

# **UNC Teacher Quality Research: Teacher Preparation Program Effectiveness**

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**University of North Carolina Asheville**

**Gary T. Henry, Charles L. Thompson, Kevin C. Bastian, C. Kevin Fortner, and Jade V. Marcus  
Carolina Institute for Public Policy**

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## **University of North Carolina Asheville Teacher Preparation Program Effectiveness**

The University of North Carolina (UNC) established an initial agenda of research in the summer of 2009 to address the entry, persistence, and quality of teacher and school leader preparation in North Carolina. Since that time, UNC's teacher quality research has become a very important component of the University's efforts to prepare more, higher quality teachers and school leaders for the public schools of North Carolina. The results are enabling the leaders on UNC campuses to identify areas of strength, potential areas of weakness, and the areas where their graduates' performance is comparable to the performance of teachers from a variety of other sources. The research should enable state education policy makers to understand where their policies and investments are paying off as well as where they are not achieving the intended purposes.

For this report the research team at the Carolina Institute for Public Policy (CIPP) compared the performance of UNC traditionally prepared undergraduates to all other teachers in the state. Detailed below are key features of these models, a summary of CIPP's findings, graphs of the results, and a table of teacher counts in each model.

### Model Information

Data for this analysis spanned the 2005-2006 to 2009-2010 school years and was limited to teachers with less than five years of experience in order to best capture the effects of teacher preparation on student achievement. For this analysis the performance of University of North Carolina Asheville traditionally prepared teachers was compared to the performance of all other teachers in the state. Models were generated across eleven grade-subject areas—elementary school mathematics and reading; middle grades mathematics, reading, science (8<sup>th</sup> grade), and algebra; and high school overall, mathematics, English I, science and social studies—with control variables for prior student achievement and demographic information, classroom and teacher indicators, including years of teaching experience and out-of-field teaching, and school level contextual factors. Finally, institutions needed at least ten traditionally prepared undergraduate teachers in the grade-subject area for results to be reported.

### Summary of Results

The following key points summarize the results for traditionally prepared undergraduates from UNC Asheville. There were insufficient data to generate the following comparisons:

- MS science
- MS algebra
- HS social studies

UNC Asheville traditionally prepared undergraduates outperformed:

- NC Private University Undergraduates in MS mathematics
- Out of State University Undergraduates in ES mathematics
- Other Licensure Only in ES mathematics
- Visiting International Faculty in HS all subjects
- Unclassifiable in ES mathematics

UNC Asheville traditionally prepared undergraduates underperformed:

- Other UNC Traditionally Prepared Undergraduates in MS reading

- UNC Graduate Degree in MS reading
- NC Private Undergraduates in MS reading
- NC Private Graduate Degree in HS English I
- Out of State University Graduate Degree in MS reading and HS English I
- UNC Licensure Only in ES reading
- Teach for America in ES reading, MS mathematics, MS reading, HS all subjects, HS English I and HS mathematics
- Visiting International Faculty in ES reading and MS reading
- Alternative Entry in MS reading

## Graphs

The following pages present graphical results at the elementary, middle, and high school levels. For interpretation four points are important:

- 1) UNC Asheville (UNCA) is set to zero for all graphs and each plot represents the relative difference between the marked category and UNCA.
- 2) All model results have been multiplied by 100 to express findings as percentages of standard deviations.
- 3) Significant results are expressed with black labels, diamond symbols and asterisks; non-significant results are grayed with square symbols
- 4) Scaling for graphs differ depending on the magnitude of results.

**Table 1: Key for the Interpretation of Coefficients (Days Equivalency)**

Result Values	ES Math	ES Reading	MS Math	MS Reading
15.00	37.60 days	43.02 days	80.22 days	77.14 days
10.00	25.07 days	28.68 days	53.48 days	51.39 days
5.00	12.53 days	14.34 days	26.74 days	25.69 days
2.00	5.01 days	5.74 days	10.70 days	10.28 days

