

**Web Appendix G**  
**Details on the Regression Models for Middle School and High School Students**

This appendix includes regression results for middle school and high school students, in that order. See Chapter 6 for a discussion of these results.

**Table G.1**

**Reading Regressions Results for Middle School Students**

	All Students	All Students	EL Students	EL Students
	School fixed effects; student fixed effects	School fixed effects	School fixed effects; student fixed effects	School fixed effects
Parental education level: high school	0.9892	0.4993	2.1371	0.2561
	(0.5442)	(0.3353)	(1.4287)	(0.7141)
Parental education level: some college	0.8378	1.5822	5.0685	3.0465
	(0.5412)	(0.3232)**	(2.0443)*	(0.9354)**
Parental education level: college	0.9428	1.9472	2.9445	1.2581
	(0.5567)	(0.3205)**	(2.0926)	(0.9772)
Parental education level: graduate school	0.5907	3.9292	5.6443	1.9786
	(0.6969)	(0.3996)**	(2.8299)*	(1.6036)
Student is female	0.0000	0.6452	0.0000	0.2164
	(0.0000)	(0.1908)**	(0.0000)	(0.5267)
Student is Black	0.0000	-4.8923	0.0000	-3.9198
	(0.0000)	(0.3459)**	(0.0000)	(2.7929)
Student is Asian	0.0000	-1.4166	0.0000	-1.7682
	(0.0000)	(0.3237)**	(0.0000)	(2.4643)
Student is Hispanic	0.0000	-2.4625	0.0000	-3.0998
	(0.0000)	(0.3347)**	(0.0000)	(3.2326)
Student is other race	0.0000	0.0721	0.0000	-2.1095
	(0.0000)	(0.9333)	(0.0000)	(7.2346)
Student changed schools midyear	-1.0941	-1.5782	0.1555	-2.7946
	(0.8924)	(0.5606)**	(2.7192)	(1.2585)*
Percentage of students at school that changed unexpectedly	0.1260	0.0585	-0.1168	-0.1352
	(0.0361)**	(0.0243)*	(0.2063)	(0.1342)
Unexpected school change	-0.6028	1.0803	0.0576	1.3620
	(0.7763)	(0.5085)*	(2.5553)	(1.3437)
Student is new to district that year	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)

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**Table G.1 (continued)**

Percentage of school that is new to the district	-0.1823	-0.1584	0.3454	-0.2533
	(0.1183)	(0.0776)*	(0.6004)	(0.2888)
Age of student on the first day of school	-0.5801	-0.5019	6.9384	-0.8541
	(1.5006)	(0.1889)**	(5.9733)	(0.4415)
Student is in 7th grade	0.1099	8.4724	-21.4679	0.2873
	(5.9735)	(0.3839)**	(15.7956)	(1.1085)
Student is in 8th grade	-0.7040	11.5912	-42.3682	9.8136
	(11.9221)	(0.5236)**	(31.4475)	(1.4017)**
Student is in 9th grade	-16.8993	3.2655	-79.5287	0.2131
	(17.8891)	(0.8459)**	(47.0778)	(2.1475)
Student is in 10 <sup>th</sup> grade	-34.2040	7.6417	-120.7231	1.9483
	(23.8766)	(1.5656)**	(62.8375)	(4.2494)
Student is in 11 <sup>th</sup> grade	0.0000	10.1585	0.0000	9.3070
	(0.0000)	(1.7426)**	(0.0000)	(4.9535)
Student is in 12 <sup>th</sup> grade	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Student was an English learner (EL)	-0.2045	-2.7999		
	(16.8175)	(0.5725)**		
Student was redesignated English proficient (FEP)	4.2626	0.8410		
	(16.7397)	(0.5622)		
EL but not Spanish	0.4048	-0.3984	0.0000	-1.1606
	(2.4137)	(0.7079)	(0.0000)	(3.0344)
Non Spanish FEP	0.0000	-1.2194		
	(0.0000)	(0.6831)		
Special-ed student	3.9523	-4.7158	0.4934	-0.6439
	(2.3471)	(1.3348)**	(8.3009)	(3.5748)
Student skipped a year	1.5795	4.4687	0.0000	0.0000
	(11.2897)	(3.4019)	(0.0000)	(0.0000)
Student retained that year	0.0000	0.0000	14.9271	-9.2998
	(0.0000)	(0.0000)	(26.3791)	(7.7620)

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**Table G.1 (continued)**

Percentage of year student was absent	-0.1112	-0.1733	-0.3073	-0.1744
	(0.0484)*	(0.0217)**	(0.1323)*	(0.0512)**
Percentage of school on free/reduced meal	-0.1314	-0.1019	0.0101	-0.1552
	(0.0793)	(0.0564)	(0.3074)	(0.1528)
Year-round school	2.8481	1.2367	-6.7386	-1.1818
	(1.7572)	(1.1666)	(6.1780)	(3.1304)
Charter school	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Atypical school	38.3697	0.0000	8.5819	0.0000
	(28.2634)	(0.0000)	(25.9875)	(0.0000)
Percentage of school that is Asian	0.1650	0.0226	-0.2322	-0.0963
	(0.0644)*	(0.0398)	(0.2224)	(0.1179)
Percentage of school that is Hispanic	0.2738	0.0440	-0.3555	0.0764
	(0.1067)*	(0.0713)	(0.3232)	(0.1695)
Percentage of school that is Black	0.2992	0.0604	-0.0510	-0.0929
	(0.0804)**	(0.0558)	(0.2977)	(0.1709)
Percentage of school that is Pacific Islander	-0.8352	-2.4095	-2.1222	1.1566
	(0.8012)	(0.6297)**	(4.5726)	(2.0266)
Percentage of school that is Native American	3.9894	1.3192	2.9339	-1.1351
	(0.8127)**	(0.6414)*	(3.7234)	(2.2535)
Percentage of school that is EL	-0.0091	-0.0876	0.3494	0.0146
	(0.0969)	(0.0655)	(0.4184)	(0.1805)
Percentage of school that is FEP	0.3832	0.3932	0.1049	0.5094
	(0.1187)**	(0.0969)**	(0.4554)	(0.2835)
Classroom peer group	-0.2272	6.2160	-1.3431	3.9718
	(0.4214)	(0.2328)**	(1.3683)	(0.6829)**
Grade-level peer group	7.1941	-6.0196	-1.3038	-7.5467
	(2.0340)**	(1.3324)**	(7.4552)	(3.6814)*
Average English class size, annual	0.0047	-0.0211	0.0187	0.0351
	(0.0250)	(0.0168)	(0.0872)	(0.0451)

