

NOT FOR PUBLICATION

Data Appendix for “School Accountability, Postsecondary Attainment and Earnings”

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Table A1 - Descriptive Statistics by School Ratings

	Percent Black (1)	Percent Latino (2)	Percent Free Lunch (3)	% Passed 8th Math (4)	% Passed 8th Reading (5)	Avg. Cohort Size (7)	Number of Students (8)
Rated Low-Performing at least once	0.182	0.394	0.471	0.612	0.735	333	263,657
Rated Acceptable in every year	0.136	0.414	0.426	0.641	0.768	416	362,780
Rated Recognized at least once	0.048	0.215	0.270	0.751	0.839	274	155,406
Rated Exemplary at least once	0.038	0.119	0.171	0.825	0.892	292	105,870

Notes: This table presents descriptive statistics across schools that are categorized according to the distribution of the accountability ratings that they received over the five year period from 1996 to 2000. The five categories are mutually exclusive and collectively exhaustive.

Table A2: Impact of Accountability Pressure, by Terciles of Predicted Rating

	10th Grade Math		Four Year College		Earnings
	Passed Test	Scale	Ever	BA	Age 25
School Predicted Rating is in:	(1)	(2)	(3)	(4)	(5)
<i>Risk of Low-Performing Rating</i>					
Bottom Third	0.006*	0.228**	0.011**	0.0041**	141
	[0.003]	[0.076]	[0.002]	[0.0011]	[89]
Middle Third	0.014*	0.490**	0.011**	0.0047*	233
	[0.006]	[0.157]	[0.003]	[0.0020]	[130]
Top Third	0.010*	0.308	0.020**	0.0054**	326*
	[0.005]	[0.171]	[0.002]	[0.0019]	[143]
<i>Risk of Recognized Rating</i>					
School Predicted Rating is in:					
Bottom Third	-0.003	-0.085	-0.003	-0.0026	-168
	[0.004]	[0.119]	[0.004]	[0.0034]	[204]
Middle Third	-0.011*	-0.441*	-0.009	-0.0061	-336
	[0.005]	[0.197]	[0.007]	[0.0046]	[267]
Top Third	-0.011*	-0.478**	-0.008	-0.0065	51
	[0.005]	[0.161]	[0.005]	[0.0045]	[226]
Sample Size	697,728	697,728	887,713	887,713	887,713

Notes: Each column is a single regression of the indicated outcome on the variables from equation (3) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a cohort that has a positive estimated risk of being rated either Low-Performing or Recognized. The estimates are also allowed to vary by terciles (low/middle/high) of the ratings prediction. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A3: Results by lowest scoring subgroup's pass rate relative to the yearly threshold

<i>8th Grade Pass Rate of lowest-scoring subgroup and test, relative to yearly threshold, is:</i>	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
More than 10 points below	0.034** [0.007]	0.717** [0.229]	0.015** [0.004]	0.0053* [0.0026]	1043** [184]
5 to 10 points below	0.037** [0.006]	0.576** [0.179]	0.018** [0.004]	0.0056* [0.0025]	707** [172]
0 to 5 points below	0.022** [0.005]	0.401** [0.151]	0.017** [0.003]	0.0025 [0.0021]	841** [154]
0 to 5 points above	0.018** [0.005]	0.304** [0.125]	0.009** [0.003]	0.0011 [0.0019]	520** [126]
5 to 10 points above	0.011** [0.004]	0.250* [0.098]	0.010** [0.002]	0.0032 [0.0018]	438** [120]
10 to 15 points above	0.007 [0.004]	0.083 [0.095]	0.009** [0.002]	0.0031* [0.0015]	89 [109]
25 to 30 points above	-0.008 [0.005]	-0.030 [0.118]	-0.006* [0.003]	-0.0039* [0.0019]	-247 [169]
30 to 35 points above	-0.006 [0.005]	-0.146 [0.112]	-0.009** [0.003]	-0.0043 [0.0024]	-79 [153]
35 to 40 points above	-0.006 [0.006]	-0.333* [0.137]	-0.013** [0.004]	-0.0044 [0.0027]	-305 [240]
More than 40 points above	-0.016* [0.006]	-0.197 [0.150]	-0.017** [0.004]	-0.0063* [0.0029]	-317 [216]
Sample Size	697,728	697,728	887,713	887,713	887,713

Notes: Each column is a single regression of the indicated outcome on controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, school fixed effects, and 5 percentage point bins of each school and grade cohort's lowest 8th grade test-subgroup pass rate, minus the yearly passing threshold for an Acceptable rating. 15 to 25 percentage points above the threshold is the left-out category, because nearly all schools in this group would be rated as "safe" using the ratings prediction from our main results. See text for details. Standard errors are block bootstrapped at the school level. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A4: Transition Matrix for Predicted Ratings Categories

Predicted Rating in Year T	Predicted Rating in Year T+1							
	LP	Safe A	R	Total				
Pr(Low-Performing)>0	0.589	0.389	0.021	1,035				
Pr(Acceptable) => 100%	0.261	0.634	0.105	1,512				
Pr(Recognized)>0	0.043	0.170	0.787	737				
	highLP	midLP	lowLP	safeA	lowR	midR	highR	Total
Low-Performing (high)	0.227	0.128	0.370	0.270	0.005	0.000	0.000	211
Low-Performing (mid)	0.157	0.126	0.384	0.327	0.006	0.000	0.000	159
Low-Performing (low)	0.123	0.081	0.323	0.442	0.024	0.002	0.005	665
Pr(Acceptable) => 100%	0.034	0.033	0.194	0.634	0.078	0.013	0.015	1,512
Recognized (low)	0.003	0.008	0.045	0.229	0.416	0.156	0.142	353
Recognized (mid)	0.015	0.000	0.031	0.146	0.292	0.231	0.285	130
Recognized (high)	0.000	0.000	0.024	0.098	0.165	0.094	0.618	254

