Online Table 1: Descriptive Statistics on Children's Schools

School Teacher Resources		
Teacher-student ratio across whole school	0.06	(0.01)
Average classroom teacher-student ratio	0.05	(0.02)
Proportion core teachers with more than Bachelor's	0.32	(0.12)
Core teachers' average years experience	11.05	(2.87)
Special education teachers' average years experience	12.57	(5.54)
Structural Resources for Distinctive Learners		
School is a charter	0.07	
Subject of student's magnet program:		
Not in a magnet program	0.83	
Applied	0.08	
Arts or alternative pedagogy	0.07	
Academically intensive	0.02	
Student Population Resources		
Proportion students:		
Living in poverty	0.24	(0.14)
Black	0.28	(0.26)
Hispanic	0.61	(0.29)
English learners	0.30	(0.23)
School average test score	-0.01	(0.37)

Note: Data on schools of 346,957 children. Standard deviations in parentheses besides means.

Online Table 2: Descriptive Statistics on Children

Designated with:		Grade level last year at risk:	
No disability	0.973	Pre-kindergarten	0.08
Learning disability	0.015	Kindergarten	0.08
Speech impairment	0.007	Between grades 1 and 3	0.22
Other health impairment	0.003	Between grades 4 and 5	0.14
Intellectual disability	0.001	Between grades 6 and 12	0.47
Emotional disturbance	0.001	Child's zoned status:	
Autism	0.001	Zoned school	0.72
First school year child in district:		Non-zoned school	0.26
2006-07	0.53	Lives outside of district	0.02
2007-08	0.10	Age relative to others in same	0.00
2008-09	0.10	grade	(1.00)
2009-10	0.09	Male	0.50
2010-11	0.09	Race:	
2011-12	0.09	White	0.08
First grade level in district:		Black	0.29
Pre-kindergarten	0.25	Hispanic	0.59
Kindergarten	0.12	Other	0.04
Between grades 1 and 3	0.21	Child's economic status:	
Between grades 4 and 5	0.11	Not disadvantaged	0.21
Between grades 6 and 12	0.32	Eligible for reduced lunch	0.09
Last school year at risk:		Eligible for free lunch	0.50
2006-07	0.09	Living in poverty	0.20
2007-08	0.09	In Gifted and Talented program	0.13
2008-09	0.09	English learner	0.29
2009-10	0.10	Average test score	0.02
2010-11	0.11		(0.82)
2011-12	0.52	Missing all test scores	0.14

Note: Data on 346,957 children. Standard deviations in parentheses below means.

Online Table 3: Rates of Missingness

	06-07	07-08	08-09	09-10	10-11	11-12
Proportion Students Missing All Test Scores Within their Focus Year						
All	0.165	0.181	0.189	0.212	0.198	0.303
No disability	0.161	0.182	0.193	0.215	0.200	0.306
Learning disability	0.017	0.011	0.012	0.005	0.009	0.042
Speech impairment	0.318	0.347	0.332	0.444	0.398	0.468
Other health impairment	0.143	0.142	0.092	0.112	0.081	0.142
Intellectual disability	0.500	0.383	0.328	0.286	0.328	0.385
Emotional disturbance	0.107	0.118	0.077	0.156	0.105	0.183
Autism	0.520	0.647	0.571	0.535	0.515	0.558
Proportion Students Missing all Test Scores Across All Years in District						
All	0.143	0.132	0.144	0.160	0.121	0.142
No disability	0.144	0.135	0.150	0.167	0.124	0.143
Learning disability	0.003	0.001	0.001	0.001	0.001	0.016
Speech impairment	0.017	0.026	0.024	0.040	0.031	0.154
Other health impairment	0.035	0.044	0.026	0.018	0.029	0.065
Intellectual disability	0.353	0.250	0.224	0.171	0.103	0.308
Emotional disturbance	0.018	0.020	0.019	0.000	0.015	0.086
Autism	0.240	0.412	0.286	0.256	0.303	0.468
Proportion School Variables Missing Among Non-Charter Schools						
Charter and magnet status	0.98	0.01	0.00	0.00	0.01	0.00
Campus staff variables[a]	0.09-0.26	0.02-0.17	0.01-0.17	0.02-0.16	0.02-0.16	0.01-0.14
Teacher level aggregated[b]	0.98	0.03-0.06	0.02-0.06	0.02-0.06	0.03-0.09	0.07-0.19
Student level aggregated	0.09	0.02	0.02	0.02	0.03	0.07
Proportion School Variables Missing Among Charter Schools						
Charter and magnet status	0.68	0.12	0.16	0.04	0.00	0.00
Campus staff variables	0.32-0.48	0.40-0.52	0.48-0.62	0.44-0.66	0.40-0.64	0.36-0.52
Teacher level aggregated	0.68	0.12-0.52	0.18-0.62	0.06-0.66	0.06-0.64	0.34-0.68
Student level aggregated	0.06	0.12	0.18	0.06	0.06	0.34