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**Table G.1 (continued)**

Number of English classes taken annually, 0-1	-1.3768	-2.5958	-1.0175	-2.3791
	(0.8706)	(0.5521)**	(1.8577)	(1.0349)*
Number of English classes taken annually, >2	0.8501	0.7258	2.0101	2.8415
	(0.9597)	(0.7043)	(3.8946)	(2.3182)
Teachers with full credential and 0-2 years experience	-0.0018	-0.2744	-0.6385	-0.4364
	(0.4405)	(0.3240)	(1.6534)	(0.9648)
Teachers with full credential and 3-5 year experience	0.6994	0.5354	-0.3169	0.6773
	(0.4390)	(0.3350)	(1.9024)	(1.0430)
Teachers with full credential and 6-9 years experience	-0.5755	0.3566	-0.5797	-1.2606
	(0.4273)	(0.3124)	(2.0147)	(1.0115)
BCLAD-equivalent credential	-0.1295	0.0166	0.0786	-0.1595
	(0.0417)**	(0.0252)	(0.2177)	(0.1841)
BCLAD credential	0.0108	-0.0155	0.0588	-0.0228
	(0.0182)	(0.0119)	(0.0319)	(0.0148)
CLAD credential	0.0026	-0.0026	-0.0081	-0.0099
	(0.0042)	(0.0030)	(0.0135)	(0.0072)
CLAD-equivalent credential	-0.0032	0.0009	-0.0128	0.0039
	(0.0104)	(0.0070)	(0.0346)	(0.0178)
Supplemental authorization in English	0.5741	-0.7138	2.3619	0.1904
	(0.3906)	(0.3080)*	(1.9384)	(0.9686)
Board resolution in English	0.4014	-0.4959	-2.1650	-1.3565
	(0.5122)	(0.3841)	(1.9871)	(1.1171)
Limited assignment emergency in English	0.8291	-0.3845	1.4446	-1.4449
	(0.6515)	(0.4699)	(2.5128)	(1.4178)
Emergency credential	0.0039	-0.0109	-0.0056	-0.0178
	(0.0071)	(0.0055)*	(0.0186)	(0.0126)
Intern credential	-0.1856	-0.0377	-0.1995	-0.0603
	(0.1107)	(0.0400)	(0.1265)	(0.0446)

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**Table G.1 (continued)**

Bachelors in English	0.0069	-0.0111	0.0530	0.0054
	(0.0048)	(0.0035)**	(0.0263)*	(0.0122)
Bachelors in science	-0.0132	0.0062	-0.1306	-0.0024
	(0.0161)	(0.0121)	(0.3101)	(0.0582)
Bachelors in social science	-0.0001	-0.0015	0.0377	-0.0156
	(0.0049)	(0.0036)	(0.0237)	(0.0121)
Bachelors in foreign language	-0.0112	-0.0143	0.0238	0.0020
	(0.0079)	(0.0062)*	(0.0286)	(0.0174)
Bachelors in math	-0.0227	-0.0321	-0.2228	0.1405
	(0.0251)	(0.0194)	(0.6737)	(0.1637)
Bachelors in other subject	0.0058	-0.0073	0.0086	-0.0253
	(0.0048)	(0.0035)*	(0.0232)	(0.0117)*
Minor in science	-0.0054	-0.0142	0.0379	0.1442
	(0.0259)	(0.0195)	(0.1836)	(0.1293)
Minor in social science	-0.0170	-0.0049	-0.0162	-0.0015
	(0.0052)**	(0.0040)	(0.0283)	(0.0170)
Minor in foreign language	-0.0039	-0.0025	0.0437	0.0160
	(0.0083)	(0.0064)	(0.0464)	(0.0207)
Minor in English	-0.0078	-0.0016	0.0238	0.0044
	(0.0077)	(0.0055)	(0.0275)	(0.0154)
Minor in math	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Master's degree	0.0028	-0.0041	0.0069	-0.0110
	(0.0033)	(0.0024)	(0.0141)	(0.0085)
Ph.D. degree	0.0020	0.0308	-0.0709	0.0184
	(0.0190)	(0.0155)*	(0.0771)	(0.0476)
CLAD teacher and EL student interaction	-1.4597	-0.5007		
	(0.9763)	(0.6362)		
CLAD teacher and FEP student interaction	0.9329	0.3777		
	(0.9406)	(0.6747)		
CLAD-equivalent teacher and EL student interaction	-2.2656	1.5712		
	(2.6098)	(1.4284)		

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**Table G.1 (continued)**

CLAD-equivalent teacher and FEP student interaction	-3.8422	3.0714		
	(2.5364)	(1.6802)		
BCLAD teacher and EL student interaction	-0.5982	0.0427		
	(2.7838)	(1.5319)		
BCLAD teacher and FEP student interaction	1.4268	0.6523		
	(3.0828)	(2.1203)		
BCLAD-equivalent teacher and EL student interaction	19.1011	-12.6171		
	(18.2073)	(17.7099)		
BCLAD-equivalent teacher and FEP student interaction	-2.2845	5.7150		
	(16.7714)	(8.9697)		
Female teacher	-0.0050	0.0042	-0.0076	-0.0108
	(0.0036)	(0.0026)	(0.0132)	(0.0077)
Asian teacher	-0.0019	-0.0067	-0.0017	0.0013
	(0.0073)	(0.0056)	(0.0253)	(0.0150)
Black teacher	-0.0070	-0.0107	-0.0043	0.0066
	(0.0052)	(0.0038)**	(0.0210)	(0.0119)
Hispanic teacher	-0.0051	0.0078	-0.0522	0.0073
	(0.0079)	(0.0059)	(0.0236)*	(0.0129)
Other race teacher	-0.0137	-0.0543	-0.0701	-0.0206
	(0.0139)	(0.0103)**	(0.0578)	(0.0391)
Sat9: previous reading scaled score	-1.4194	-0.3067	-1.3640	-0.3432
	(0.0093)**	(0.0038)**	(0.0344)**	(0.0128)**
Constant	944.3831	223.4914	888.9631	280.2756
	(32.7698)**	(6.5516)**	(90.5350)**	(24.4794)**
Observations	33399	33399	4212	4212
Number of student id number	24759		3440	
R-squared	0.75	0.21	0.77	0.23
Standard errors in parentheses				

\* significant at 5%

\*\* significant at 1%

Notes: Each column refers to a separate model, with the dependent variable being gains in reading achievement, and the sample being all students or English Learners. The omitted college major is education and the omitted minor is education/no minor. Regressors not shown include fixed effects as listed at the top of the table, and dummies set to 1 if a given variable was missing.

Some regressors range from 0-1. They are: interns with 0-1 years experience, interns with 2-5 years experience, teachers with emergency credentials and 0-1 years experience, emergency credentials and 2-5 years experience, full credential and 0-1 years experience, full credential and 2-5 years experience, full credential and 6-9 years experience, BCLAD equivalent teachers, and interactions of CLAD, BCLAD, CLAD-equivalent, and BCLAD-equivalent with EL and FEP students.

Variables not included in the results include: dummy for year (1998-1999), dummy variables for missing variables, dummy variables for schools, and dummy variables for zip code.

