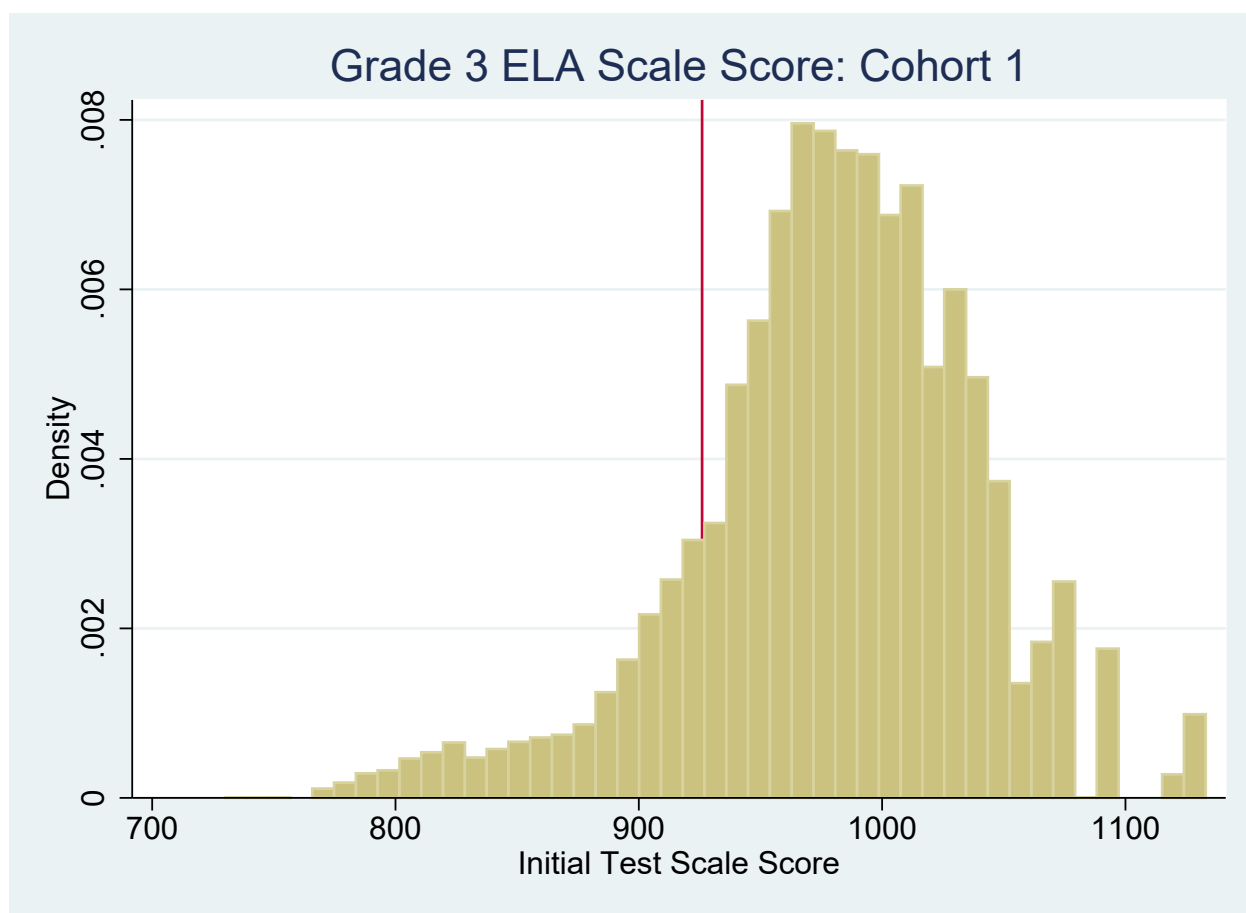


Online Appendix:

The Effect of Mississippi's Test-Based Promotion Policy

Figure (1) Relationship Between 3rd Grade ELA Score and Retention Probability



Notes: This figure illustrates the distribution of student scores on the 3rd grade MKAS ELA test administered in 2014-15. The vertical line illustrates the passing threshold on the test used by the policy.

Table (1) Summary Statistics

	(1)	(2)	(3)	(4)
	All	<i>Within 20 Point Sample</i>		
		All	Below	Above
Retained	0.0608	0.0908	0.167	0.0460
Below	0.148	0.371	1	0
ELA Score	979.8	929.3	916.1	937.1
White	0.439	0.227	0.226	0.228
Black	0.494	0.708	0.713	0.706
Hispanic	0.0369	0.0430	0.0445	0.0421
Female	0.491	0.465	0.449	0.474
Sped	0.110	0.175	0.231	0.141
<i>N</i>	37892	5397	2004	3393