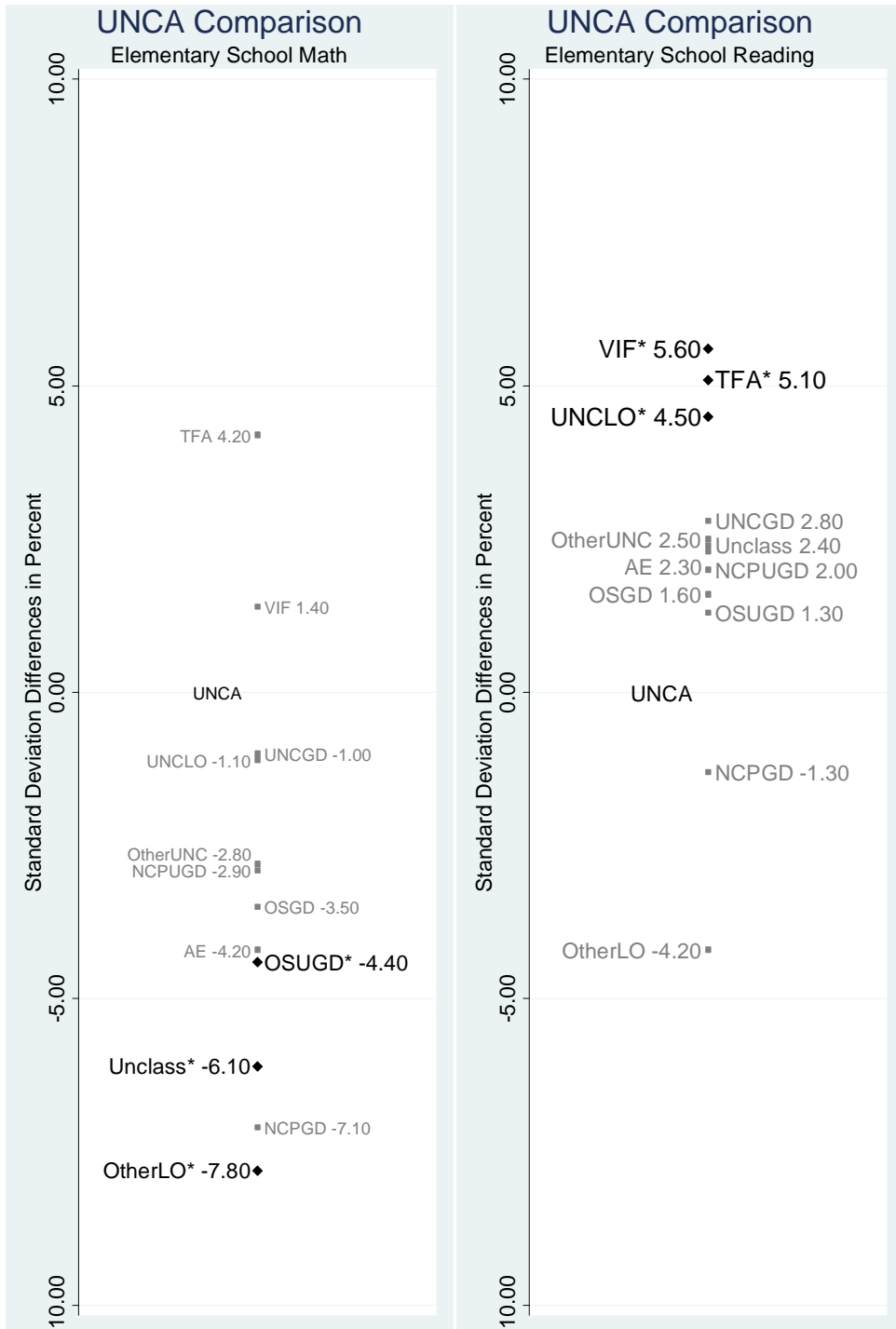
*Note: The result values show days equivalency in relation to the reference group; negative result values have negative days equivalency results.*

*Note: See the technical report for directions to calculate days equivalency*

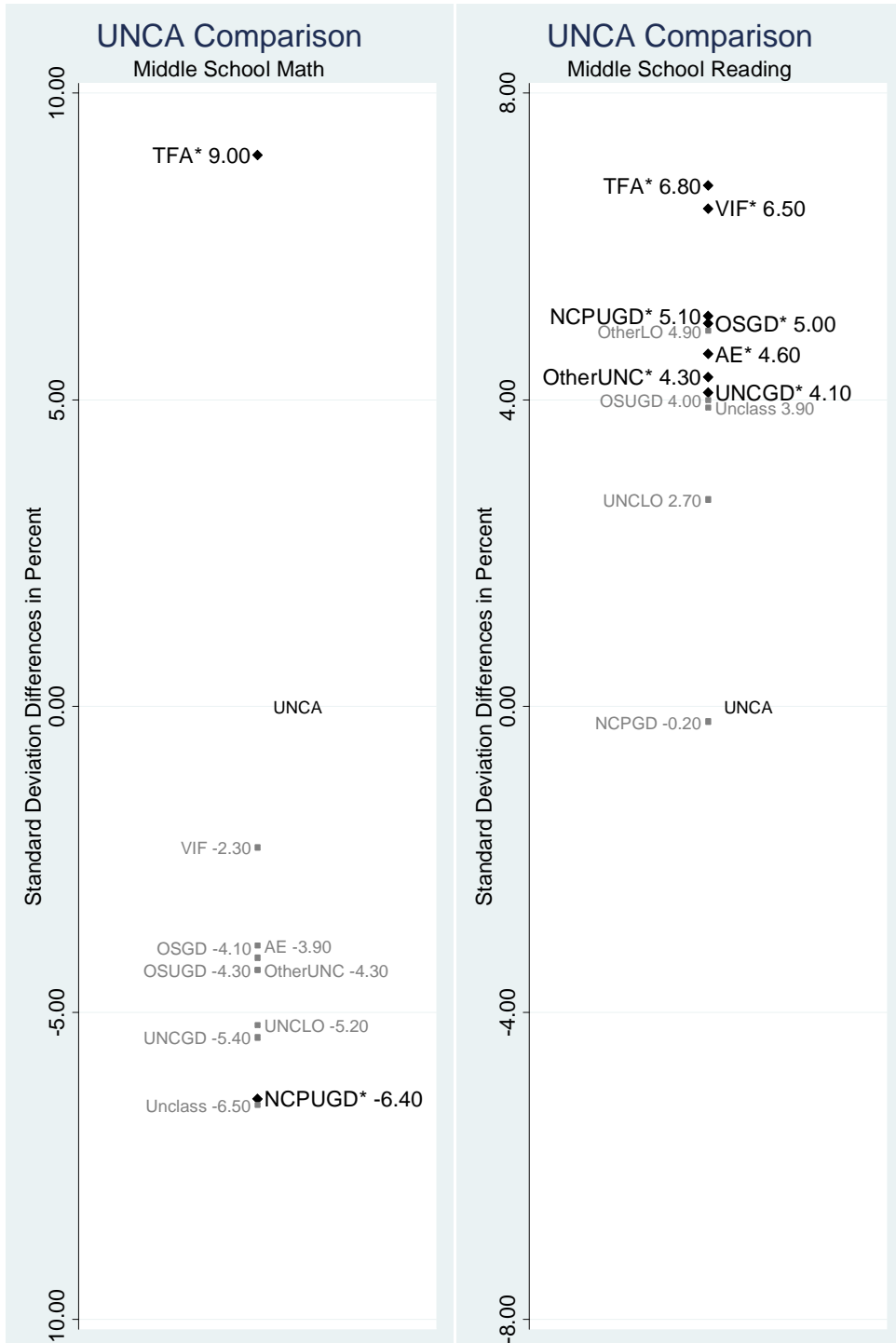
**Table 2: Teacher Preparation Category Abbreviations**

