



Placed for Success? An Analysis of Student Teaching Placements and Novice Teacher Performance

In this research brief we examine characteristics of student teaching placement sites and clinical teachers and assess whether these characteristics predict the performance of novice teachers. We aim to enhance the value of student teaching by better understanding the environments and mentors that matter. Descriptively, we find that placement site characteristics differ across educator preparation programs (EPPs) in ways that may be related to the location of the program and to the characteristics of the program and its candidates. Empirical results indicate that (1) high-quality learning environments matter; (2) teacher candidates benefit from greater exposure to racial/ethnic minority students during student teaching; and (3) candidate success is influenced by the instructional and mentoring skills of the clinical teacher. We hope these analyses aid evidence-based placements, encourage school districts to actively participate in the placement process, and inform policy on student teaching requirements.

Introduction

Each year, educator preparation programs (EPPs) across the United States take on a monumental task: securing student teaching placements for nearly 150,000 teacher candidates. As the culmination of multiple semesters of coursework and field experiences, student teaching is a scaffolded opportunity for candidates to assume full control of a K-12 classroom. This hands-on, practical experience allows candidates to refine their classroom management and instructional skills and become better prepared for the demands of teaching.

Given the importance of student teaching, EPPs and their school district partners face strong incentives to identify placement sites and clinical teachers that encourage candidates' development. This need for quality placements precipitates the key question of the present study: where should candidates student teach? Prior work in this

area indicates that candidates placed in schools with higher teacher retention rates, higher levels of teacher collaboration, and higher levels of student achievement growth go on to be more effective novice teachers. This suggests that pre-service experience in good learning environments enhances teacher performance.

In this research brief we extend these student teaching analyses to North Carolina, where the quality of administrative data allow us to make several unique contributions. In particular, we examine characteristics of the placement school, placement classroom, and clinical teacher and assess two measures of novice teacher performance. These analyses can help EPPs make evidence-based placements, encourage school districts to actively participate in the placement process, and inform state policy on student teaching requirements. Ultimately, this research is motivated by the opportunity to benefit novice teachers and the students they teach.

Background

To conduct these analyses we received student teaching placement data from six UNC System institutions.

These institutions are geographically spread across North Carolina, and together, they account for 70 percent of the initially-prepared teachers in the UNC System. The student teaching data provided by these institutions covered the 2011-12 through 2015-16 academic years¹ and included the following: a unique identifier for the teacher candidate, the semester and year during which the candidate student taught, the school in which the candidate student taught, and the name of the clinical teacher.

We matched these student teaching data to administrative files from the North Carolina Department of Public Instruction to determine characteristics of the student teaching school, classroom, and clinical teacher. Table 1 displays the placement site and clinical teacher characteristics that we linked to each candidate. The placement school characteristics include indicators for school urbanicity, the percentage of racial/ethnic minority and economically-disadvantaged students, short-term suspension rates, teacher retention rates, Education Value-Added Assessment System (EVAAS) growth status, and a measure of teacher collaboration

constructed from Teacher Working Conditions survey items. The placement classroom characteristics capture the demographics of the students taught by the clinical teacher, and by extension, the teacher candidate. They include the average days absent and the percentages of racial/ethnic minority, economically-disadvantaged, limited English proficient, mobile, academically or intellectually gifted, and exceptional status students. Finally, the clinical teacher characteristics consist of their gender, racial/ethnic minority status, teaching experience, NBC status, graduate degree status, licensure exam scores, teacher preparation institution, and their prior year EVAAS estimates and evaluation ratings.

After identifying the placement site and clinical teacher characteristics, we followed candidates into teaching in North Carolina public schools to assess whether these characteristics predict their performance as novice teachers (defined as teachers in their first, second, or third-year).² Specifically, we focused on two outcome measures: standardized EVAAS estimates and a composite evaluation rating from the North Carolina Educator Evaluation System (NCEES).³ We entered the placement school, placement classroom, and clinical teacher measures into separate models. All models controlled for characteristics

Table 1: Placement Site and Clinical Teacher Characteristics

Placement School	Placement Classroom	Clinical Teacher
<ul style="list-style-type: none"> • School urbanicity • Percent racial/ethnic minority • Percent economically-disadvantaged • Short-term suspension rates • Teacher retention rates • EVAAS growth status • Teacher collaboration 	<ul style="list-style-type: none"> • Days absent • Percent racial/ethnic minority • Percent economically-disadvantaged • Percent mobile • Percent exceptional children • Percent academically gifted • Percent limited English proficient 	<ul style="list-style-type: none"> • Gender • Racial/ethnic minority • Teaching experience • NBC status • Graduate degree status • Licensure exam scores • Teacher preparation institution • Prior year evaluation ratings • Prior year EVAAS estimates

Note: This table displays the placement school, placement classroom, and clinical teacher characteristics that we linked to each teacher candidate.