**Table G.2**

**Math Regression Results for Middle School Students**

	All Students	All Students	EL Students	EL Students
	School fixed effects; student fixed effects	School fixed effects	School fixed effects; student fixed effects	School fixed effects
Parental education level: high school	0.2431	0.2871	-0.5715	-0.6256
	(0.4611)	(0.3063)	(0.7922)	(0.4929)
Parental education level: some college	0.3539	1.0318	0.3498	0.9882
	(0.4859)	(0.3038)**	(1.0756)	(0.6498)
Parental education level: college	0.5154	1.7952	0.2751	1.1313
	(0.5038)	(0.3043)**	(1.1978)	(0.7082)
Parental education level: graduate school	1.4346	5.2383	-0.6803	1.3002
	(0.6522)*	(0.3878)**	(1.7848)	(1.2083)
Student is female	0.0000	-1.4671	0.0000	-1.2192
	(0.0000)	(0.1821)**	(0.0000)	(0.3565)**
Student is Black	0.0000	-5.0051	0.0000	0.6170
	(0.0000)	(0.3393)**	(0.0000)	(1.9316)
Student is Asian	0.0000	1.0145	0.0000	5.8736
	(0.0000)	(0.3250)**	(0.0000)	(1.8039)**
Student is Hispanic	0.0000	-2.4999	0.0000	2.2899
	(0.0000)	(0.3328)**	(0.0000)	(2.4650)
Student is other race	0.0000	1.7919	0.0000	5.9243
	(0.0000)	(0.9276)	(0.0000)	(4.4555)
Student changed schools midyear	-0.1485	-0.7899	0.1645	-0.5476
	(0.7029)	(0.5009)	(1.2567)	(0.8410)
Percentage of students at school that changed unexpectedly	-0.0080	-0.1527	0.2116	-0.0132
	(0.0265)	(0.0223)**	(0.1078)*	(0.0854)
Unexpected school change	-0.6052	-0.3665	2.3612	0.4701
	(0.6473)	(0.4572)	(1.3214)	(0.8788)
Student is new to district that year	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)

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**Table G.2 (continued)**

Percentage of school that is new to the district	-0.1821	-0.1441	-0.1213	-0.3965
	(0.0871)*	(0.0700)*	(0.2135)	(0.1770)*
Age of student on the first day of school	1.2593	-0.8195	0.2628	-0.4755
	(0.9109)	(0.1711)**	(2.7569)	(0.2870)
Student is in 7th grade	5.3202	-1.4838	10.7831	6.3577
	(5.0696)	(0.3481)**	(7.4585)	(0.6669)**
Student is in 8th grade	5.2955	-0.9115	14.4760	5.4308
	(10.1223)	(0.4757)	(14.8719)	(0.8865)**
Student is in 9th grade	14.2193	12.6252	24.6600	19.3362
	(15.1906)	(0.8012)**	(22.3003)	(1.5566)**
Student is in 10 <sup>th</sup> grade	13.8009	7.0405	27.6761	14.9390
	(20.2769)	(1.4926)**	(29.9030)	(3.4005)**
Student is in 11 <sup>th</sup> grade	18.4994	9.9424	0.0000	17.8618
	(29.7470)	(1.6830)**	(0.0000)	(4.1507)**
Student is in 12 <sup>th</sup> grade	0.0000	10.4657	0.0000	14.3545
	(0.0000)	(18.5429)	(0.0000)	(16.8572)
Student is an English learner (EL)	-0.1599	-2.0746		
	(7.7816)	(0.4260)**		
Student was redesignated English proficient (FEP)	-2.4784	-0.8253		
	(7.8772)	(0.5048)		
EL but not Spanish	-21.4505	-0.0593	0.0000	0.3634
	(19.0631)	(0.5629)		
Non Spanish FEP	-13.1735	0.3454		
	(19.1736)	(0.6499)	(0.0000)	(2.2013)
Special-ed student	-0.0393	-2.1571	-7.6176	-6.8167
	(1.9383)	(0.9601)*	(4.4555)	(1.9489)**
Student skipped a year	8.4880	0.0000	15.2754	0.0000
	(9.8448)	(0.0000)	(13.6601)	(0.0000)
Student retained that year	0.0000	-6.8644	0.0000	-6.7360
	(0.0000)	(2.8264)*	(0.0000)	(5.0736)

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**Table G.2 (continued)**

Percentage of year student was absent	-0.1395	-0.2740	-0.1943	-0.2830
	(0.0413)**	(0.0206)**	(0.0715)**	(0.0356)**
Percentage of school on free/reduced meal	-0.0056	-0.0878	0.0092	0.1220
	(0.0614)	(0.0484)	(0.1508)	(0.1025)
Year-round school	1.2442	2.1802	-3.5859	0.7214
	(1.5008)	(1.1269)	(3.1562)	(2.4153)
Charter school	-11.2816	0.0000	0.0000	0.0000
	(21.8354)	(0.0000)	(0.0000)	(0.0000)
Atypical school	26.2201	0.0000	53.4595	0.0000
	(25.8886)	(0.0000)	(32.4238)	(0.0000)
Percentage of school that is Asian	0.0347	-0.2191	0.0143	-0.1290
	(0.0530)	(0.0373)**	(0.1176)	(0.0835)
Percentage of school that is Hispanic	0.0786	-0.3110	0.1206	-0.1861
	(0.0811)	(0.0642)**	(0.1568)	(0.1181)
Percentage of school that is Black	0.1882	-0.0618	0.0275	-0.1236
	(0.0671)**	(0.0517)	(0.1611)	(0.1235)
Percentage of school that is Pacific Islander	-0.4083	-1.2445	1.4807	-0.0739
	(0.6598)	(0.5712)*	(1.5185)	(1.2547)
Percentage of school that is Native American	2.6793	-0.6716	3.1673	-1.1520
	(0.6100)**	(0.5480)	(1.6905)	(1.3735)
Percentage of school that is EL	0.1673	0.1401	0.0815	-0.0780
	(0.0711)*	(0.0571)*	(0.1613)	(0.1171)
Percentage of school that is FEP	0.1851	0.2100	0.0987	-0.1128
	(0.0921)*	(0.0789)**	(0.2132)	(0.1613)
Average math class size, annual	0.0498	0.0707	-0.0096	0.0340
	(0.0195)*	(0.0152)**	(0.0404)	(0.0299)
Classroom peer group	2.2579	3.1821	4.3415	4.0076
	(0.2547)**	(0.2222)**	(0.7781)**	(0.6031)**
Grade-level peer group	10.2683	-10.8322	4.0514	-6.6291
	(1.4290)**	(1.0170)**	(3.4105)	(2.0789)**