Teacher Preparation Category	Abbreviation
Other UNC Traditionally Prepared Undergraduates	OtherUNC
UNC Graduate Degree Prepared	UNCGD
NC Private University Undergraduate Degree Prepared	NCPUGD
NC Private University Graduate Degree Prepared	NCPGD
Out of State University Undergraduate Degree Prepared	OSUGD
Out of State University Graduate Degree Prepared	OSGD
UNC Licensure Only	UNCLO
Other Licensure Only	OtherLO
Teach For America	TFA
Visiting International Faculty	VIF
Alternative Entry	AE
Unclassifiable	Unclass

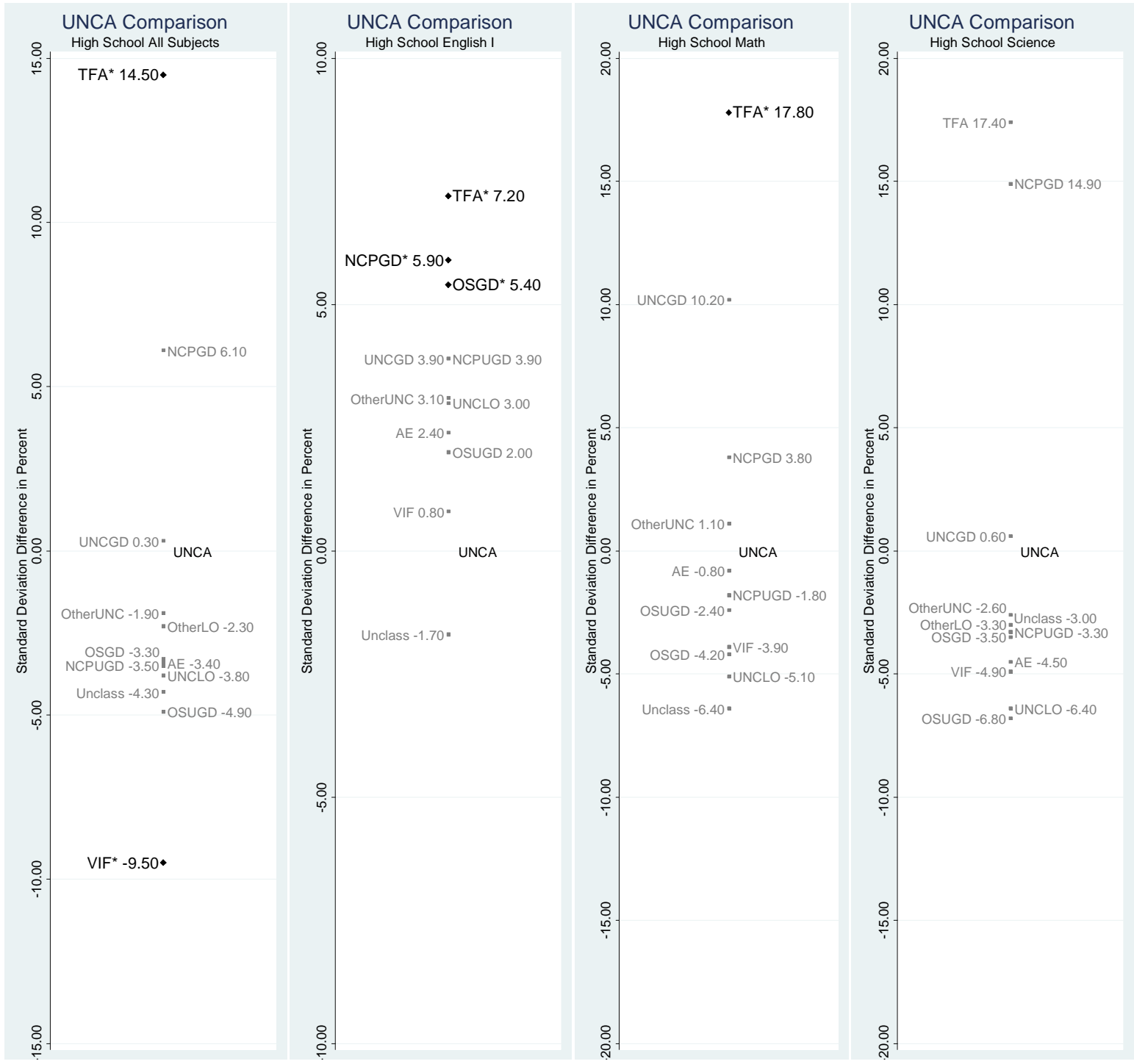
**Elementary School Results: UNC Asheville Traditionally Prepared Teachers vs. All Other Teacher Categories with 5 Yrs. Exp. or Less (2005-06 through 2009-10)**