Notes: The top panel presents a transition matrix of schools across three ratings categories, while the bottom panel gives a similar transition matrix where we break the Low-Performing and Recognized categories into three terciles each. Low is a probability greater than zero and less than or equal to 33 percent, Mid is 33 to 67 percent, and High is 67 to 100 percent. Each cell gives the share of schools in the indicated row category in year T that are included in the indicated column category in year T+1. Rows may not sum exactly to one due to rounding error. See the text for details on the construction of predicted ratings.

Table A5: Determinants of Schools' Predicted Ratings*Outcome is prob(Low-Performing)>0*

	(1)	(2)	(3)	(4)	(5)	(6)
Percent Black	0.201*	0.390	0.155	0.080	0.647*	0.783
	[0.073]	[0.285]	[0.091]	[0.476]	[0.288]	[0.402]
Percent Latino	-0.197**	-0.052	-0.123	-0.189	0.165	-0.012
	[0.062]	[0.213]	[0.078]	[0.355]	[0.216]	[0.339]
Percent Free Lunch	0.096	-0.213	0.013	0.024	-0.142	-0.253
	[0.084]	[0.120]	[0.102]	[0.202]	[0.119]	[0.181]
8th Gd. Math Pass Rate	-0.413**	-0.456**	-0.360**	-0.412**	-0.562**	-0.367**
	[0.058]	[0.070]	[0.063]	[0.095]	[0.104]	[0.107]
First-time 9th grade in 1996	0.029	0.029			0.031	
	[0.018]	[0.020]			[0.020]	
First-time 9th grade in 1997	0.065**	0.073**			0.111**	0.035
	[0.020]	[0.023]			[0.023]	[0.028]
First-time 9th grade in 1998	0.099**	0.113**	0.057**	0.050*	0.184**	0.057
	[0.022]	[0.024]	[0.021]	[0.026]	[0.026]	[0.039]
First-time 9th grade in 1999	0.066**	0.082**	0.052*	0.034	0.180**	
	[0.024]	[0.028]	[0.025]	[0.032]	[0.030]	
Teacher Yrs of Experience			0.015	-0.005		
			[0.022]	[0.027]		
Changed Principals			0.012*	-0.003		
			[0.006]	[0.014]		
Average Teacher Pay (in \$1000s)			-0.024**	-0.013		
			[0.006]	[0.007]		
8th Grade Math Pass Rate - Black					-0.142	
					[0.098]	
8th Grade Math Pass Rate - Latino					0.353**	
					[0.113]	
8th Grade Math Pass Rate - Ec. Disadv.					-0.534**	
					[0.120]	
Lag of 8th Grade Math Pass Rate						0.110
						[0.104]
Lead of 8th Grade Math Pass Rate						0.014
						[0.092]
School Fixed Effects	No	Yes	No	Yes	Yes	Yes
F(demographics = 0)	0.000	0.135	0.001	0.938	0.105	0.091
F (school vars = 0)			0.001	0.300		
F (cohort effects = 0)	0.000	0.000	0.020	0.142	0.000	0.328
F(lag and lead = 0)						0.561
R-Squared	0.055	0.480	0.055	0.590	0.495	0.586
Sample Size	4,506	4,506	2,618	2,618	4,506	2,693

Notes: Each column represents a single regression of the probability that a grade cohort will be rated "Low-Performing" on the indicated set of time-varying school characteristics. The teacher and principal variables are measured as of each cohort's 9th grade year, and are only available from 1997 onward. The subgroup math pass rates in Column 5 are given a value of zero in schools with too few students to count, and we also include a dummy variable that is equal to one if the group is missing. The lag and lead variables in Column 6 are the average math pass rates of the grade cohorts immediately before and after the one in question, and thus are only available for grade cohorts 1996, 1997, and 1998. See the text in Section V for a description of how schools' predicted ratings were constructed. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A6 - Impact of Pre-Accountability Test Score Trends on Predicted Rating

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
8th grade scores - all	-0.290**	-0.277**	-0.368**	-0.470**	-0.474**	-0.473**	-0.485**
	[0.057]	[0.058]	[0.053]	[0.070]	[0.071]	[0.072]	[0.072]
8th grade scores - black	-0.029	-0.031	-0.053**	-0.038	-0.038	-0.037	-0.035
	[0.017]	[0.017]	[0.019]	[0.021]	[0.021]	[0.021]	[0.021]
8th grade scores - Latino	-0.009	-0.008	-0.290**	-0.074**	-0.074**	-0.074**	-0.076**
	[0.024]	[0.024]	[0.075]	[0.024]	[0.024]	[0.024]	[0.024]
8th grade scores - FRPL	-0.999**	-0.995**	-0.859**	-0.597**	-0.598**	-0.599**	-0.598**
	[0.074]	[0.074]	[0.063]	[0.065]	[0.065]	[0.065]	[0.065]
Linear Trend		0.105**	0.094**				
		[0.013]	[0.016]				
1994 Pass Rate - all		-0.019	-0.364				
		[0.114]	[0.226]				
Trend*1994 pass rate		-0.025	0.008		-0.011	-0.009	0.011
		[0.023]	[0.036]		[0.025]	[0.038]	[0.040]
Trend*1993 pass rate			0.017				0.007
			[0.029]				[0.032]
Trend*1992 pass rate			0.017				0.021
			[0.032]				[0.034]
Trend*1991 pass rate			-0.029				-0.035
			[0.023]				[0.025]
Trend * 1994 subgroup pass rates	no	no	yes	no	no	yes	yes
Trend * 1991-1993 subgroup pass rates	no	no	yes	no	no	no	yes
School Fixed Effects	no	no	no	yes	yes	yes	yes
Number of trend interactions	0	1	4	16	1	4	16
F (Trends = 0)		0.000	0.000		0.656	0.960	0.482
R-squared	0.277	0.278	0.350	0.618	0.618	0.618	0.621
Sample size	4,253	4,253	4,253	4,253	4,253	4,253	4,253