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**Table G.2 (continued)**

Number of math classes taken annually, 0-1	-0.9455	-2.5807	-0.7310	-0.5191
	(0.7148)	(0.5472)**	(1.1798)	(0.8980)
Number of math classes taken annually, >2	3.5365	0.7806	2.7815	1.1747
	(0.6571)**	(0.5846)	(1.1662)*	(1.0144)
Teachers with full credential and 0-2 years experience	-0.8321	-0.7539	-0.0819	-1.3256
	(0.4212)*	(0.3262)*	(0.9207)	(0.6626)*
Teachers with full credential and 3-5 year experience	-0.0731	-0.1436	0.6064	-1.1869
	(0.4276)	(0.3351)	(0.9205)	(0.6618)
Teachers with full credential and 6-9 years experience	-1.0109	-0.2994	-1.2893	0.0407
	(0.4240)*	(0.3170)	(0.9425)	(0.6635)
BCLAD-equivalent credential	0.0111	-0.0938	0.0475	-0.0103
	(0.0415)	(0.0280)**	(0.1800)	(0.1705)
BCLAD credential	0.0083	-0.0128	-0.0148	-0.0128
	(0.0105)	(0.0080)	(0.0167)	(0.0100)
CLAD credential	0.0184	0.0258	0.0056	0.0096
	(0.0082)*	(0.0065)**	(0.0166)	(0.0126)
CLAD-equivalent credential	-0.0036	0.0078	-0.0060	0.0054
	(0.0041)	(0.0032)*	(0.0071)	(0.0051)
Supplemental authorization in Math	-0.0167	-1.4388	-1.7798	-3.2089
	(0.3561)	(0.2778)**	(0.7606)*	(0.5467)**
Board resolution in Math	1.5346	0.9472	-2.4427	0.2233
	(0.5666)**	(0.4453)*	(1.5161)	(1.0616)
Limited assignment emergency in Math	1.4263	1.8097	3.1838	1.2007
	(0.8328)	(0.5850)**	(2.1026)	(1.2068)
Emergency credential	0.0057	-0.0037	0.0003	-0.0159
	(0.0070)	(0.0052)	(0.0128)	(0.0085)
Intern credential	0.0237	0.0015	0.0030	-0.0245
	(0.0292)	(0.0261)	(0.0376)	(0.0319)

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**Table G.2 (continued)**

Bachelors in math	0.0086 (0.0049)	-0.0088 (0.0038)*	-0.0058 (0.0115)	-0.0173 (0.0078)*
Bachelors in science	0.0006 (0.0060)	0.0095 (0.0051)	-0.0189 (0.0150)	-0.0116 (0.0115)
Bachelors in English	0.0374 (0.0122)**	0.0005 (0.0084)	0.0093 (0.0312)	0.0059 (0.0196)
Bachelors in social science	-0.0007 (0.0050)	-0.0157 (0.0038)**	-0.0206 (0.0117)	-0.0146 (0.0078)
Bachelors in foreign language	0.0239 (0.0143)	0.0189 (0.0097)	-0.0613 (0.0315)	0.0130 (0.0225)
Bachelors in other subject	-0.0053 (0.0040)	-0.0068 (0.0032)*	-0.0135 (0.0099)	-0.0077 (0.0068)
Minor in science	-0.0016 (0.0105)	-0.0245 (0.0078)**	-0.0330 (0.0242)	-0.0580 (0.0166)**
Minor in English	0.0348 (0.0150)*	0.0061 (0.0104)	0.0152 (0.0484)	0.0856 (0.0330)**
Minor in social science	-0.0058 (0.0053)	-0.0221 (0.0043)**	-0.0126 (0.0131)	-0.0303 (0.0102)**
Minor in foreign language	0.0165 (0.0099)	0.0302 (0.0080)**	0.0073 (0.0207)	0.0145 (0.0130)
Minor in math	0.0092 (0.0077)	0.0266 (0.0068)**	0.0253 (0.0201)	0.0483 (0.0160)**
Master's degree	-0.0021 (0.0032)	0.0069 (0.0026)**	0.0165 (0.0070)*	0.0168 (0.0052)**
Ph.D. degree	-0.0116 (0.0146)	-0.0439 (0.0117)**	-0.0101 (0.0295)	-0.0224 (0.0215)
CLAD teacher and EL student interaction	-0.2164 (0.7238)	-0.2874 (0.5153)		
CLAD teacher and FEP student interaction	1.3620 (0.8881)	1.6375 (0.6881)*		
CLAD-equivalent teacher and EL student interaction	-0.7363 (1.5583)	-0.5063 (1.2546)		

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**Table G.2 (continued)**

CLAD-equivalent teacher and FEP student interaction	-1.9415	-1.8408		
	(2.1716)	(1.9107)		
BCLAD teacher and EL student interaction	-4.4353	0.1697		
	(1.5376)**	(1.1149)		
BCLAD teacher and FEP student interaction	-2.2034	-2.6333		
	(2.6119)	(1.7101)		
BCLAD-equivalent teacher and EL student interaction	6.9271	-1.9346		
	(18.7889)	(18.8401)		
BCLAD-equivalent teacher and FEP student interaction	3.5534	-0.2530		
	(17.7566)	(9.6266)		
Female teacher	0.0057	-0.0009	-0.0033	-0.0091
	(0.0029)*	(0.0023)	(0.0065)	(0.0047)*
Asian teacher	0.0123	-0.0035	0.0004	-0.0064
	(0.0048)*	(0.0038)	(0.0099)	(0.0076)
Black teacher	0.0028	-0.0112	0.0002	0.0101
	(0.0051)	(0.0040)**	(0.0133)	(0.0099)
Hispanic teacher	-0.0105	-0.0015	0.0075	0.0054
	(0.0064)	(0.0052)	(0.0101)	(0.0076)
Other race teacher	-0.0002	-0.0233	0.0220	0.0266
	(0.0138)	(0.0118)*	(0.0493)	(0.0349)
Sat9: previous math scaled score	-1.3694	-0.2372	-1.3696	-0.3854
	(0.0079)**	(0.0031)**	(0.0179)**	(0.0081)**
Constant	887.8738	208.8670	838.4743	267.0307
	(27.5553)**	(6.4882)**	(47.6968)**	(20.0475)**
Observations	42052	42052	8671	8671
Number of student id number	30226		6445	
R-squared	0.74	0.17	0.77	0.27
Number of location of school with max days		87		48
Standard errors in parentheses				

\* significant at 5%

\*\* significant at 1%

Notes: Each column refers to a separate model, with the dependent variable being gains in math achievement, and the sample being all students or English Learners. The omitted college major is education and the omitted minor is education/no minor. Regressors not shown include fixed effects as listed at the top of the table, and dummies set to 1 if a given variable was missing.

Some regressors range from 0-1. They are: interns with 0-1 years experience, interns with 2-5 years experience, teachers with emergency credentials and 0-1 years experience, emergency credentials and 2-5 years experience, full credential and 0-1 years experience, full credential and 2-5 years experience, full credential and 6-9 years experience, BCLAD equivalent teachers, and interactions of CLAD, BCLAD, CLAD-equivalent, and BCLAD-equivalent with EL and FEP students.