**Middle School Results: UNCAshville Traditionally Prepared Teachers vs. All Other Teacher Categories with 5 Yrs. Exp. or Less (2005-06 through 2009-10)**



# High School Results: UNC Asheville Traditionally Prepared Teachers vs. All Other Teacher Categories with 5 Yrs. Exp. or Less (2005-06 through 2009-10)



**Table 3: Teacher Counts by Preparation Category, Level, and Subject**

Teacher Preparation Category	ES Math	ES Read	MS Math	MS Read	MS Science	MS Algebra	HS Overall	HS English I	HS Math	HS Science	HS Social Studies
UNCA	49	51	10	17	1	4	49	17	14	11	7
Other UNC	3246	3639	884	951	152	162	1785	453	636	241	486
UNC Graduate Degree Prepared	119	147	22	70	7	4	304	95	49	57	105
NC Private Undergraduate Degree Prepared	1288	1398	212	217	23	16	453	111	162	51	138
NC Private Graduate Degree Prepared	34	39	6	10	0	3	103	24	25	24	30
Out of State Undergraduate Degree Prepared	3201	3599	799	882	175	139	1117	254	366	212	311
Out of State Graduate Degree Prepared	631	704	146	206	45	33	350	76	92	98	95
UNC Licensure Only	121	140	35	50	5	4	106	31	13	18	47
Other Licensure Only	37	45	4	13	1	1	21	4	4	11	3
Teach For America	110	119	83	106	24	16	207	44	70	57	39
Visiting International Faculty	242	282	121	96	13	20	132	33	57	43	1
Alternative Entry	715	1030	1087	1405	298	169	2461	623	759	745	453
Unclassifiable	254	299	50	73	11	9	91	18	11	17	48

\*Cells highlighted in grey have less than ten teachers and therefore do not have any results reported.

**Table 4A: UNCA Traditionally Prepared Teachers Elementary School Models**

Variable	Elementary Reading		Elementary Mathematics	
	Value	Standard Error	Value	Standard Error
<b>Teacher Preparation Categories</b>				
Other UNC Traditionally Prepared Undergraduates	0.025	0.020	-0.028	0.022
UNC Graduate Degree Prepared	0.028	0.024	-0.010	0.028
NC Private University Undergraduate Degree Prepared	0.020	0.020	-0.029	0.023
NC Private University Graduate Degree Prepared	-0.013	0.029	-0.071	0.038
Out of State Undergraduate Degree Prepared	0.013	0.020	<b>-0.044*</b>	0.022
Out of State Graduate Degree Prepared	0.016	0.021	-0.035	0.023
UNC Licensure Only	<b>0.045*</b>	0.022	-0.011	0.027
Other Licensure Only	-0.042	0.030	<b>-0.078*</b>	0.037
Teach For America	<b>0.051*</b>	0.025	0.042	0.031
Visiting International Faculty	<b>0.056*</b>	0.023	0.014	0.027
Alternative Entry	0.023	0.021	-0.042	0.024
Unclassifiable	0.024	0.022	<b>-0.061*</b>	0.026
<b>Teacher Characteristics</b>				
Out of field teaching	-0.002	0.005	<b>-0.021*</b>	0.007
First year teacher	<b>-0.048*</b>	0.005	<b>-0.092*</b>	0.006
Second year teacher	<b>-0.026*</b>	0.004	<b>-0.034*</b>	0.006
Third year teacher	<b>-0.018*</b>	0.004	-0.009	0.006
Fourth year teacher	-0.009	0.004	-0.008	0.006
<b>Student Characteristics</b>				
Average prior grade EOG scores (Std.)	<b>0.678*</b>	0.002	<b>0.706*</b>	0.001
Average peer test score (Prior grade)	<b>0.042*</b>	0.005	-0.002	0.006
Days absent	<b>-0.003*</b>	0.000	<b>-0.006*</b>	0.000
Student structural move	<b>-0.050*</b>	0.012	<b>-0.042*</b>	0.019
Student moved in prior year	0.005	0.004	0.002	0.003
Missing prior year school information	<b>0.022*</b>	0.005	<b>0.044*</b>	0.006
Student moved during school year	<b>-0.053*</b>	0.005	<b>-0.074*</b>	0.005
Missing within year moved information	---	---	---	---
Underage student based on grade	<b>0.053*</b>	0.010	<b>0.076*</b>	0.009
Overage student based on grade	<b>-0.099*</b>	0.003	<b>-0.120*</b>	0.002
Academically or intellectually gifted	<b>0.255*</b>	0.003	<b>0.245*</b>	0.003
Disabled student	<b>-0.132*</b>	0.003	<b>-0.117*</b>	0.003
Free lunch	<b>-0.097*</b>	0.003	<b>-0.064*</b>	0.002
Reduced price lunch	<b>-0.063*</b>	0.004	<b>-0.041*</b>	0.004
Lunch status missing	<b>-0.095*</b>	0.009	<b>-0.021*</b>	0.007
Black	<b>-0.170*</b>	0.003	<b>-0.145*</b>	0.003
Hispanic	<b>-0.032*</b>	0.005	<b>-0.009*</b>	0.005
Multiracial	<b>-0.053*</b>	0.005	<b>-0.043*</b>	0.004