a - Campus staff variables had different rates of missingness across variables within the same school.

b - Teacher level variables were aggregated from multiple sources which resulted in different rates of missingness across variables within the same school; some of these data sources were not available from the district for 2006-07.

Online Table 4, Part 1 of 2: Achievement and English Learner Distinction - Hazard Ratios of Diagnosis with a Disabiilty from Weibull Regression Models

	Model 1: Average Test Score		Model 2: English Learners		
	HR	(SE)	HR		(SE)
School Teacher Resources					
Teacher-student ratio across whole school	1.19	(0.11)	1.11	**	(0.03)
Average classroom teacher-student ratio	1.12 +	(0.03)	1.24	**	(0.09)
Proportion core teachers with more than Bachelor's	0.96	(0.06)	0.98		(0.05)
Core teachers' average years experience	1.08 +	(0.05)	1.08	+	(0.05)
Special education teachers' average years experience	0.99	(0.03)	0.99		(0.03)
Structural Resources for Distinctive Learners					
School is a charter	0.86	(0.19)	0.96		(0.20)
Subject of student's magnet program:					
Not in a magnet program (ref)	-		-		
Applied	1.13	(0.12)	1.13		(0.13)
Arts or alternative pedagogy	1.02	(0.10)	1.04		(0.10)
Academically intensive	1.41	(0.35)	1.56	+	(0.41)
Student Population Resources					
Proportion students:					
Living in poverty	0.89	(0.06)	0.88	+	(0.06)
Black	0.98	(0.08)	0.99		(0.08)
English Learners	1.00	(0.06)	1.02		(0.06)
x Child is English Learner			0.90	+	(0.06)
School average test score	1.31 ***	(0.08)	1.30	***	(0.07)
x Child score (-0.5, 0.0) SDs	1.22 **	(0.08)			
x Child score [0.0, 0.5) SDs	1.05	(0.07)			
x Child score between [0.5, max] SDs	1.19	(0.14)			
Child Characteristics					
Child's zoned status:					
Zoned school (ref)	-		-		
Non-zoned school	1.20 **	(0.06)	1.08		(0.06)
Lives outside of district	2.58 ***	(0.39)	2.48	***	(0.46)
Age relative to others in same grade	1.45 ***	(0.02)	1.47	***	(0.02)
Male	1.66 ***	(0.04)	1.67	***	(0.06)

Online Table 4, Part 2 of 2: Achievement and English Learner Distinction - Hazard Ratios of Diagnosis with a Disabiilty from Weibull Regression Models