Variables not included in the results include: dummy for year (1998-1999), dummy variables for missing variables, dummy variables for schools, and dummy variables for zip code.

**Table G.3**

**Reading Regression Results for High School Students**

	All Students	All Students	EL Students	EL Students
	School fixed effects; student fixed effects	School fixed effects	School fixed effects; student fixed effects	School fixed effects
Parental education level: high school	-0.8826 (0.6490)	-0.1906 (0.3515)	-1.2124 (1.6267)	0.9291 (0.7325)
Parental education level: some college	-0.7205 (0.6321)	0.8159 (0.3364)*	0.8810 (2.3879)	1.4904 (0.9630)
Parental education level: college	-0.5208 (0.6731)	1.1280 (0.3379)**	-2.2246 (2.8180)	1.4894 (1.0202)
Parental education level: graduate school	-0.4755 (0.8931)	3.7853 (0.4268)**	5.0151 (4.1361)	2.7321 (2.0350)
Student is female	0.0000 (0.0000)	-0.3570 (0.1987)	0.0000 (0.0000)	-0.5312 (0.5279)
Student is black	0.0000 (0.0000)	-4.3118 (0.3731)**	0.0000 (0.0000)	-1.2085 (2.4531)
Student is Asian	0.0000 (0.0000)	-2.6449 (0.3208)**	0.0000 (0.0000)	-0.6843 (2.1685)
Student is Hispanic	0.0000 (0.0000)	-2.1223 (0.3441)**	0.0000 (0.0000)	-1.5601 (3.4669)
Student is other race	0.0000 (0.0000)	-0.5327 (1.0429)	0.0000 (0.0000)	-6.6057 (4.8494)
Student changed schools midyear	-2.5830 (0.9809)**	-1.2192 (0.5544)*	-4.0326 (2.5897)	-0.1334 (1.1661)
Percentage of students at school that changed unexpectedly	0.0427 (0.0993)	-0.2670 (0.0598)**	0.2175 (0.5039)	-0.0182 (0.1550)
Unexpected school change	-0.2173 (0.8753)	-0.0465 (0.5444)	-2.6050 (2.6153)	-0.4512 (1.1592)
Student is new to district that year	0.0000 (0.0000)	18.0153 (16.6567)	0.0000 (0.0000)	0.0000 (0.0000)

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**Table G.3 (continued)**

Percentage of school that is new to the district	0.1180	0.0999	-0.7163	0.0447
	(0.2361)	(0.1369)	(1.0596)	(0.4968)
Age of student on the first day of school	0.4062	-1.0338	-4.9223	-1.3016
	(1.4859)	(0.1799)**	(4.6751)	(0.3807)**
Student is in 10 <sup>th</sup> grade	-5.7869	4.4588	-2.6416	3.8321
	(3.1722)	(0.3327)**	(6.3454)	(0.7981)**
Student is in 11 <sup>th</sup> grade	-9.5584	8.3863	-3.3349	8.0181
	(6.3331)	(0.4653)**	(12.6044)	(1.0921)**
Student is in 12 <sup>th</sup> grade	-7.2746	13.3952	-2.7931	7.3093
	(10.4164)	(3.5223)**	(19.8182)	(5.6345)
Student is an English learner (EL)	4.2858	-2.3775		
	(11.7775)	(0.5479)**		
Student was redesignated English proficient (FEP)	5.7390	-0.3680		
	(11.9284)	(0.6759)		
EL but not Spanish	-3.0013	-2.1956	0.0000	-3.9015
	(2.5774)	(0.6617)**	(0.0000)	(3.4223)
Non Spanish FEP	0.0000	0.1398		
	(0.0000)	(0.8158)		
Special-ed student	-0.7172	-6.3120	-3.0006	-3.6922
	(2.9865)	(1.2595)**	(7.7055)	(2.9170)
Student skipped a year	0.0000	0.0000	-6.9032	6.5463
	(0.0000)	(0.0000)	(11.8006)	(2.7516)*
Student retained that year	7.2444	-5.0695	0.0000	0.0000
	(5.7064)	(1.4227)**	(0.0000)	(0.0000)
Percentage of year student was absent	-0.1266	-0.1365	-0.4497	-0.1724
	(0.0492)*	(0.0225)**	(0.1360)**	(0.0515)**
Percentage of school on free/reduced meal	-0.0265	-0.0554	-0.0588	0.0018
	(0.0784)	(0.0531)	(0.2689)	(0.1452)
Year-round school	-18.5671	-4.1334	0.0000	-1.9231
	(17.2084)	(7.1496)	(0.0000)	(17.0891)
Charter school	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)

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**Table G.3 (continued)**

Atypical school	-4.7333	0.0000	9.7500	0.0000
	(10.7012)	(0.0000)	(34.2636)	(0.0000)
Percentage of school that is Asian	-0.1113	0.0653	-0.3012	-0.2536
	(0.0849)	(0.0547)	(0.3005)	(0.1560)
Percentage of school that is Hispanic	-0.0387	0.1834	0.0494	-0.3783
	(0.1459)	(0.0916)*	(0.4861)	(0.2221)
Percentage of school that is Black	0.0559	0.0926	0.3209	-0.0555
	(0.0979)	(0.0623)	(0.3846)	(0.1942)
Percentage of school that is Pacific Islander	0.3794	-1.7843	-8.6621	-4.8224
	(1.1563)	(0.8163)*	(4.0954)*	(2.2040)*
Percentage of school that is Native American	1.9320	-0.7450	7.6766	-3.8754
	(1.3888)	(1.1091)	(6.4460)	(3.4568)
Percentage of school that is EL	-0.0081	-0.0552	-0.2262	0.2676
	(0.1262)	(0.0835)	(0.4051)	(0.2055)
Percentage of school that is FEP	0.2763	-0.4443	1.6351	-0.0657
	(0.2257)	(0.1809)*	(0.9355)	(0.5029)
Classroom peer group	0.2888	5.5443	-1.7294	2.7486
	(0.4440)	(0.2325)**	(1.3837)	(0.6786)**
Grade-level peer group	3.2728	-3.9126	2.1956	-1.0918
	(2.2626)	(1.1955)**	(8.2165)	(3.1119)
Average English class size, annual	-0.0168	-0.0547	0.0674	0.0451
	(0.0278)	(0.0174)**	(0.0821)	(0.0453)
Number of English classes taken annually, 0-1	-2.0217	-0.3199	0.5718	-2.0768
	(1.2139)	(0.6808)	(2.1038)	(1.0606)
Number of English classes taken annually, >2	0.6643	0.8412	0.1100	0.1566
	(0.6858)	(0.4470)	(2.0709)	(1.1580)
Teachers with full credential and 0-2 years experience	-0.1553	-0.2151	3.2286	0.1239
	(0.5383)	(0.3805)	(1.9637)	(0.9614)