**Table 4A: UNCA Traditionally Prepared Teachers Elementary School Models Continued**

Variable	Elementary Reading		Elementary Mathematics	
	Value	Standard Error	Value	Standard Error
American Indian	<b>-0.084*</b>	0.011	<b>-0.060*</b>	0.011
Asian	0.002	0.006	<b>0.083*</b>	0.006
Male	<b>-0.012*</b>	0.002	<b>0.020*</b>	0.002
LEP services recipient	<b>-0.160*</b>	0.006	<b>-0.073*</b>	0.005
Previous LEP services recipient	<b>0.030*</b>	0.007	<b>0.051*</b>	0.006
<b>Classroom Characteristics</b>				
Students per classroom	-0.001	0.000	-0.001	0.001
Classroom ability dispersion	<b>0.046*</b>	0.009	<b>0.043*</b>	0.012
<b>School Characteristics</b>				
School size (per 100)	<b>-0.013*</b>	0.004	<b>-0.012*</b>	0.005
School size squared	<b>0.001*</b>	0.000	<b>0.001*</b>	0.000
Total per-pupil expenditures (\$100s)	0.000	0.000	0.000	0.000
Average teacher supplement (\$100s)	0.000	0.000	<b>0.001*</b>	0.000
Short-term suspension rate (per 100 students)	<b>-0.001*</b>	0.000	<b>-0.001*</b>	0.000
Violent acts rate (per 1000 students)	0.000	0.001	<b>-0.002*</b>	0.001
Free and reduced price lunch mean	<b>-0.001*</b>	0.000	<b>-0.001*</b>	0.000
Black mean	<b>0.000*</b>	0.000	-0.000	0.000
Hispanic mean	<b>0.001*</b>	0.000	0.000	0.000
Multiracial mean	-0.001	0.001	<b>-0.004*</b>	0.001
American Indian mean	-0.000	0.000	-0.001	0.000
Asian mean	<b>0.002*</b>	0.001	<b>0.003*</b>	0.001

Note: Teachers with less than 5 years of experience and teaching an elementary school reading or math course during the 2005-06, through 2009-10 school year.

\*Indicates a given coefficient is significant at the .05 level.

**Table 4B: UNCA Traditionally Prepared Teachers Middle School Model**

Variable	Middle Reading		Middle Mathematics		Middle Science		Middle Algebra I	
	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error
<b>Teacher Preparation Categories</b>								
Other UNC Traditionally Prepared Undergraduates	<b>0.043*</b>	0.021	-0.043	0.031	Intentionally Blank Due to Insufficient Data for Reporting			
UNC Graduate Degree Prepared	0.041	0.024	-0.054	0.042				
NC Private University Undergraduate Degree Prepared	<b>0.051*</b>	0.022	<b>-0.064*</b>	0.031				
NC Private University Graduate Degree Prepared	-0.002	0.034	NR	NR				
Out of State Undergraduate Degree Prepared	0.040	0.021	-0.043	0.031				
Out of State Graduate Degree Prepared	<b>0.050*</b>	0.021	-0.041	0.033				
UNC Licensure Only	0.027	0.022	-0.052	0.037				
Other Licensure Only	0.049	0.035	NR	NR				
Teach For America	<b>0.068*</b>	0.024	<b>0.090*</b>	0.038				
Visiting International Faculty	<b>0.065*</b>	0.024	-0.023	0.034				
Alternative Entry	<b>0.046*</b>	0.021	-0.039	0.030				
Unclassifiable	0.039	0.023	-0.065	0.040				
<b>Teacher Characteristics</b>								
Out of field teaching	-0.007	0.004	<b>-0.028*</b>	0.007				
First year teacher	<b>-0.029*</b>	0.005	<b>-0.075*</b>	0.008				
Second year teacher	<b>-0.015*</b>	0.005	<b>-0.025*</b>	0.008				
Third year teacher	-0.004	0.005	-0.002	0.008				
Fourth year teacher	-0.000	0.005	0.001	0.008				
<b>Student Characteristics</b>								
Prior grade EOG reading score (Std.)	<b>0.577*</b>	0.002	<b>0.140*</b>	0.001				
Prior grade EOG math score (Std.)	<b>0.176*</b>	0.002	<b>0.582*</b>	0.002				
Average peer reading test score (Prior grade)	<b>0.072*</b>	0.003	<b>0.111*</b>	0.004				
Days absent	<b>-0.003*</b>	0.000	<b>-0.006*</b>	0.000				
Student structural move	<b>-0.018*</b>	0.004	<b>-0.030*</b>	0.006				
Student moved in prior year	<b>0.013*</b>	0.004	0.004	0.004				
Missing prior year school info.	-0.006	0.012	0.002	0.012				
Student moved during school year	<b>-0.041*</b>	0.005	<b>-0.079*</b>	0.005				
Missing within year moved info.	-0.042	0.078	-0.119	0.099				
Underage student based on grade	<b>0.040*</b>	0.008	<b>0.049*</b>	0.008				