Notes: Each column represents a single regression of the probability that a grade cohort will be rated "Low-Performing" on the indicated set of time-varying school characteristics. The models in Columns 1 through 3 include a linear trend indexed by cohort, mathematics pass rates overall and by subgroup (black, Latino, free lunch) for grade cohorts 1991 through 1994, and the interaction between them. Columns 4 through 7 only include the pass rate by trend interactions, since only these are identified after controlling for school fixed effects. Subgroup pass rates are given a value of zero in schools with too few students to count, and we also include a dummy variable that is equal to one if the group is missing. See the text for details on the construction of the ratings prediction. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A7: Main Results with controls for pre-accountability test score trend interactions

	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
<i>Panel A</i>					
Risk of Low Performing Rating	0.007** [0.003]	0.254** [0.085]	0.011** [0.002]	0.0044** [0.0012]	167* [81]
Risk of Recognized Rating	-0.005 [0.003]	-0.212 [0.122]	-0.004 [0.004]	-0.0040 [0.0032]	-96 [176]
<i>Panel B</i>					
Risk of Low Performing Rating					
Failed an 8th grade exam	0.016** [0.005]	0.428** [0.148]	0.014** [0.003]	0.0061** [0.0015]	186 [93]
Passed 8th grade exams	0.003 [0.003]	0.169* [0.080]	0.009** [0.003]	0.0032* [0.0016]	133 [104]
Risk of Recognized Rating				-	
Failed an 8th grade exam	-0.009 [0.008]	-0.408* [0.199]	-0.028** [0.006]	0.0131** [0.0042]	-642** [218]
Passed 8th grade exams	-0.006 [0.004]	-0.182 [0.124]	0.002 [0.005]	-0.0015 [0.0034]	61 [183]
Sample Size	697,728	697,728	887,713	887,713	887,713

Notes: Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, school fixed effects, and interactions between a linear trend and overall and subgroup-specific math and reading pass rates for the high school for the four years (1991-1994) prior to the cohorts used in our sample. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A8: Falsification test with 7th grade scores

	7th Grade Math	
	Passed Test	Z Score
<i>Panel A</i>	(1)	(2)
Risk of Low Performing Rating	-0.003 [0.003]	0.010 [0.006]
Risk of Recognized Rating	-0.013* [0.005]	-0.035** [0.009]
<i>Panel B</i>		
Risk of Low Performing Rating		
Failed an 8th grade exam	0.004 [0.004]	-0.008 [0.008]
Passed 8th grade exams	0.006 [0.003]	0.022** [0.005]
Risk of Recognized Rating		
Failed an 8th grade exam	0.002 [0.005]	-0.019 [0.013]
Passed 8th grade exams	-0.022** [0.005]	-0.037** [0.010]

Notes: Each column is a single regression of the indicated outcome on the set of variables from equation (1) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Because the outcomes are based on 7th grade math performance, we must exclude the 1995 first-time 9th grade cohort, who were in 7th grade in 1993. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A9: Sensitivity of Earnings Results to Imputation

	Annual Earnings at Age 25			
	Missing = Zero (1)	Impute Mean (2)	Minus 1 SD (3)	Plus 1 SD (4)
Risk of Low Performing Rating	172 [97]	240** [66]	332** [84]	149* [69]
Risk of Recognized Rating	-121 [198]	1032** [132]	102 [153]	1,962** [150]
Sample Size	887,713	887,713	887,713	887,713

Notes: Each column is a single regression of the indicated outcome on the set of variables from equations (1) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. The outcomes in Columns 1 through 4 are annual earnings in the 11th years after the first time a student enters 9th grade (which we refer to as the age 25 year). Column 1 replicates the main results from Table 3. Column 2 replaces missing earnings with the mean value of earnings for students in the grade cohort and school ratings category. Columns 3 and 4 subtract and add 1 standard deviation from that mean value, respectively. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A10: Main Results by high school share of out-of-state college attendees

	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
Risk of Low Performing Rating	0.007** [0.003]	0.260** [0.090]	0.012** [0.002]	0.0045** [0.0012]	188* [87]
*>10% attend out-of-state	0.015 [0.009]	0.500 [0.267]	-0.010 [0.008]	-0.0044 [0.0047]	-383 [370]
Risk of Recognized Rating	-0.005 [0.004]	-0.226 [0.129]	-0.006 [0.004]	-0.0050 [0.0033]	-151 [190]
*>10% attend out-of-state	-0.007 [0.008]	0.034 [0.260]	0.003 [0.014]	0.0052 [0.123]	178 [613]
Sample Size	697,728	697,728	887,713	887,713	887,713