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**Table G.3 (continued)**

Teachers with full credential and 3-5 year experience	-0.6626	-1.5235	1.9231	-0.4318
	(0.5314)	(0.3868)**	(1.8340)	(0.9553)
Teachers with full credential and 6-9 years experience	-0.1881	-0.4837	-1.0930	-0.4463
	(0.4473)	(0.3269)	(1.8015)	(0.9902)
BCLAD-equivalent credential	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
BCLAD credential	-0.0185	-0.0005	-0.0557	-0.0261
	(0.0232)	(0.0144)	(0.0351)	(0.0161)
CLAD credential	0.0075	-0.0058	-0.0446	0.0041
	(0.0047)	(0.0033)	(0.0145)**	(0.0076)
CLAD-equivalent credential	-0.0013	0.0024	-0.0178	-0.0089
	(0.0107)	(0.0079)	(0.0331)	(0.0191)
Supplemental authorization in English	-0.3081	-1.2867	0.5489	2.1516
	(0.5989)	(0.4115)**	(2.1355)	(1.0733)*
Board resolution in English	1.9955	-0.8355	4.5636	2.4821
	(1.0350)	(0.7128)	(2.5182)	(1.5294)
Limited assignment emergency in English	2.0271	-1.4209	2.8578	0.8231
	(1.1129)	(0.7746)	(2.9758)	(2.0739)
Emergency credential	-0.0338	0.0047	-0.0394	-0.0165
	(0.0154)*	(0.0109)	(0.0779)	(0.0294)
Intern credential	-0.0025	0.0168	-0.1533	0.0873
	(0.0384)	(0.0304)	(0.1162)	(0.0842)
Bachelors in English	-0.0034	-0.0099	0.0208	-0.0135
	(0.0075)	(0.0053)	(0.0272)	(0.0155)
Bachelors in science	0.0225	0.0024	0.0334	0.0074
	(0.0198)	(0.0124)	(0.0737)	(0.0303)
Bachelors in social science	-0.0067	-0.0019	0.0094	-0.0102
	(0.0082)	(0.0059)	(0.0277)	(0.0163)
Bachelors in math	-0.0551	0.0138	0.0322	-0.0311
	(0.0282)	(0.0424)	(0.0371)	(0.0192)
Bachelors in foreign language	0.0152	0.0053	-0.1353	0.0276
	(0.0119)	(0.0088)	(0.1136)	(0.1578)

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**Table G.3 (continued)**

Bachelors in other subject	-0.0083	0.0009	0.0162	-0.0223
	(0.0083)	(0.0059)	(0.0302)	(0.0167)
Minor in science	0.0000	-0.0302	0.0000	-0.2140
	(0.0000)	(0.0457)	(0.0000)	(0.1761)
Minor in English	-0.0004	0.0009	0.0271	0.0166
	(0.0067)	(0.0049)	(0.0250)	(0.0140)
Minor in social science	-0.0131	0.0031	-0.0337	0.0099
	(0.0058)*	(0.0038)	(0.0259)	(0.0135)
Minor in math	-0.0022	-0.0148	0.1358	-0.0083
	(0.0321)	(0.0248)	(0.1003)	(0.0621)
Minor in foreign language	-0.0035	-0.0156	0.0297	-0.0092
	(0.0115)	(0.0074)*	(0.0338)	(0.0204)
Master's degree	0.0104	0.0091	0.0331	0.0110
	(0.0038)**	(0.0026)**	(0.0152)*	(0.0075)
Ph.D. degree	0.0374	0.0123	0.0750	0.0468
	(0.0178)*	(0.0108)	(0.0472)	(0.0267)
CLAD teacher and EL student interaction	-3.6075	1.6160		
	(0.9347)**	(0.6253)**		
CLAD teacher and FEP student interaction	-0.1868	0.7783		
	(1.1837)	(0.8347)		
CLAD-equivalent teacher and EL student interaction	-0.6155	-1.3798		
	(2.4437)	(1.6701)		
CLAD-equivalent teacher and FEP student interaction	2.1908	-3.3413		
	(4.4149)	(2.6200)		
BCLAD teacher and EL student interaction	-5.1573	-0.5826		
	(2.7715)	(1.7152)		
BCLAD teacher and FEP student interaction	-2.9497	1.0969		
	(4.2623)	(2.5818)		
BCLAD-equivalent teacher and EL student interaction	0.0000	0.0000		
	(0.0000)	(0.0000)		

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**Table G.3 (continued)**

BCLAD-equivalent teacher and FEP student interaction	0.0000	0.0000		
	(0.0000)	(0.0000)		
Female teacher	-0.0037	0.0000	-0.0120	0.0041
	(0.0035)	(0.0024)	(0.0129)	(0.0066)
Asian teacher	0.0127	0.0012	-0.0204	-0.0028
	(0.0242)	(0.0109)	(0.0579)	(0.0262)
Black teacher	-0.0091	-0.0076	0.0090	0.0057
	(0.0069)	(0.0048)	(0.0218)	(0.0123)
Hispanic teacher	0.0110	-0.0082	-0.0015	-0.0004
	(0.0070)	(0.0048)	(0.0236)	(0.0123)
Other race teacher	0.0286	-0.0041	0.0174	0.0416
	(0.0304)	(0.0175)	(0.0893)	(0.0327)
Sat9: previous reading scaled score	-1.4566	-0.2732	-1.4360	-0.3702
	(0.0110)**	(0.0042)**	(0.0382)**	(0.0134)**
Constant	988.8215	213.2768	1,054.3901	288.2774
	(33.3978)**	(5.5540)**	(89.0405)**	(15.7182)**
Observations	29462	29462	3781	3781
Number of student id number	21917		3004	
R-squared	0.71	0.15	0.71	0.21
Standard errors in parentheses				

\* significant at 5%  
 \*\* significant at 1%

Notes: Each column refers to a separate model, with the dependent variable being gains in reading achievement, and the sample being all students or English Learners. The omitted college major is education and the omitted minor is education/no minor. Regressors not shown include fixed effects as listed at the top of the table, and dummies set to 1 if a given variable was missing.

Some regressors range from 0-1. They are: interns with 0-1 years experience, interns with 2-5 years experience, teachers with emergency credentials and 0-1 years experience, emergency credentials and 2-5 years experience, full credential and 0-1 years experience, full credential and 2-5 years experience, full credential and 6-9 years experience, BCLAD equivalent teachers, and interactions of CLAD, BCLAD, CLAD-equivalent, and BCLAD-equivalent with EL and FEP students.

Variables not included in the results include: dummy for year (1998-1999), dummy variables for missing variables, dummy variables for schools, and dummy variables for zip code.