**Table 4B: UNCA Traditionally Prepared Teachers Middle School Model Continued**

Variable	Middle Reading		Middle Mathematics		Middle Science		Middle Algebra I	
	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error
Overage student based on grade	<b>-0.059*</b>	0.002	<b>-0.068*</b>	0.002	Intentionally Blank Due to Insufficient Data for Reporting			
Academically or intellectually gifted	<b>0.118*</b>	0.004	<b>0.150*</b>	0.004				
Disabled student	<b>-0.110*</b>	0.004	<b>-0.054*</b>	0.004				
Free lunch	<b>-0.058*</b>	0.002	<b>-0.023*</b>	0.002				
Reduced price lunch	<b>-0.039*</b>	0.004	<b>-0.016*</b>	0.003				
Lunch status missing	<b>-0.037*</b>	0.010	-0.016	0.009				
Black	<b>-0.091*</b>	0.003	<b>-0.085*</b>	0.003				
Hispanic	<b>-0.009*</b>	0.004	-0.002	0.004				
Multiracial	-0.002	0.005	<b>-0.026*</b>	0.005				
American Indian	<b>-0.064*</b>	0.010	<b>-0.045*</b>	0.008				
Asian	<b>-0.020*</b>	0.006	<b>0.098*</b>	0.006				
Male	<b>-0.037*</b>	0.002	<b>0.010*</b>	0.002				
LEP services recipient	<b>-0.126*</b>	0.006	-0.001	0.005				
Previous LEP services recipient	0.011	0.008	<b>0.054*</b>	0.007				
<b>Classroom Characteristics</b>								
Students per classroom	0.000	0.000	-0.001	0.000				
Reading classroom ability dispersion	<b>0.017*</b>	0.007	-0.010	0.010				
Advanced curriculum	<b>0.014*</b>	0.005	<b>0.018*</b>	0.006				
Remedial curriculum	<b>-0.025*</b>	0.007	<b>-0.033*</b>	0.011				
<b>School Characteristics</b>								
School size (per 100)	-0.005	0.003	0.007	0.005				
School size squared	0.000	0.000	<b>-0.001*</b>	0.000				
Total per-pupil expenditures (\$100s)	-0.000	0.000	-0.000	0.000				
Average teacher supplement (\$100s)	0.000	0.000	0.000	0.000				
Short-term suspension rate (per 100 students)	<b>-0.000*</b>	0.000	<b>-0.000*</b>	0.000				
Violent acts rate (per 1000 students)	-0.000	0.000	-0.000	0.000				
Free and reduced price lunch mean	<b>-0.001*</b>	0.000	-0.000	0.000				
Black mean	<b>0.001*</b>	0.000	0.000	0.000				
Hispanic mean	<b>0.001*</b>	0.000	0.000	0.000				
Multiracial mean	0.002	0.001	-0.001	0.002				
American Indian mean	-0.001	0.000	-0.000	0.001				
Asian mean	0.001	0.001	<b>0.004*</b>	0.001				

Note: Teachers with less than 5 years of experience and teaching a middle school EOG or EOC tested course during the 2005-06 through 2009-10 school year.