Notes: Each column is a single regression of the indicated outcome on the set of variables from equations (1) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. The main treatment variables are interacted with indicators that are equal to one if a high school sends more than 10 percent of college-bound seniors to out-of-state institutions (based on a match of 2008/2009 graduating classes to the National Student Clearinghouse - see text for details.) Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A11: Main Results restricted to non-consecutive cohorts (1995, 1997 and 1999)

	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
<i>Panel A</i>					
Risk of Low Performing Rating	0.015** [0.004]	0.450** [0.107]	0.014** [0.003]	0.0059** [0.0018]	202 [132]
Risk of Recognized Rating	-0.005 [0.005]	-0.292* [0.147]	-0.007 [0.005]	-0.0010 [0.0036]	-17 [251]
<i>Panel B</i>					
Risk of Low Performing Rating					
Failed an 8th grade exam	0.033** [0.007]	0.851** [0.179]	0.013** [0.004]	0.0071** [0.0021]	280 [156]
Passed 8th grade exams	0.007* [0.00]	0.271** [0.104]	0.014** [0.003]	0.0052* [0.0023]	148 [152]
Risk of Recognized Rating					
Failed an 8th grade exam	-0.005 [0.009]	-0.434 [0.224]	-0.029** [0.007]	-0.0099* [0.0043]	-610 [345]
Passed 8th grade exams	-0.006 [0.005]	-0.298* [0.151]	-0.001 [0.005]	0.0011 [0.0039]	132 [262]
Sample Size	415,731	415,731	528,830	528,830	528,830

Notes: The 1996 and 1998 grade cohorts are excluded from this sample. Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A12: Main Results restricted to non-overlapping cohorts (1995 and 1999)

	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
<i>Panel A</i>					
Risk of Low Performing Rating	0.011 [0.006]	0.383* [0.177]	0.018** [0.004]	0.0077** [0.0026]	391* [177]
Risk of Recognized Rating	-0.012 [0.008]	-0.548* [0.247]	0.006 [0.007]	0.0026 [0.0055]	54 [406]
<i>Panel B</i>					
Risk of Low Performing Rating					
Failed an 8th grade exam	0.033** [0.010]	0.874** [0.267]	0.018** [0.005]	0.0099** [0.0029]	340 [201]
Passed 8th grade exams	0.002 [0.005]	0.170 [0.166]	0.019** [0.005]	0.0064* [0.0031]	424* [191]
Risk of Recognized Rating					
Failed an 8th grade exam	-0.003 [0.011]	-0.539 [0.319]	-0.021* [0.009]	-0.0066 [0.0062]	-623 [467]
Passed 8th grade exams	-0.015* [0.008]	-0.599* [0.246]	0.012 [0.007]	0.0044 [0.0058]	269 [394]
Sample Size	273,177	273,177	348,375	348,375	348,375

Notes: The 1996, 1997 and 1998 grade cohorts are excluded from this sample. Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A13: Main results when controlling for new special education classification

	Four Year College				Earnings	
	Ever Attend		BA		Age 25	
	(1)	(2)	(3)	(4)	(5)	(6)
Special Education in 10th grade		-0.049** [0.005]		-0.034** [0.002]		-1,740** [187]
Risk of Low Performing Rating	0.011** [0.002]	0.012** [0.003]	0.0043** [0.0011]	0.0044** [0.0012]	172 [97]	178* [77]
Risk of Recognized Rating	-0.006 [0.004]	-0.003 [0.004]	-0.0041 [0.0037]	-0.0043 [0.0031]	-121 [98]	7 [169]
Sample Size	887,711	887,711	887,711	887,711	887,711	887,711

Notes: The 1996 and 1998 grade cohorts are excluded from this sample. Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A14: Main results when controlling for total math credits

	Four Year College				Earnings	
	Ever Attend		BA		Age 25	
	(1)	(2)	(3)	(4)	(5)	(6)
Math Credits		0.109** [0.002]		0.055** [0.001]		2,671** [37]
Risk of Low Performing Rating	0.011** [0.002]	0.006** [0.002]	0.0043** [0.0011]	0.0012 [0.0014]	172 [97]	22 [79]
Risk of Recognized Rating	-0.006 [0.004]	-0.007 [0.004]	-0.0041 [0.0037]	-0.0048 [0.0031]	-121 [98]	-13 [181]
Sample Size	887,711	887,711	887,711	887,711	887,711	887,711

Notes: The 1996 and 1998 grade cohorts are excluded from this sample. Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A15A: Impact of Accountability Pressure on Additional Outcomes