**Table G.4**

**Math Regression Results for High School Students**

	All Students	All Students	EL Students	EL Students
	School fixed effects; student fixed effects	School fixed effects	School fixed effects; student fixed effects	School fixed effects
Parental education level: high school	-0.6379	0.0310	-0.6525	0.3060
	(0.6327)	(0.3647)	(1.2301)	(0.6528)
Parental education level: some college	-0.1481	1.3316	-3.1680	0.8199
	(0.6381)	(0.3550)**	(1.8003)	(0.8932)
Parental education level: college	-1.1145	1.1298	-4.3073	1.9389
	(0.6695)	(0.3538)**	(2.1601)*	(0.9192)*
Parental education level: graduate school	-1.8040	4.1051	0.0349	4.1535
	(0.8730)*	(0.4404)**	(3.0501)	(1.7774)*
Student is female	0.0000	-2.2826	0.0000	-2.3855
	(0.0000)	(0.2095)**	(0.0000)	(0.4737)**
Student is black	0.0000	-4.9481	0.0000	0.6905
	(0.0000)	(0.3971)**	(0.0000)	(2.1393)
Student is Asian	0.0000	-0.8031	0.0000	4.9557
	(0.0000)	(0.3451)*	(0.0000)	(1.9813)*
Student is Hispanic	0.0000	-2.2298	0.0000	2.0190
	(0.0000)	(0.3651)**	(0.0000)	(3.2169)
Student is other race	0.0000	0.1874	0.0000	-0.5812
	(0.0000)	(1.1235)	(0.0000)	(4.8834)
Student changed schools midyear	-0.8083	-2.4722	0.3785	-0.4392
	(0.8021)	(0.5114)**	(1.7096)	(0.9656)
Percentage of students at school that changed unexpectedly	-0.0387	-0.1861	-0.0252	-0.0140
	(0.0662)	(0.0479)**	(0.1746)	(0.1084)
Unexpected school change	0.4447	-0.5345	0.4483	0.7452
	(0.7354)	(0.4923)	(1.6708)	(0.9400)
Student is new to district that year	0.0000	-11.4107	0.0000	0.0000
	(0.0000)	(19.8365)	(0.0000)	(0.0000)

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**Table G.4 (continued)**

Percentage of school that is new to the district	0.0317	-0.0976	-0.1695	0.0758
	(0.1556)	(0.0966)	(0.5245)	(0.3360)
Age of student on the first day of school	2.9422	-1.5237	1.6193	-2.1845
	(1.5047)	(0.1802)**	(3.6206)	(0.3230)**
Student is in 10 <sup>th</sup> grade	-0.5618	-3.6309	0.9857	3.2610
	(2.2871)	(0.3327)**	(4.4856)	(0.7131)**
Student is in 11 <sup>th</sup> grade	-4.2101	0.1211	-5.1259	5.4284
	(4.5447)	(0.4622)	(8.9247)	(0.9715)**
Student is in 12 <sup>th</sup> grade	-15.9809	2.5318	-12.5447	9.5989
	(6.9914)*	(1.7525)	(14.0788)	(3.7614)*
Student is an English learner (EL)	-3.8414	-2.8662		
	(10.4780)	(0.4934)**		
Student was redesignated English proficient (FEP)	0.5147	-0.0961		
	(10.6711)	(0.6943)		
EL but not Spanish	1.1541	0.2905	0.0000	0.1574
	(2.6741)	(0.6421)	(0.0000)	(3.0999)
Non Spanish FEP	0.0000	0.1415		
	(0.0000)	(0.8952)		
Special-ed student	-1.0264	-6.6133	-8.4567	-6.1924
	(2.6263)	(1.0681)**	(6.7849)	(2.1454)**
Student skipped a year	0.0000	0.0000	-5.2509	0.0000
	(0.0000)	(0.0000)	(8.5664)	(0.0000)
Student retained that year	4.6509	0.3831	0.0000	-1.3527
	(4.3536)	(1.3229)	(0.0000)	(2.4009)
Percentage of year student was absent	-0.1206	-0.2783	-0.1059	-0.1616
	(0.0480)*	(0.0244)**	(0.1047)	(0.0481)**
Percentage of school on free/reduced meal	-0.0505	-0.0479	-0.1383	-0.1733
	(0.0583)	(0.0451)	(0.1541)	(0.1068)
Year-round school	7.0018	2.1108	0.0000	4.6172
	(10.7200)	(6.2716)	(0.0000)	(18.7583)
Charter school	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)

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**Table G.4 (continued)**

Atypical school	17.4175	0.0000	9.3457	0.0000
	(10.3325)	(0.0000)	(15.6107)	(0.0000)
Percentage of school that is Asian	0.1054	0.0936	0.2730	0.0662
	(0.0686)	(0.0515)	(0.1937)	(0.1333)
Percentage of school that is Hispanic	0.1603	0.1602	-0.1288	-0.0492
	(0.1063)	(0.0793)*	(0.2498)	(0.1765)
Percentage of school that is Black	0.2418	0.1666	0.2275	0.0728
	(0.0781)**	(0.0543)**	(0.2411)	(0.1520)
Percentage of school that is Pacific Islander	0.3510	-1.9052	-2.2940	-1.2056
	(0.9695)	(0.7676)*	(2.7833)	(1.7300)
Percentage of school that is Native American	3.7085	4.2764	0.9192	3.5035
	(1.0024)**	(0.8384)**	(3.1998)	(2.2686)
Percentage of school that is EL	0.0009	-0.0367	0.1596	0.2961
	(0.1032)	(0.0815)	(0.2548)	(0.1843)
Percentage of school that is FEP	-0.0351	-0.6733	0.5015	-0.3354
	(0.1988)	(0.1691)**	(0.5083)	(0.3772)
Classroom peer group	-0.2187	7.2505	-1.3366	6.5816
	(0.3563)	(0.2422)**	(1.2392)	(0.7803)**
Grade-level peer group	5.1576	-3.7984	-7.3333	-0.4626
	(1.9933)**	(1.1249)**	(4.7895)	(2.4503)
Average math class size, annual	0.0272	0.0115	0.0721	0.0597
	(0.0256)	(0.0175)	(0.0631)	(0.0391)
Number of math classes taken annually, 0-1	-1.8934	-3.5023	-1.5593	-1.8068
	(0.9289)*	(0.6139)**	(1.9321)	(1.1956)
Number of math classes taken annually, >2	0.6687	-0.7499	-2.1590	-0.2970
	(0.8348)	(0.5814)	(1.5782)	(1.0201)
Highest annual math level, midlevel 1	-0.4999	-4.7727	0.0755	1.6949
	(0.5244)	(0.2810)**	(1.1221)	(1.1384)**

