.19)	(.09)
“I was suspended or put on probation” (Student in 10th Grade)	.23	.42	.11	.34
	(.23)	(.10)	(.24)	(.10)

Source: See Table 1.

Notes: See Table 4.

**Table S4. Coefficients for “Don’t Know” and “High School and College” for Models of Student Reports of Achievement-
Relevant Behavior, With Additional Adjustments for Educational Expectations and for Comparison with Table S3**

Student reports of achievement-related behavior	Adjusted by Educational Expectations		Adjusted by Educational Expectations, Background, and School Sector	
	“High School and College”	“Don’t Know”	“High School and College”	“Don’t Know”
How many times did the following things happen to you in the first semester or term of this school year? [ordered logit]				
“I was late for school”	.26 (.11)	.10 (.05)	.21 (.11)	.09 (.05)
“I cut or skipped class”	.22 (.13)	.13 (.06)	.17 (.13)	.10 (.06)
“I got in trouble for not following school rules”	.23 (.12)	.18 (.05)	.19 (.12)	.12 (.05)
“I was transferred to another school for disciplinary reasons”	-.95 (1.04)	.68 (.34)	-.96 (1.04)	.59 (.34)
How often do you spend time on the following activities outside of school? [ordered logit]				
“Visiting friends at a hangout”	.28 (.10)	-.01 (.05)	.28 (.10)	-.01 (.05)
“Driving or riding around”	.13 (.14)	-.11 (.05)	.16 (.11)	-.08 (.05)
How much do you like school? [ordered logit]	-.2 (.13)	-.38 (.06)	-.24 (.13)	-.36 (.06)
How often do you come to class without these things? [ordered logit]				
“Pencil/pen or paper”	.06 (.12)	.28 (.05)	.02 (.12)	.24 (.05)
“Books”	-.01 (.12)	.20 (.05)	-.04 (.12)	.17 (.05)
“Homework done”	.08 (.11)	.19 (.05)	.03 (.11)	.15 (.05)
How many times did the following things happen to you in the first semester or term of this school year? [ordered logit]				
“I was absent from school”	.10 (.10)	-.07 (.05)	.11 (.11)	-.06 (.05)
“I was put on in-school suspension”	.38 (.20)	.32 (.09)	.31 (.20)	.30 (.09)
“I was suspended or put on probation”	.14 (.24)	.13 (.11)	.05 (.24)	.10 (.11)

Source: See Table 1.

Notes: See Table S1.

Table S5. Coefficients for “Don’t Know” and “High School and College” for Models of Parent Reports of Achievement-Relevant Behavior, With and Without Adjustments for Background and School Sector

Parent reports of achievement-related behavior	No Adjustments		Adjusted by Background and School Sector (see Table A1)	
	“High School and College”	“Don’t Know”	“High School and College”	“Don’t Know”
Has your tenth grader ever been considered to have a behavior problem at school? [logit]	.36 (.26)	.47 (.12)	.23 (.27)	.33 (.12)
Since your tenth grader's school opened last fall, how many times have you or your spouse/partner contacted the school about the following? [ordered logit]				
“Your tenth grader’s problem behavior in school”	.57 (.20)	.39 (.10)	.43 (.21)	.32 (.10)
“Your tenth grader's poor attendance record at school”	.003 (.24)	.32 (.09)	-.10 (.25)	.21 (.10)
“Your tenth grader’s poor performance in school”	.480 (.13)	.44 (.06)	.39 (.14)	.36 (.06)
Since your tenth grader's school opened last fall, how many times have you or your spouse/partner been contacted by the school about the following? [ordered logit]				
“Your tenth grader’s problem behavior in school”	.48 (.20)	.30 (.09)	.35 (.21)	.23 (.10)
“Your tenth grader's poor attendance record at school”	.26 (.19)	.42 (.09)	.17 (.20)	.34 (.09)
“Your tenth grader’s poor performance in school”	.57 (.14)	.54 (.07)	.46 (.15)	.45 (.07)

Source: See Table 1.

Notes: See Table S1.