\*Indicates a given coefficient is significant at the .05 level

**Table 4C: UNCA Traditionally Prepared Teachers High School Models**

Variable	High School All Subjects		High School English I		High School Mathematics		High School Science		High School Social Studies	
	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error
<b>Teacher Preparation Categories</b>										
Other UNC Traditionally Prepared Undergraduates	-0.019	0.025	0.031	0.021	0.011	0.076	-0.026	0.089	Intentionally Blank Due to Insufficient Data for Reporting	
UNC Graduate Degree Prepared	0.003	0.028	0.039	0.023	0.102	0.079	0.006	0.094		
NC Private University Undergraduate Degree Prepared	-0.035	0.027	0.039	0.022	-0.018	0.078	-0.033	0.094		
NC Private University Graduate Degree Prepared	0.061	0.032	<b>0.059*</b>	0.027	0.038	0.081	0.149	0.104		
Out of State Undergraduate Degree Prepared	-0.049	0.026	0.020	0.022	-0.024	0.076	-0.068	0.091		
Out of State Graduate Degree Prepared	-0.033	0.028	<b>0.054*</b>	0.025	-0.042	0.079	-0.035	0.090		
UNC Licensure Only	-0.038	0.028	0.030	0.024	-0.051	0.083	-0.064	0.097		
Other Licensure Only	-0.023	0.056	NR	NR	NR	NR	-0.033	0.127		
Teach For America	<b>0.145*</b>	0.033	<b>0.072*</b>	0.028	<b>0.178*</b>	0.082	0.174	0.097		
Visiting International Faculty	<b>-0.095*</b>	0.038	0.008	0.037	-0.039	0.082	-0.049	0.106		
Alternative Entry	-0.034	0.026	0.024	0.022	-0.008	0.076	-0.045	0.088		
Unclassifiable	-0.043	0.031	-0.017	0.033	-0.064	0.085	-0.030	0.101		
<b>Teacher Characteristics</b>										
Out of field teaching	<b>-0.033*</b>	0.006	0.001	0.007	<b>-0.029*</b>	0.011	<b>-0.063*</b>	0.016		
First year teacher	<b>-0.099*</b>	0.008	<b>-0.027*</b>	0.007	<b>-0.099*</b>	0.014	<b>-0.110*</b>	0.022		
Second year teacher	<b>-0.033*</b>	0.008	-0.012	0.008	<b>-0.042*</b>	0.013	-0.016	0.022		
Third year teacher	-0.012	0.008	-0.001	0.007	<b>-0.032*</b>	0.014	0.008	0.023		
Fourth year teacher	-0.001	0.008	-0.004	0.008	0.003	0.015	0.024	0.023		

**Table 4C: UNCA Traditionally Prepared Teachers High School Models Continued**

Variable	High School All Subjects		High School English I		High School Mathematics		High School Science		High School Social Studies	
	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error
<b>Student Characteristics</b>										
8th Grade Math EOG score (Std.)	<b>0.327*</b>	0.002	<b>0.189*</b>	0.003	<b>0.513*</b>	0.004	<b>0.369*</b>	0.004	Intentionally Blank Due to Insufficient Data for Reporting	
8th Grade Reading EOG score (Std.)	<b>0.301*</b>	0.002	<b>0.484*</b>	0.003	<b>0.097*</b>	0.002	<b>0.281*</b>	0.003		
Average peer test score (Prior grade)	<b>0.157*</b>	0.005	<b>0.104*</b>	0.006	<b>0.153*</b>	0.009	<b>0.102*</b>	0.012		
Days absent	<b>-0.008*</b>	0.000	<b>-0.005*</b>	0.000	<b>-0.009*</b>	0.000	<b>-0.009*</b>	0.000		
Student structural move	<b>0.067*</b>	0.005	<b>-0.040*</b>	0.009	<b>0.084*</b>	0.006	0.008	0.009		
Student moved in prior year	<b>0.012*</b>	0.004	-0.010	0.022	0.013	0.008	0.014	0.008		
Missing prior year school info.	<b>0.045*</b>	0.006	0.026	0.034	0.012	0.009	<b>0.044*</b>	0.009		
Student moved during school year	<b>-0.077*</b>	0.004	<b>-0.062*</b>	0.007	<b>-0.077*</b>	0.007	<b>-0.101*</b>	0.010		
Missing within year moved info.	-0.008	0.054	-0.080	0.084	0.005	0.092	0.074	0.128		
Underage student based on grade	<b>0.108*</b>	0.006	<b>0.059*</b>	0.011	<b>0.082*</b>	0.010	<b>0.167*</b>	0.013		
Overage student based on grade	<b>-0.107*</b>	0.002	<b>-0.106*</b>	0.004	<b>-0.104*</b>	0.003	<b>-0.119*</b>	0.005		
Academically or intellectually gifted	<b>0.143*</b>	0.003	<b>0.167*</b>	0.005	<b>0.153*</b>	0.005	<b>0.141*</b>	0.006		
Disabled student	<b>-0.050*</b>	0.004	<b>-0.171*</b>	0.006	<b>-0.053*</b>	0.005	<b>-0.030*</b>	0.007		
Free lunch	<b>-0.008*</b>	0.002	<b>-0.046*</b>	0.004	<b>0.009*</b>	0.003	0.002	0.004		
Reduced price lunch	-0.004	0.003	<b>-0.042*</b>	0.005	<b>0.009*</b>	0.005	<b>0.013*</b>	0.006		
Lunch status missing	0.003	0.006	-0.018	0.010	-0.003	0.009	0.002	0.011		
Black	<b>-0.115*</b>	0.003	<b>-0.078*</b>	0.005	<b>-0.104*</b>	0.004	<b>-0.155*</b>	0.005		
Hispanic	<b>0.009*</b>	0.004	-0.013	0.007	<b>0.015*</b>	0.006	-0.015	0.008		
Multiracial	<b>-0.025*</b>	0.005	-0.004	0.009	<b>-0.044*</b>	0.007	<b>-0.027*</b>	0.010		
American Indian	<b>-0.083*</b>	0.008	<b>-0.067*</b>	0.017	<b>-0.071*</b>	0.012	<b>-0.097*</b>	0.018		