	Reading Scale Score (1)	Took 10th Math On Time (2)	Passed 10th Writing On Time (3)	10th Gd. Absences (4)	Same School T+1 (5)	Same Schl, On Time (6)	Still in TX in T+1 (7)	Transfer to Alt. School (8)
<i>Panel A</i>								
Risk of Low Performing Rating	0.288** [0.062]	0.005 [0.003]	0.005 [0.003]	-0.123 [0.089]	0.005 [0.005]	0.013** [0.005]	0.003* [0.001]	-0.005* [0.002]
Risk of Recognized Rating	-0.089 [0.081]	-0.009 [0.006]	-0.008 [0.006]	-0.189 [0.139]	-0.001 [0.006]	-0.005 [0.006]	0.001 [0.002]	-0.003 [0.004]
<i>Panel B</i>								
Risk of Low Performing Rating								
Failed an 8th grade exam	0.321** [0.104]	0.009 [0.005]	0.008 [0.004]	-0.063 [0.130]	0.010* [0.004]	0.020** [0.005]	0.005** [0.001]	-0.011** [0.003]
Passed 8th grade exams	0.270** [0.060]	0.002 [0.004]	0.003 [0.004]	-0.157 [0.091]	0.002 [0.005]	0.008 [0.006]	0.003* [0.001]	-0.001 [0.002]
Risk of Recognized Rating								
Failed an 8th grade exam	-0.170 [0.141]	0.015 [0.008]	0.006 [0.008]	-0.924** [0.195]	-0.007 [0.006]	0.019* [0.008]	-0.000 [0.003]	-0.022** [0.006]
Passed 8th grade exams	-0.072 [0.087]	-0.016** [0.006]	-0.012* [0.006]	-0.049 [0.142]	0.001 [0.006]	-0.013* [0.006]	0.001 [0.002]	0.004 [0.005]
Sample Size	697,404	887,713	887,713	543,744	887,713	887,713	887,713	887,713

Notes: Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who are in 10th grade and/or pass the 10th grade math exam in year T+1 are considered to be or to have passed "on time". Data on absences (Column 3) are available only beginning in 1998. Alternative schools are generally (although not always) intended for students who have behavior problems. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A15B: Impact of Accountability Pressure on Additional Outcomes

	Pass Algebra I (8)	Pass Geometry (9)	Pass Algebra II (10)	Pass Pre- Calc (11)	Attend 2 yr coll (12)	Attend AA (13)	Attend Flagship (14)
<i>Panel A</i>							
Risk of Low Performing Rating	0.002 [0.008]	0.021** [0.006]	0.021** [0.004]	0.016** [0.003]	0.008** [0.002]	0.0011* [0.0005]	0.0030** [0.0008]
Risk of Recognized Rating	0.028* [0.012]	-0.001 [0.010]	-0.004 [0.005]	-0.012 [0.006]	-0.001 [0.006]	0.0002 [0.0015]	-0.0032 [0.0023]
<i>Panel B</i>							
Risk of Low Performing Rating							
Failed an 8th grade exam	0.019* [0.009]	0.028** [0.006]	0.017** [0.005]	0.008* [0.004]	0.003 [0.004]	0.0018** [0.0006]	-0.0016 [0.0016]
Passed 8th grade exams	-0.010 [0.009]	0.016* [0.007]	0.023** [0.006]	0.021** [0.004]	0.011** [0.003]	0.0007 [0.0007]	0.0061** [0.0015]
Risk of Recognized Rating							
Failed an 8th grade exam	0.029 [0.015]	-0.047** [0.012]	-0.058** [0.008]	-0.030** [0.009]	0.021 [0.011]	0.0031 [0.0017]	-0.0203** [0.0043]
Passed 8th grade exams	0.026* [0.012]	0.011 [0.011]	0.012* [0.006]	-0.005 [0.007]	-0.007 [0.007]	-0.0007 [0.0016]	0.0023 [0.0030]
Sample Size	887,713	887,713	887,713	887,713	887,713	887,713	887,713

Notes: Within Panels A and B, each column is a single regression of the indicated outcome on the set of variables from equations (1) (Panel A) or (2) (Panel B) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized, for either all students in the grade cohort (Panel A) or students who failed one / passed both 8th grade exams (Panel B). The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. The math courses in rows 8 through 11 are state-standardized courses - students are considered to have passed if they received at least one course credit at any point in their high school career. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. Flagship institutions are UT-Austin and Texas A&M. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A16: Impact of Differential Accountability Pressure for Targeted Subgroups

	10th Grade Math		Four Year College		Earnings
	Passed Test	Scale Score	Ever Attend	BA	Age 25
	(1)	(2)	(3)	(4)	(5)
<i>Risk of Low-Performing Rating</i>					
Targeted Subgroup, Failed 8th Grade Exam	0.011* [0.005]	0.279* [0.134]	0.012* [0.005]	0.008** [0.002]	579** [141]
<i>Risk of Recognized Rating</i>					
Targeted Subgroup, Failed 8th Grade Exam	0.009 [0.020]	-0.370 [0.422]	-0.012 [0.012]	-0.006 [0.008]	-193 [586]
Sample Size	618,721	618,721	797,703	797,703	797,703

Notes: Each column is a single regression of the indicated outcome on the set of variables from equation (4) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for an exhaustive set of race (black/Latino vs. white/other) by poverty by prior test score (failed either or passed both 8th grade exams) categories, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, and school-by-year fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the difference in outcomes between students in a targeted subgroup (i.e. poor black or Latino students with low 8th grade test scores) and all other students, within a grade cohort and school that has a positive estimated risk of being rated either Low-Performing or Recognized. The reference category is the difference between targeted subgroups and all other students in grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A17: Main Results by gender

	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
Risk of Low Performing Rating	0.007*	0.247**	0.008**	0.0013	79
	[0.003]	[0.088]	[0.002]	[0.0015]	[120]
*Male	0.001	0.038	0.008**	0.0062**	189
	[0.002]	[0.046]	[0.002]	[0.0017]	[196]
Risk of Recognized Rating	-0.001	-0.132	-0.008	0.0142**	-286
	[0.004]	[0.118]	[0.004]	[0.0038]	[226]
*Male	-0.011**	-0.215**	0.006	0.0203**	333
	[0.002]	[0.055]	[0.004]	[0.0038]	[312]
Sample Size	697,728	697,728	887,713	887,713	887,713