¹ Data for EPP 1 covered 2012-13 through 2015-16.

² We estimate models on first-year teachers only and for first, second, and third-year teachers, combined. Results displayed in this brief are for first, second, and third-year teachers.

³ EVAAS estimates come from North Carolina's mCLASS, End-of-Grade, End-of-Course, and North Carolina Final Exams. We created the composite evaluation rating by summing teachers' ratings on Standards 1-5 of the NCEES and then standardizing this evaluation measure.

of the teacher and characteristics of the school in which they are employed.⁴ Lastly, all of our analyses include a university fixed effect. This allows us to hold constant many features of a teacher preparation program—e.g. selection criteria, quality of courses, student teaching requirements—and assess how variation in placement sites and clinical teachers predicts variation in teacher performance for graduates of the same university.

What are the characteristics of placement sites and clinical teachers?

In Table 2 we display descriptive information on the placement site and clinical teacher characteristics of the UNC System institutions participating in the study.

These data may be particularly valuable to EPPs and their

Table 2: What are the characteristics of placement sites and clinical teachers?

	EPP 1	EPP 2	EPP 3	EPP 4	EPP 5	EPP 6
Placement School						
Percent Racial/Ethnic Minority	25.93	55.18	70.25	50.13	50.97	22.76
Percent Economically-Disadvantaged	49.37	60.36	63.94	37.67	47.64	59.59
Short-Term Suspension Rates	8.06	22.58	15.99	10.96	12.31	7.47
Teacher Retention Rates	84.48	81.88	80.36	82.88	80.53	85.04
Exceeds Student Growth	33.94	30.58	32.73	55.80	34.22	31.82
Meets Student Growth	36.27	39.70	43.03	29.27	28.07	44.01
Does Not Meet Student Growth	29.79	29.72	24.24	14.93	37.71	24.17
Teacher Collaboration (Std.)	-0.18	-0.15	-0.18	0.09	0.01	-0.34
City/Suburb	33.37	4.24	79.46	86.69	54.54	37.90
Rural/Town	66.63	95.76	20.54	13.31	45.46	62.10
Placement Classroom						
Days Absent	7.01	6.24	7.22	6.09	5.60	7.11
Percent Racial/Ethnic Minority	20.68	49.87	63.76	39.01	43.18	18.94
Percent Economically-Disadvantaged	47.14	55.98	60.10	34.15	45.20	57.33
Percent Mobile	6.81	10.32	11.36	9.62	10.08	10.36
Percent Academically Gifted	15.79	8.64	15.35	16.79	10.37	10.42
Percent Exceptional Children	19.19	16.68	16.34	12.66	18.82	20.23
Percent Limited English Proficient	4.74	5.40	8.76	6.92	7.29	4.55
Clinical Teacher						
Female	78.77	85.84	76.53	75.71	88.07	81.29
Racial/Ethnic Minority	3.90	8.09	42.55	9.04	14.00	3.14
Teaching Experience	15.18	15.07	14.39	13.98	13.41	14.85
NBC	28.34	28.23	10.99	34.78	21.79	30.51
Graduate Degree	44.22	41.39	43.59	46.05	41.09	39.81
Licensure Exam Scores (Std.)	0.30	0.10	-0.03	0.43	0.19	0.31
Percent Prepared in NC	70.10	73.17	58.99	53.13	50.67	68.36
Percent Prepared by the Same University as the Candidate	36.33	46.50	6.55	21.56	17.40	40.60
Prior-Year Ratings on Leadership	4.04	3.96	3.88	4.20	3.91	3.97
Prior-Year Ratings on Facilitating Student Learning	3.98	3.89	3.76	4.10	3.85	3.92
Prior-Year EVAAS Estimates (Std.)	0.22	0.17	0.03	0.43	0.22	-0.01

Note: For each of the participating UNC System institutions, this table displays descriptive data on the placement school, placement classroom, and clinical teacher characteristics experienced by their teacher candidates.

⁴ The teacher characteristics are indicators for female and racial/ethnic minority, collegiate GPA, and teacher experience. The characteristics of the employment school include indicators for school level and the percentage of racial/ethnic minority and economically disadvantaged students.

efforts to meet Council for the Accreditation of Educator Preparation (CAEP) standards and make evidence-based program improvements.