Note: Table reports mean value for observed student characteristics. Column (1) reports for all observed students in the third grade in 2014-15. Columns (2) through (4) are restricted to observations with third grade ELA score within 20 points of the policy threshold - i.e. the primary estimation in the regressions reported in later sections. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (2) Testing Covariate Balance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Female	Black	Hispanic	White	G3 Sped	G3 LEP	G3 Absences
Below	0.003 (0.029)	0.001 (0.026)	-0.004 (0.012)	0.003 (0.024)	0.022 (0.022)	0.001 (0.011)	-0.048 (0.431)
dif	0.001 (0.001)	-0.000 (0.001)	-0.000 (0.000)	0.000 (0.001)	-0.003*** (0.001)	-0.000 (0.000)	-0.013 (0.017)
Average Outcome	.491	.501	.037	.433	.114	.029	8.183

Note: Table reports results from regressions investigating differences in the value for observed student characteristics on either side of the passing threshold. Each column is a separate regression with dependent variable listed at top. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (3) IV Regressions with Alternative Bandwidth Sizes

	<i>Grade 6</i>				<i>Year 4</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
	ELA	Math	Absences	Sped	Absences	Sped
<i>Within 10 Points of Threshold</i>						
Retained (IV)	1.742 (1.894)	0.337 (1.897)	-12.142 (26.581)	-0.812 (0.945)	11.500 (23.191)	-0.404 (0.712)
Average Outcome	-.86	-.76	9.68	.22	10.43	.22
N	2241	2237	2241	2241	2157	2157
<i>Within 20 Points of Threshold (Primary Sample)</i>						
Retained (IV)	1.153* (0.657)	-0.436 (0.743)	-1.983 (9.433)	-0.284 (0.292)	7.512 (8.820)	-0.361 (0.280)
Average Outcome	-.84	-.73	9.61	.2	10.41	.21
N	4729	4719	4729	4729	4562	4562
<i>Within 30 Points of Threshold</i>						
Retained (IV)	1.151** (0.479)	-0.313 (0.545)	0.897 (6.661)	-0.256 (0.209)	5.257 (6.264)	-0.291 (0.197)
Average Outcome	-.79	-.68	9.51	.19	10.29	.2
N	7347	7334	7347	7347	7088	7088
<i>Within 40 Points of Threshold</i>						
Retained (IV)	1.386*** (0.378)	0.496 (0.405)	-1.979 (4.949)	-0.129 (0.149)	2.342 (4.714)	-0.136 (0.143)
Average Outcome	-.72	-.61	9.51	.18	10.2	.18
N	10336	10317	10336	10336	9980	9980

Note: Table reports IV estimates for the full sample using bandwidths of alternative sizes, as described at the top of the subsection. Each column is a separate regression with dependent variable listed at top. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (4) IV Regressions with Alternative Bandwidth Sizes & Interacting Below with Forcing Variable

	<i>Grade 6</i>				<i>Year 4</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
	ELA	Math	Absences	Sped	Absences	Sped
<i>Within 10 Points of Threshold</i>						
Retained (IV)	2.456 (5.338)	-0.150 (4.451)	1.910 (57.912)	-1.105 (2.532)	37.354 (63.602)	-0.480 (1.375)
Average Outcome	-.86	-.76	9.68	.22	10.43	.22
N	2241	2237	2241	2241	2157	2157
<i>Within 20 Points of Threshold (Primary Sample)</i>						
Retained (IV)	1.306 (0.932)	-0.695 (1.037)	-1.854 (12.914)	-0.284 (0.390)	9.484 (11.684)	-0.412 (0.365)
Average Outcome	-.84	-.73	9.61	.20	10.41	.21
N	4729	4719	4729	4729	4562	4562
<i>Within 30 Points of Threshold</i>						
Retained (IV)	1.151** (0.479)	-0.313 (0.545)	0.897 (6.661)	-0.256 (0.209)	5.257 (6.264)	-0.291 (0.197)
Retained (IV)	1.120 (0.837)	-1.180 (1.050)	4.639 (11.547)	-0.553 (0.409)	9.710 (10.029)	-0.544 (0.341)
Average Outcome	-.79	-.68	9.51	.19	10.29	.20
N	7347	7334	7347	7347	7088	7088
<i>Within 40 Points of Threshold</i>						
Retained (IV)	1.596 (1.096)	-0.782 (1.133)	-10.663 (14.458)	-0.530 (0.468)	5.035 (10.637)	-0.419 (0.350)
Average Outcome	-.72	-.61	9.51	.18	10.2	.18
N	10336	10317	10336	10336	9980	9980