**Table 4C: UNCA Traditionally Prepared Teachers High School Models Continued**

Variable	High School All Subjects		High School English I		High School Mathematics		High School Science		High School Social Studies	
	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error
Asian	<b>0.057*</b>	0.006	<b>-0.022*</b>	0.009	<b>0.131*</b>	0.009	<b>0.069*</b>	0.011	Intentionally Blank Due to Insufficient Data for Reporting	
Male	<b>0.063*</b>	0.002	<b>-0.123*</b>	0.003	0.003	0.003	<b>0.104*</b>	0.004		
LEP services recipient	<b>-0.077*</b>	0.006	<b>-0.154*</b>	0.009	-0.006	0.009	<b>-0.055*</b>	0.013		
Previous LEP services recipient	<b>0.023*</b>	0.007	-0.008	0.011	0.013	0.011	<b>0.039*</b>	0.014		
Algebra II	<b>-0.389*</b>	0.012	---	---	<b>-0.407*</b>	0.012	---	---		
English I	0.007	0.007	---	---	---	---	---	---		
Geometry	<b>-0.284*</b>	0.009	---	---	<b>-0.297*</b>	0.010	---	---		
Biology	-0.011	0.009	---	---	---	---	<b>0.932*</b>	0.041		
Chemistry	<b>-0.576*</b>	0.020	---	---	---	---	<b>0.386*</b>	0.042		
Physical Science	<b>0.307*</b>	0.014	---	---	---	---	<b>1.249*</b>	0.040		
Physics	<b>-0.957*</b>	0.038	---	---	---	---	---	---		
Civics/Economics	-0.015	0.008	---	---	---	---	---	---		
U.S. History	<b>-0.103*</b>	0.010	---	---	---	---	---	---		
<b>Classroom Characteristics</b>										
Students per classroom	<b>-0.002*</b>	0.000	0.001	0.000	<b>-0.002*</b>	0.001	<b>-0.004*</b>	0.001		
Classroom ability dispersion	<b>0.037*</b>	0.010	0.021	0.013	<b>0.048*</b>	0.017	<b>0.057*</b>	0.021		
Advanced curriculum	<b>0.127*</b>	0.006	<b>0.085*</b>	0.007	<b>0.234*</b>	0.012	<b>0.119*</b>	0.015		
Remedial curriculum	0.012	0.016	0.003	0.010	0.018	0.037	-0.086	0.063		

**Table 4C: UNCA Traditionally Prepared Teachers High School Models Continued**

Variable	High School All Subjects		High School English I		High School Mathematics		High School Science		High School Social Studies	
	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error	Value	Standard Error
<b>School Characteristics</b>										
School size (per 100)	<b>0.010*</b>	0.002	0.003	0.002	<b>0.009*</b>	0.004	0.002	0.004	Intentionally Blank Due to Insufficient Data for Reporting	
School size squared	<b>-0.000*</b>	0.000	-0.000	0.000	-0.000	0.000	0.000	0.000		
Total per-pupil expenditures (\$100s)	0.000	0.000	<b>0.001*</b>	0.000	-0.000	0.000	-0.000	0.000		
Average teacher supplement (\$100s)	<b>0.001*</b>	0.000	<b>0.001*</b>	0.000	0.000	0.001	0.001	0.001		
Short-term suspension rate (per 100 students)	<b>-0.000*</b>	0.000	-0.000	0.000	-0.000	0.000	<b>-0.001*</b>	0.000		
Violent acts rate (per 1000 students)	<b>-0.001*</b>	0.000	-0.000	0.000	-0.000	0.001	<b>-0.002*</b>	0.000		
Free and reduced price lunch mean	-0.000	0.000	<b>-0.001*</b>	0.000	0.000	0.000	-0.000	0.001		
Black mean	<b>0.001*</b>	0.000	<b>0.001*</b>	0.000	-0.000	0.000	<b>0.001*</b>	0.000		
Hispanic mean	<b>0.003*</b>	0.001	<b>0.002*</b>	0.001	<b>0.003*</b>	0.001	<b>0.003*</b>	0.001		
Multiracial mean	-0.001	0.003	<b>0.007*</b>	0.002	-0.001	0.003	0.002	0.005		
American Indian mean	0.001	0.001	-0.000	0.001	0.000	0.001	0.002	0.001		
Asian mean	0.003	0.002	0.002	0.001	<b>0.005*</b>	0.002	0.005	0.003		

*Note: Teachers with less than 5 years of experience and teaching EOC tested course during the 2005-06, through 2009-10 school year.*

*\*Indicates a given coefficient is significant at the .05 level.*