Notes: Each column is a single regression of the indicated outcome on the set of variables from equations (1) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. The main treatment variables are interacted with indicators that are equal to one if a student is male. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A18: Main Results by limited English proficiency

	10th Grade Math		Four Year College		Earnings
	Passed Test (1)	Scale Score (2)	Ever Attend (3)	BA (4)	Age 25 (5)
Risk of Low Performing Rating	0.007** [0.003]	0.251** [0.083]	0.011** [0.002]	0.0040** [0.0012]	188* [84]
*LEP	0.011 [0.008]	0.363 [0.226]	0.012 [0.007]	0.0055 [0.0037]	-351 [233]
Risk of Recognized Rating	-0.007* [0.003]	-0.245* [0.116]	-0.005 [0.004]	-0.0042 [0.0032]	-98 [179]
*LEP	-0.006 [0.018]	-0.096 [0.440]	-0.007 [0.016]	0.0024 [0.0117]	-170 [121]
Sample Size	697,728	697,728	887,713	887,713	887,713

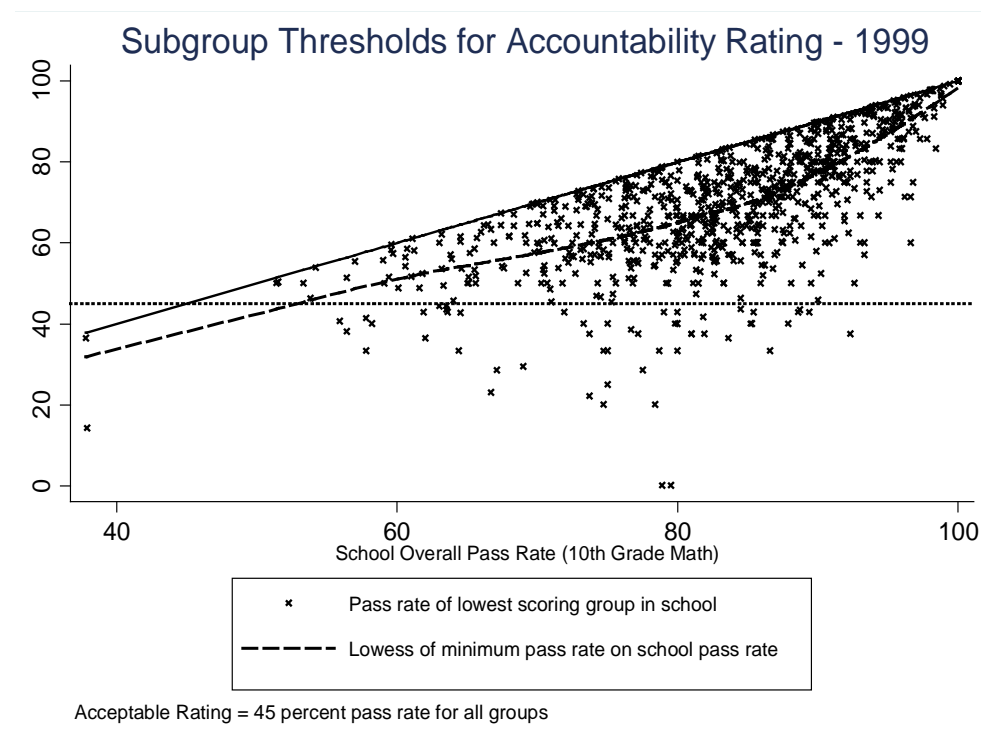
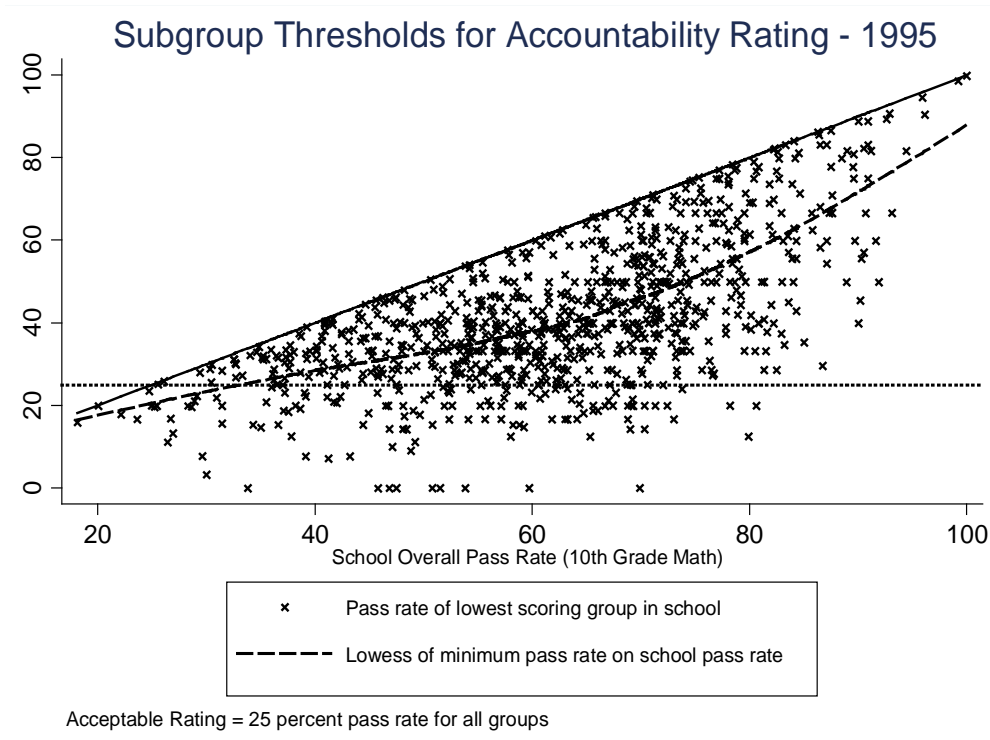
Notes: Each column is a single regression of the indicated outcome on the set of variables from equations (1) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. The main treatment variables are interacted with indicators that are equal to one if a student was designated as having limited English proficiency in 8th grade. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. Students who are first time 9th graders in year T and who pass the 10th grade math exam in year T+1 are considered to have passed "on time". A one standard deviation change in the math score is equal to about 7 scale score points. College attendance outcomes are measured within an 8 year time window beginning with the student's first-time 9th grade cohort, and measure attendance at any public (and after 2003, any private) institution in the state of Texas. The outcome in Column 5 is annual earnings in the 11th year after the first time a student enters 9th grade (which we refer to as the age 25 year), including students with zero reported earnings. * = sig. at 5% level; ** = sig. at 1% level or less.