	Model 1, continued		Model 2, continued	
	HR	(SE)	HR	(SE)
Child Characteristics, continued				
Race:				
White (ref)	-		-	
Black	0.71 ***	(0.05)	0.77 ***	(0.05)
Hispanic	0.64 ***	(0.04)	0.68 ***	(0.04)
Other	0.47 ***	(0.05)	0.51 ***	(0.05)
Child's economic status:				
Not disadvantaged (ref)	-		-	
Eligible for reduced lunch	0.91	(0.05)	0.94	(0.06)
Eligible for free lunch	1.00	(0.05)	1.02	(0.05)
Living in poverty	0.88 *	(0.04)	0.97	(0.05)
In Gifted and Talented program	0.31 ***	(0.04)	0.25 ***	(0.05)
English learner	0.66 ***	(0.02)	0.65 ***	(0.04)
Average test score:			0.40 ***	(0.02)
[minimum, 0.5] standard deviations (SDs) (ref)				
(-0.5, 0.0) SDs	0.20 ***	(0.01)		
[0.0, 0.5) SDs	0.10 ***	(0.01)		
[0.5, maximum] SDs	0.05 ***	(0.01)		
Missing all test scores	1.83 ***	(0.19)	1.64 ***	(0.20)
First school year in district:				
2006-07 (ref)				
2007-08	1.31 ***	(0.05)	1.35 ***	(0.05)
2008-09	1.55 ***	(0.07)	1.57 ***	(0.07)
2009-10	1.89 ***	(0.11)	1.89 ***	(0.11)
2010-11	2.32 ***	(0.16)	2.25 ***	(0.16)
2011-12	3.94 ***	(0.33)	1.55 **	(0.24)
First grade level in district:				
Pre-kindergarten (ref)				
Kindergarten	1.23 ***	(0.07)	1.42 ***	(0.08)
Between grades 1 and 3	1.10 +	(0.06)	1.25 ***	(0.07)
Between grades 4 and 5	0.53 ***	(0.04)	0.59 ***	(0.05)
Between grades 6 and 12	0.15 ***	(0.02)	0.18 ***	(0.02)
Constant	0.01 ***	(0.00)	0.00 ***	(0.00)

Note: Model 1 relies on a categorical measure of children's average test score to facilitate graphical representation.

***$p<0.001$, **$p<0.01$, *$p<0.05$, +$p<0.10$, two-tailed test.

Online Table 5, Part 1 of 3: Race Distinction - Hazard Ratios of Diagnosis with a Disabiilty from Weibull Regression Models

	Hispanic				Black			
	Model 1: Dispropor-tionately over-designated disabilities (LD, OHI, ID, ED)		Model 2: Dispropor-tionately under-designated disabilities (SI, Aut)		Model 3: Dispropor-tionately over-designated disabilities (LD, SI)		Model 4: Dispropor-tionately under-designated disabilities (OHI, ID, ED, Aut)	
	HR	(SE)	HR	(SE)	HR	(SE)	HR	(SE)
School Teacher Resources								
Teacher-student ratio across whole school	1.19 +	(0.11)	1.27 **	(0.09)	1.26 **	(0.09)	1.26 **	(0.09)
Average classroom teacher-student ratio	1.13 **	(0.05)	1.11 ***	(0.03)	1.08 **	(0.03)	1.09 ***	(0.03)
Proportion core teachers with more than Bachelor's	0.96	(0.07)	1.03	(0.05)	1.04	(0.05)	1.05	(0.05)
Core teachers' average years experience	1.08	(0.06)	1.10 *	(0.05)	1.10 *	(0.05)	1.09 +	(0.05)
Special education teachers' average years experience	0.98	(0.03)	0.99	(0.03)	0.98	(0.03)	0.99	(0.03)
Structural Resources for Distinctive Learners								
School is a charter	1.08	(0.29)	0.81	(0.14)	0.87	(0.14)	0.84	(0.14)
Subject of student's magnet program:								
Not in a magnet program (ref)	-		-		-		-	
Applied	1.12	(0.14)	1.32 *	(0.16)	1.37 **	(0.17)	1.34 *	(0.16)
Arts or alternative pedagogy	1.09	(0.14)	1.19	(0.13)	1.21 +	(0.14)	1.19	(0.13)
Academically intensive	1.47	(0.52)	1.19	(0.53)	1.05	(0.47)	1.17	(0.51)

Online Table 5, Part 1 of 3: Race Distinction - Hazard Ratios of Diagnosis with a Disabiilty from Weibull Regression Models