Note: Table reports IV estimates for the full sample using bandwidths of alternative sizes, as described at the top of the subsection. In addition, these models include an interaction between *Below* and the forcing variable. Each column is a separate regression with dependent variable listed at top. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (5) First Stage and Reduced Form Test Scores by Grade and Year: Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
	Retained	ELA	ELA	ELA	Math	Math
Below	0.072*** (0.016)	0.098** (0.040)	0.041 (0.036)	0.067* (0.035)	0.010 (0.038)	-0.005 (0.038)
dif	-0.003*** (0.001)	0.012*** (0.002)	0.010*** (0.001)	0.009*** (0.001)	0.008*** (0.002)	0.005*** (0.002)
Average Outcome	.096	-.863	-.871	-.837	-.741	-.674
Grade	Initial 3	4	5	6	4	5

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Table reports results from first stage and reduced form regressions for analyses of student math and ELA scores for within-grade analyses for each observed grade. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. All regressions control for student race/ethnicity, gender, and classification as receiving special education and LEP services as of the initial third grade year. Robust standard errors reported in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (6) Reduced Form Absences: Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
Below	0.056 (0.451)	0.025 (0.468)	-0.115 (0.546)	-0.189 (0.443)	0.158 (0.473)	-0.624 (0.541)
dif	-0.019 (0.019)	-0.021 (0.019)	-0.028 (0.023)	-0.027 (0.018)	-0.019 (0.019)	-0.043* (0.022)
Average Outcome	7.88	8.19	9.61	7.79	8.06	9.37
Comparison	Grade 4	Grade 5	Grade 6	1YR	2YR	3YR

Note: Table reports results from reduced form regressions for analyses of total absences for within-grade and within-year analyses for each observed grade. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. All regressions control for student race/ethnicity, gender, and classification as receiving special education and LEP services as of the initial third grade year. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (7) Reduced Form Special Education Classification: Full Sample

	(1)	(2)	(3)	(4)
Below	0.002 (0.013)	-0.016 (0.016)	-0.001 (0.013)	-0.014 (0.016)
dif	-0.000 (0.001)	-0.002** (0.001)	-0.000 (0.001)	-0.001** (0.001)
Average Outcome	.19	.2	.19	.2
Comparison	Grade 5	Grade 6	2YR	3YR

Note: Table reports results from reduced form regressions for analyses of probability of being classified as enrolled in special education for within-grade and within-year analyses for each observed grade. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. All regressions control for student race/ethnicity, gender, and classification as receiving special education and LEP services as of the initial third grade year. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (8) IV Estimates for the Effect of Retention on Test Scores: Full Sample

	(1)	(2)	(3)	(4)	(5)
	ELA	ELA	ELA	Math	Math
Retained (IV)	1.399** (0.605)	0.571 (0.500)	1.153* (0.657)	0.137 (0.537)	-0.067 (0.528)
Score	0.016*** (0.003)	0.012*** (0.003)	0.012*** (0.003)	0.008*** (0.003)	0.005* (0.003)
Average Outcome	-.86	-.87	-.84	-.74	-.67
Comparison	Grade 4	Grade 5	Grade 6	Grade 4	Grade 5

Note: Table reports IV estimates for the effect of retention on student math and ELA scores for within-grade analyses for each observed grade. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. All regressions control for student race/ethnicity, gender, and classification as receiving special education and LEP services as of the initial third grade year. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (9) IV Estimates for the Effect of Retention on Absences: Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)
Retained (IV)	0.792 (6.411)	0.345 (6.550)	-1.983 (9.433)	-2.628 (6.186)	2.125 (6.375)	-8.842 (7.904)
Score	-0.017 (0.033)	-0.021 (0.034)	-0.033 (0.047)	-0.034 (0.035)	-0.013 (0.036)	-0.066 (0.042)
Average Outcome	7.88	8.19	9.601	7.79	8.06	9.37
Comparison	Grade 4	Grade 5	Grade 6	YR1	YR2	YR3

Note: Table reports IV estimates for the effect of retention on total absences for within-grade and within-year analyses for each observed grade. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. All regressions control for student race/ethnicity, gender, and classification as receiving special education and LEP services as of the initial third grade year. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table (10) IV Estimates for the Effect of Retention on Special Education Status: Full Sample

	(1)	(2)	(3)	(4)
Retained (IV)	0.031 (0.185)	-0.284 (0.292)	-0.013 (0.170)	-0.195 (0.232)
Score	-0.000 (0.001)	-0.002* (0.001)	-0.000 (0.001)	-0.002 (0.001)
Average Outcome	.19	.2	.19	.2
Comparison	Grade 5	Grade 6	YR2	YR3

Note: Table reports IV estimates for the effect of retention on probability of being classified as enrolled in special education for within-grade and within-year analyses for each observed grade. Sample includes those who scored within 20 points of the policy threshold on the 2014-15 administration of the MKAS third grade ELA test. *dif* is the difference between the student's score and the passing score; *Below* is an indicator that equals 1 if the score is below the passing threshold, and equals zero otherwise. All regressions control for student race/ethnicity, gender, and classification as receiving special education and LEP services as of the initial third grade year. Robust standard errors reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$