Table A19: Impacts on college enrollment, earnings and idle by year

	Enrolled in any postsecondary institution						
	Age 19	Age 20	Age 21	Age 22	Age 23	Age 24	Age 25
<i>Panel A</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Risk of Low Performing Rating	0.010** [0.002]	0.009** [0.002]	0.009** [0.002]	0.010** [0.002]	0.004** [0.001]	0.002* [0.001]	0.002* [0.001]
Risk of Recognized Rating	-0.002 [0.004]	0.001 [0.003]	-0.004 [0.003]	-0.003 [0.004]	-0.005 [0.003]	0.001 [0.002]	-0.002 [0.002]
	Annual earnings if not enrolled in college						
	Age 19	Age 20	Age 21	Age 22	Age 23	Age 24	Age 25
<i>Panel B</i>							
Risk of Low Performing Rating	51 [49]	135* [56]	131* [65]	232** [71]	279** [75]	200* [82]	269** [86]
Risk of Recognized Rating	69 [102]	10 [119]	-115 [140]	131 [167]	278 [161]	283 [185]	260 [200]
	Idle (zero earnings, not enrolled in college)						
	Age 19	Age 20	Age 21	Age 22	Age 23	Age 24	Age 25
<i>Panel C</i>							
Risk of Low Performing Rating	-0.002 [0.002]	-0.002 [0.002]	-0.003 [0.002]	-0.002 [0.002]	0.001 [0.002]	-0.002 [0.002]	-0.000 [0.002]
Risk of Recognized Rating	0.004 [0.004]	0.003 [0.004]	0.003 [0.004]	0.008* [0.003]	0.009* [0.004]	0.009* [0.004]	0.011** [0.004]

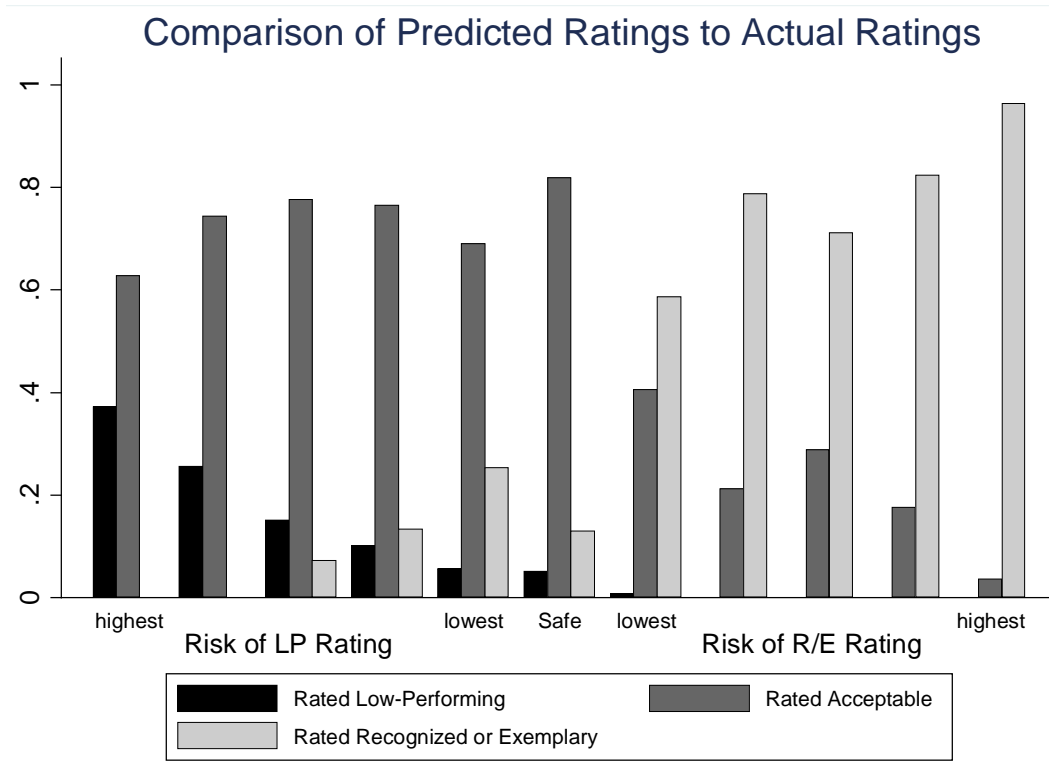
Notes: Each column is a single regression of the indicated outcome on the set of variables from equations (1) in the paper, which includes controls for cubics in 8th grade math and reading scores, dummies for male, black, Hispanic, and free/reduced price lunch, each student's percentile rank on the 8th grade exams within their incoming 9th grade cohort, year fixed effects, and school fixed effects. Standard errors are block bootstrapped at the school level. Each coefficient gives the impact of being in a grade cohort that has a positive estimated risk of being rated Low-Performing or Recognized. The reference category is grade cohorts for whom the estimated risk of receiving an Acceptable rating rounds up to 100 percent. See the text for details on the construction of the ratings prediction. The outcomes in Panel A are indicator variables that are equal to one if a student was enrolled in any public (and after 2003, any private) institution in the state of Texas in the indicated year. The outcomes in Panel B are annual earnings in the 5th through 11th years after the first time a student enters 9th grade (which we refer to as the age 19 to 25 years), for all students who were not enrolled in any postsecondary institution in the indicated year. The outcomes in Panel C are indicator variables that are equal to one if a student had zero reported earnings and was not enrolled in any postsecondary institution in the indicated year. * = sig. at 5% level; ** = sig. at 1% level or less.