Table S6. Coefficients for “Don’t Know” and “High School and College” for Models of Parent Reports of Achievement-Relevant, With Additional Adjustments for Educational Expectations and for Comparison with Table S5

Parent reports of achievement-related behavior	Adjusted with Educational Expectations		Adjusted by Educational Expectations, Background, and School Sector	
	“High School and College”	“Don’t Know”	“High School and College”	“Don’t Know”
Has your tenth grader ever been considered to have a behavior problem at school? [logit]	.24 (.27)	.16 (.13)	.16 (.27)	.09 (.13)
Since your tenth grader's school opened last fall, how many times have you or your spouse/partner contacted the school about the following? [ordered logit]				
“Your tenth grader’s problem behavior in school”	.47 (.21)	.18 (.10)	.36 (.21)	.15 (.11)
“Your tenth grader's poor attendance record at school”	-.09 (.24)	.07 (.10)	-.16 (.25)	.03 (.10)
“Your tenth grader’s poor performance in school”	.42 (.13)	.29 (.07)	.33 (.14)	.24 (.07)
Since your tenth grader's school opened last fall, how many times have you or your spouse/partner been contacted by the school about the following? [ordered logit]				
“Your tenth grader’s problem behavior in school”	.40 (.21)	.07 (.10)	.29 (.21)	.05 (.10)
“Your tenth grader's poor attendance record at school”	.14 (.19)	.15 (.09)	.09 (.20)	.13 (.10)
“Your tenth grader’s poor performance in school”	.49 (.14)	.33 (.07)	.40 (.15)	.27 (.07)

Source: See Table 1.

Notes: See Table S1.

Table S7. Alternative Regression Models with Math Gains between 2002 and 2004 as the Outcome (for Comparison with the Models for Math Scores in 2004 as presented in Tables 3 and S6)

	Math Test Score Gains between 2002 and 2004 (usually 10 th to 12 th grade)			
	Model 7G	Model 8G	Model 9G	Model 9MG
Constant	5.18	.25	1.01	1.35
Educational requirements of expected jobs:				
College or more	reference	reference	reference	reference
High school or less	-.86 (.22)	-.63 (.23)	-.45 (.23)	-.29 (.23)
High school and college	-.37 (.31)	-.31 (.31)	-.28 (.31)	-.16 (.31)
“Don’t know”	-.20 (.15)	-.16 (.15)	-.04 (.16)	.02 (.16)
“Don’t plan to work at age 30”	-2.00 (.65)	-1.87 (.68)	-1.46 (.69)	-1.07 (.69)
Missing	-.70 (.34)	-.53 (.35)	-.40 (.36)	-.28 (.35)
Uncodable	-1.84 (.67)	-1.84 (.67)	-1.67 (.68)	-1.47 (.72)
Covariates for demographic characteristics, family background, and school sector	No	Yes	Yes	Yes
Covariates for teacher, student, and parent reports of commitment	No	No	No	Yes
Educational expectations in 10 th grade				
Bachelor’s degree or higher	--	--	reference	reference
Some college	--	--	-.79 (.27)	-.45 (.27)
High school diploma or less	--	--	-1.22 (.29)	-.72 (.31)
Don’t know	--	--	-.12 (.24)	.18 (.24)
R-Squared	.004	.03	.03	.04
N	11,579	11,579	11,579	11,695

Source: See Table 1.

Notes: See Table 2.

Table S8. Logit Models for On-Time High School Graduation in 2004, Estimated for All High School Sophomores in 2002

	Math Test Score Gains between 2002 and 2004 (usually 10 th to 12 th grade)			
	Model 16	Model 17	Model 18	Model 18M
Constant	2.46	-1.80	-.55	-1.18
Educational requirements of expected jobs:				
College or more	reference	reference	reference	reference
High school or less	-.75 (.11)	-.54 (.11)	-.19 (.12)	-.07 (.13)
High school and college	-.45 (.19)	-.34 (.20)	-.26 (.20)	-.18 (.21)
“Don’t know”	-.72 (.08)	-.60 (.08)	-.28 (.09)	-.23 (.10)
“Don’t plan to work at age 30”	-1.36 (.31)	-1.05 (.34)	-.49 (.34)	-.08 (.44)
Missing	-1.10 (.10)	-.71 (.11)	-.40 (.12)	-.35 (.13)
Uncodable	-.99 (.35)	-.72 (.37)	-.38 (.40)	-.39 (.48)
Covariates for demographic characteristics, family background, and school sector	No	Yes	Yes	Yes
Covariates for teacher, student, and parent reports of commitment	No	No	No	Yes
Educational expectations in 10 th grade				
Bachelor’s degree or higher	--	--	reference	reference
Some college	--	--	-1.05 (.12)	-.63 (.12)
High school diploma or less	--	--	-1.71 (.11)	-1.09 (.13)
Don’t know	--	--	-.79 (.13)	-.36 (.14)
Chi-Squared	145.8 (6 <i>df</i>)	676.3 (32 <i>df</i>)	990.1 (35 <i>df</i>)	1473.0 (67 <i>df</i>)
N	12,591	12,591	12,591	12,591

Source: See Table 1.

Notes: See Table 2.