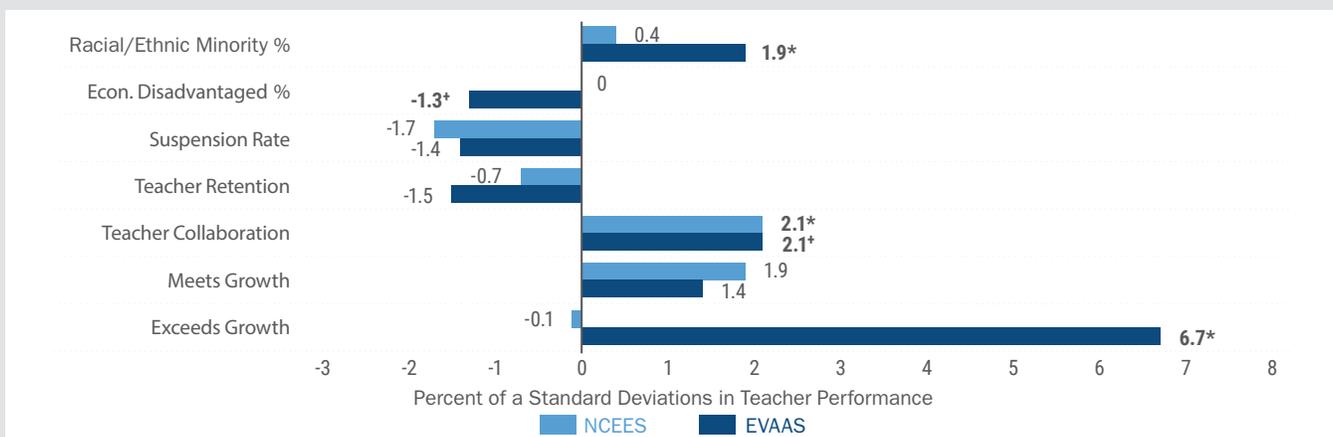
Table 2 shows that placement site characteristics differ across EPPs. Since programs often arrange student teaching experiences in close proximity to the university, these differences may reflect the location of the EPP and the demographics and labor markets of the area. For example, EPP 2 places nearly all of its candidates in rural areas or small towns in eastern North Carolina, while EPP 4 places many candidates in more affluent urban environments. This can lead to differences in the demographics—i.e. percent racial/ethnic minority or economically-disadvantaged—of students in placement schools and classrooms. Likewise, teacher retention rates are typically higher in the districts near EPPs 1 and 6; as such, these institutions place candidates in schools with less teacher turnover. Other differences may be attributable to the mission of the EPP and to the characteristics and preferences of the candidates it prepares. For instance, as a minority serving institution, EPP 3 enrolls a much higher percentage of racial/ethnic minority candidates as compared to other institutions in our study. These individuals student teach in environments with more racial/ethnic minority and economically-disadvantaged students and are more likely to have a clinical teacher who is also a racial/ethnic minority.

Regarding clinical teacher characteristics, Table 2 indicates that EPPs typically place candidates with experienced and well-credentialed teachers. For instance, clinical teachers averaged 13–15 years of experience, many held National Board certification (NBC) and/or a graduate degree, and their licensure exam scores were generally above the statewide mean. For EPPs serving more rural areas, approximately 70 percent of their clinical teachers were prepared in North Carolina. These same EPPs were also more likely to place a candidate with an alumni of the university. Lastly, effectiveness data show that clinical teachers generally had prior year EVAAS estimates above the statewide mean and prior year evaluation ratings around ‘accomplished’ on the Leadership and Facilitating Student Learning standards. Like the placement site characteristics, clinical teacher effectiveness varied across EPPs.

Do characteristics of the placement school predict novice teacher performance?

Figure 1 displays the associations between placement school characteristics and measures of novice teacher performance. In these analyses we find that teacher collaboration predicts significantly higher EVAAS estimates and evaluation ratings. Specifically, a one standard deviation increase in a construct of placement school teacher collaboration⁵

Figure 1: Placement School Characteristics and Teacher Performance



Note: This figure displays the associations between placement school characteristics and novice teacher performance (as measured by EVAAS estimates and NCEES evaluation ratings). All results are expressed as a percentage of a standard deviation (in EVAAS estimates or a composite NCEES rating) and come from models with a university fixed effect. ‘+’ and ‘*’ indicate statistical significance at the 0.10 and 0.05 levels, respectively.

⁵ We constructed this teacher collaboration construct with two items from the TWC survey: (1) Teachers have time available to collaborate with colleagues and (2) Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.

is associated with a 2.1 percent of a standard deviation increase in novice teacher EVAAS estimates and evaluation ratings. Further analyses show that these collaboration results are strongest for candidates with grade point averages in the bottom quartile for their respective EPPs. These results suggest that it is beneficial to student teach in environments where teachers have more opportunities to collaborate.

Regarding student demographics, we find that the percentage of racial/ethnic minority and economically-disadvantaged students predicts the EVAAS estimates of novice teachers. A ten percentage point increase in the percentage of racial/ethnic minority students at the placement school is associated with a 1.9 percent of a standard deviation increase in novice teacher EVAAS estimates. Conversely, a ten percentage point increase in economically-disadvantaged students is associated with a 1.3 percent of a standard deviation decrease in EVAAS estimates. These results for racial/ethnic minority and economically-disadvantaged students are strongest for novice teachers in high school grades.