Figure A1



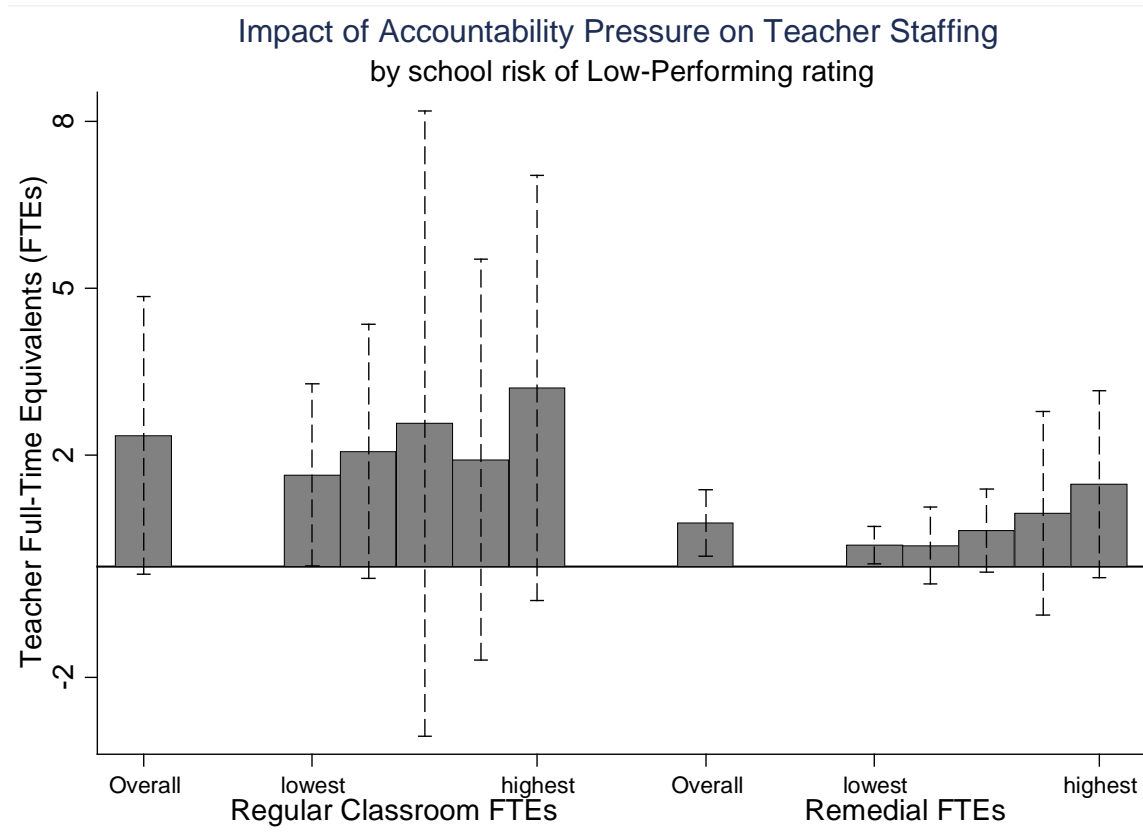
Notes: The X axis plots each high school overall pass rate on the 10th grade math exam, while the Y axis plots the same value for the lowest scoring subgroup in the school. Texas' accountability policy rates schools based on the lowest scoring subgroup. The dashed lines are locally weighted regressions.

Figure A2



Notes: This figure presents the share of school-cohorts in each predicted risk quintile that actually received the indicated accountability ratings from the Texas Education Agency (TEA). See the text for details on the construction of predicted ratings.

Figure A3



Notes: This figure presents coefficients and associated 95 percent confidence intervals from a single estimate of a modified version of equation (2) in the paper, with separate coefficients for five quintiles of a school-cohort's estimated risk of being rated Low-Performing. Since the teacher FTE allocation results vary only at the school-cohort level, these models do not include separate results by students' baseline math scores. FTE stands for Full-time Equivalent. Coefficients for schools that are on the margin of being rated Recognized are included in the model but not presented here. We also present the overall results next to each set of estimates by risk quintile.