	Hispanic				Black			
	Model 1, continued		Model 2, continued		Model 3, continued		Model 4, continued	
	HR	(SE)	HR	(SE)	HR	(SE)	HR	(SE)
Student Population Resources								
Proportion students:								
Living in poverty	0.79 **	(0.05)	0.98	(0.05)	1.02	(0.07)	1.03	(0.07)
Black					0.87	(0.08)	0.88	(0.08)
x Child is Black					0.95	(0.05)	0.94	(0.05)
Hispanic	1.02	(0.09)	1.14	(0.10)				
x Child is Hispanic	1.00	(0.07)	0.92	(0.05)				
English Learners	0.96	(0.07)	0.94	(0.08)	0.90	(0.06)	0.91	(0.06)
School average test score	1.23 **	(0.09)	1.42 ***	(0.09)	1.38 ***	(0.09)	1.38 ***	(0.09)
Child Characteristics								
Child's zoned status:								
Zoned school (ref)	-		-		-		-	
Non-zoned school	0.98	(0.07)	0.97	(0.06)	0.94	(0.06)	0.97	(0.06)
Lives outside of district	1.86 **	(0.40)	2.61 ***	(0.31)	2.10 ***	(0.25)	2.61 ***	(0.30)
Age relative to others in same grade	1.49 ***	(0.03)	1.48 ***	(0.02)	1.48 ***	(0.03)	1.48 ***	(0.03)
Male	1.53 ***	(0.06)	1.52 ***	(0.06)	1.47 ***	(0.06)	1.52 ***	(0.06)
Race:								
Black	-		-		1.22 ***	(0.07)	1.21 ***	(0.06)
Hispanic	1.01	(0.06)	0.86 **	(0.05)	-		-	
Child's economic status:								
Not disadvantaged (ref)	-		-		-		-	
Eligible for reduced lunch	0.99	(0.07)	0.91	(0.06)	0.92	(0.07)	0.92	(0.06)
Eligible for free lunch	1.11	(0.08)	0.97	(0.05)	0.99	(0.06)	0.98	(0.05)
Living in poverty	1.05	(0.07)	1.09	(0.06)	1.13 *	(0.06)	1.11 +	(0.06)

Online Table 5, Part 3 of 3: Race Distinction - Hazard Ratios of Diagnosis with a Disabiilty from Weibull Regression Models

	Hispanic				Black			
	Model 1, continued		Model 2, continued		Model 3, continued		Model 4, continued	
	HR	(SE)	HR	(SE)	HR	(SE)	HR	(SE)
Child Characteristics, continued								
In Gifted and Talented program	0.15 ***	(0.02)	0.14 ***	(0.03)	0.15 ***	(0.03)	0.14 ***	(0.03)
English learner	0.64 ***	(0.03)	0.54 ***	(0.03)	0.55 ***	(0.03)	0.55 ***	(0.03)
Average test score:	0.40 ***	(0.02)	0.32 ***	(0.01)	0.29 ***	(0.01)	0.32 ***	(0.01)
Missing all test scores	0.76 *	(0.10)	2.85 ***	(0.28)	2.19 ***	(0.25)	2.91 ***	(0.29)
First school year in district:								
2006-07 (ref)	-		-		-		-	
2007-08	1.26 ***	(0.05)	1.36 ***	(0.06)	1.33 ***	(0.06)	1.36 ***	(0.06)
2008-09	1.47 ***	(0.07)	1.58 ***	(0.09)	1.54 ***	(0.09)	1.57 ***	(0.09)
2009-10	1.75 ***	(0.13)	1.74 ***	(0.11)	1.67 ***	(0.11)	1.74 ***	(0.11)
2010-11	2.08 ***	(0.18)	1.82 ***	(0.16)	1.68 ***	(0.16)	1.82 ***	(0.16)
2011-12	1.13	(0.25)	0.38 *	(0.19)	0.16 **	(0.11)	0.38 *	(0.19)
First grade level in district:								
Pre-kindergarten (ref)	-		-		-		-	
Kindergarten	1.26 ***	(0.08)	2.22 ***	(0.11)	2.28 ***	(0.12)	2.21 ***	(0.11)
Between grades 1 and 3	1.18 *	(0.08)	2.52 ***	(0.14)	2.70 ***	(0.15)	2.52 ***	(0.14)
Between grades 4 and 5	0.51 ***	(0.05)	1.30 **	(0.10)	1.40 ***	(0.11)	1.30 **	(0.10)
Between grades 6 and 12	0.12 ***	(0.02)	0.38 ***	(0.05)	0.40 ***	(0.05)	0.37 ***	(0.05)
Constant	0.00 ***	(0.00)	0.00 ***	(0.00)	0.00 ***	(0.00)	0.00 ***	(0.00)

Note: LD=learning disability. SI=speech impairment. OHI=other health impairment. ID=intellectual disability. ED=emotional disturbance. Aut=autism.

***$p<0.001$, **$p<0.01$, *$p<0.05$, +$p<0.10$, two-tailed test.