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**Table G.4 (continued)**

Highest annual math level, midlevel 2	-2.7351	-2.5759	0.8424	6.8947
	(0.5267)**	(0.3627)**	(1.8039)	(0.6453)**
Highest annual math level, advanced	-3.0555	5.3175	0.0000	0.0000
	(3.6020)	(2.7297)	(0.0000)	(0.0000)
Teachers with full credential and 0-2 years experience	-0.7880	-2.1263	-2.2383	-1.3893
	(0.5957)	(0.4480)**	(1.4329)	(0.9460)
Teachers with full credential and 3-5 year experience	0.4789	-0.5255	-0.7267	-1.7845
	(0.6465)	(0.4792)	(1.4742)	(0.9800)
Teachers with full credential and 6-9 years experience	-0.9350	-0.5251	-2.2585	-2.0266
	(0.5102)	(0.3929)	(1.2930)	(0.8655)*
BCLAD-equivalent credential	0.0000	0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
BCLAD credential	0.0063	-0.0099	-0.0120	-0.0015
	(0.0168)	(0.0121)	(0.0233)	(0.0147)
CLAD-equivalent credential	0.0119	-0.0022	0.0131	0.0284
	(0.0087)	(0.0060)	(0.0161)	(0.0104)**
CLAD credential	0.0131	-0.0100	0.0008	-0.0103
	(0.0061)*	(0.0046)*	(0.0119)	(0.0079)
Supplemental authorization in Math	-1.2900	-2.6452	1.0274	-0.8501
	(0.5507)*	(0.4209)**	(1.5167)	(1.0265)
Board resolution in Math	-4.4498	-5.6398	-2.0869	-2.2324
	(1.6873)**	(1.1184)**	(4.3961)	(2.6505)
Limited assignment emergency in Math	2.5997	-0.6377	11.0289	7.5925
	(1.5430)	(1.0503)	(5.7640)	(2.8823)**
Emergency credential	0.0120	-0.0157	0.0728	0.0048
	(0.0103)	(0.0081)	(0.0278)**	(0.0165)
Intern credential	-0.0169	0.0364	0.0450	-0.0224
	(0.0276)	(0.0254)	(0.0707)	(0.0620)
Bachelors in math	0.0031	-0.0119	0.0070	0.0033
	(0.0064)	(0.0048)*	(0.0165)	(0.0110)

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**Table G.4 (continued)**

Bachelors in science	-0.0037	-0.0009	0.0076	0.0050
	(0.0087)	(0.0065)	(0.0246)	(0.0162)
Bachelors in English	0.0094	-0.0164	0.0650	0.0169
	(0.0110)	(0.0088)	(0.0409)	(0.0271)
Bachelors in social science	-0.0029	-0.0166	0.0050	0.0095
	(0.0074)	(0.0055)**	(0.0206)	(0.0140)
Bachelors in foreign language	-0.0198	-0.0025	-0.0346	0.0686
	(0.0175)	(0.0141)	(0.0464)	(0.0292)*
Bachelors in other subject	0.0097	-0.0200	0.0082	-0.0058
	(0.0072)	(0.0055)**	(0.0183)	(0.0125)
Minor in math	-0.0043	0.0086	-0.0541	0.0292
	(0.0085)	(0.0060)	(0.0241)*	(0.0153)
Minor in science	-0.0074	-0.0063	0.0191	0.0210
	(0.0094)	(0.0070)	(0.0299)	(0.0200)
Minor in English	-0.0288	-0.0076	-0.0242	-0.0061
	(0.0166)	(0.0131)	(0.0627)	(0.0396)
Minor in social science	0.0121	0.0047	-0.0319	-0.0134
	(0.0090)	(0.0063)	(0.0268)	(0.0173)
Minor in foreign language	0.0043	0.0147	-0.0276	-0.0148
	(0.0166)	(0.0123)	(0.0280)	(0.0185)
Master's degree	-0.0040	0.0007	0.0178	0.0116
	(0.0039)	(0.0030)	(0.0102)	(0.0069)
Ph.D. degree	0.0251	-0.0090	-0.0100	0.0097
	(0.0139)	(0.0103)	(0.0422)	(0.0257)
CLAD teacher and EL student interaction	-1.4482	0.5738		
	(1.0556)	(0.7159)		
CLAD teacher and FEP student interaction	-0.4034	-0.6029		
	(1.5102)	(1.1020)		
CLAD-equivalent teacher and EL student interaction	-1.3433	0.3858		
	(1.4430)	(0.9709)		
CLAD-equivalent teacher and FEP student interaction	-0.8571	0.4147		
	(2.1615)	(1.4921)		

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**Table G.4 (continued)**

BCLAD teacher and EL student interaction	-0.0328	-0.3033		
	(2.0169)	(1.3637)		
BCLAD teacher and FEP student interaction	-0.4592	-1.6136		
	(3.2537)	(2.2081)		
BCLAD-equivalent teacher and EL student interaction	0.0000	0.0000		
	(0.0000)	(0.0000)		
BCLAD-equivalent teacher and FEP student interaction	0.0000	0.0000		
	(0.0000)	(0.0000)		
Female teacher	-0.0008	0.0089	0.0090	0.0116
	(0.0036)	(0.0028)**	(0.0103)	(0.0066)
Asian teacher	-0.0217	-0.0203	-0.0135	0.0105
	(0.0070)**	(0.0053)**	(0.0158)	(0.0104)
Black teacher	-0.0059	-0.0064	-0.0388	-0.0016
	(0.0101)	(0.0075)	(0.0274)	(0.0179)
Hispanic teacher	0.0160	0.0152	0.0269	-0.0015
	(0.0078)*	(0.0060)*	(0.0182)	(0.0120)
Other race teacher	-0.0253	0.0173	-0.0302	0.0375
	(0.0142)	(0.0107)	(0.0339)	(0.0220)
Sat9: previous math scaled score	-1.4598	-0.3144	-1.4337	-0.5558
	(0.0092)**	(0.0040)**	(0.0239)**	(0.0125)**
Constant	870.5935	259.7103	940.3411	411.5685
	(36.9052)**	(5.1581)**	(68.3186)**	(12.8576)**
Observations	37362	37362	6019	6019
Number of student id number	26697		4478	
R-squared	0.72	0.19	0.74	0.30
Standard errors in parentheses				

\* significant at 5%  
 \*\* significant at 1%

Notes: Each column refers to a separate model, with the dependent variable being gains in math achievement, and the sample being all students or English Learners. The omitted college major is education and the omitted minor is education/no minor. Regressors not shown include fixed effects as listed at the top of the table, and dummies set to 1 if a given variable was missing.

Some regressors range from 0-1. They are: interns with 0-1 years experience, interns with 2-5 years experience, teachers with emergency credentials and 0-1 years experience, emergency credentials and 2-5 years experience, full credential and 0-1 years experience, full credential and 2-5 years experience, full credential and 6-9 years experience, BCLAD equivalent teachers, and interactions of CLAD, BCLAD, CLAD-equivalent, and BCLAD-equivalent with EL and FEP students.

Variables not included in the results include: dummy for year (1998-1999), dummy variables for missing variables, dummy variables for schools, and dummy variables for zip code.

The omitted category for math level is lower than midlevel 1. Midlevel math1 includes algebra 1, geometry, and unified 1 and 2. Midlevel 2 include algebra 2 and unified 3. Advanced math includes pre-calculus, calculus, and other advanced mathematics such as statistics.