Finally, results show a benefit to student teaching in a high value-added school. Relative to candidates who student taught in schools that did not meet expected growth, candidates who student taught in schools that exceeded expected growth had EVAAS estimates 6.7 percent of a standard deviation higher as novice teachers. In models focused on first-year teachers only, student teaching in a school that met or exceeded expected growth predicted

significantly higher EVAAS estimates. As with the teacher collaboration findings, these results suggest the value of a good learning environment.

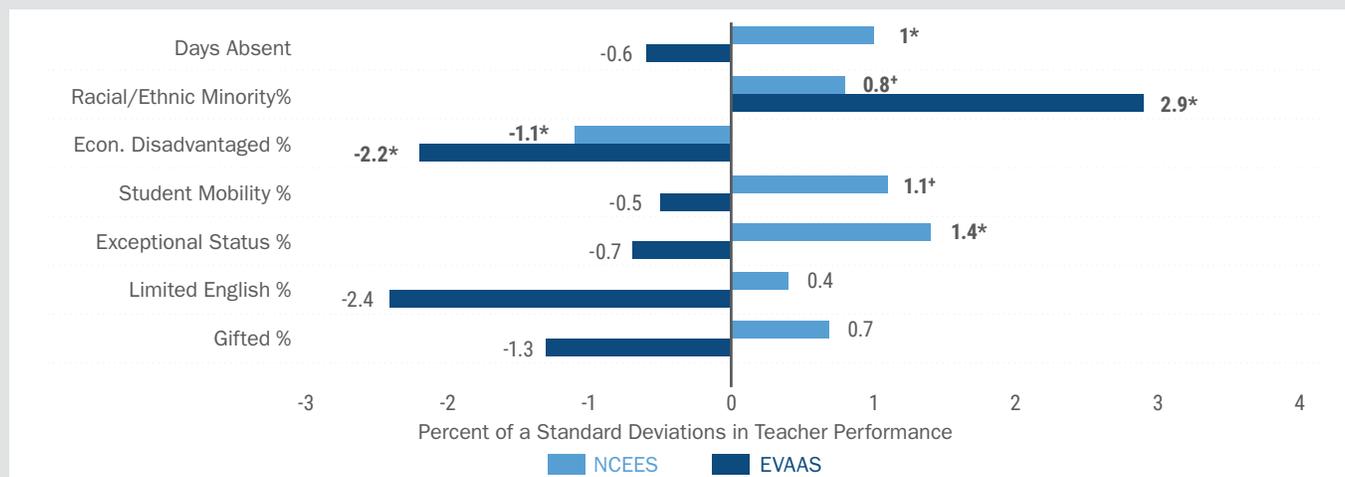
Do characteristics of the placement classroom predict novice teacher performance?

One unique aspect of this work is our ability to go within the school and link candidates to the characteristics of their placement classrooms. Figure 2 illustrates whether placement classroom characteristics predict novice teacher performance.

As with the placement school models, these analyses reveal benefits to more exposure to racial/ethnic minority students. A ten percentage point increase in the percentage of racial/ethnic minority students in the placement classroom predicts significantly higher EVAAS estimates and evaluation ratings. Like the placement school models, we also see the opposite result for economically-disadvantaged students: a ten percentage point increase in economically-disadvantaged students predicts significantly lower EVAAS estimates and evaluation ratings.

Considering other student demographics, Figure 2 suggests a benefit for novice teachers who student taught in classrooms with more challenging student populations. In particular, novice teachers had higher evaluation ratings when students in their placement classroom averaged more days absent and a higher percentage of these students were

Figure 2: Placement Classroom Characteristics and Teacher Performance



Note: This figure displays the associations between placement classroom characteristics and novice teacher performance (as measured by EVAAS estimates and NCEES evaluation ratings). All results are expressed as a percentage of a standard deviation (in EVAAS estimates or a composite NCEES rating) and come from models with a university fixed effect. '+' and '*' indicate statistical significance at the 0.10 and 0.05 levels, respectively.

mobile or designated as exceptional. For example, a ten percentage point increase in the percentage of exceptional children in the placement classroom is associated with a 1.4 percent of a standard deviation increase in novice teachers' composite evaluation ratings.

Do characteristics of the clinical teacher predict novice teacher performance?

In Table 3 we have separated the clinical teacher characteristics into three categories: demographics of the clinical teacher, credentials of the clinical teacher, and the prior performance of the clinical teacher. Demographic results reveal no significant relationships for clinical teacher gender. For racial/ethnic minority status, we created a series of indicators to capture different combinations of candidate and clinical teacher ethnicity. Relative to white candidates placed with white clinical teachers, we find that racial/ethnic minority candidates placed with white clinical teachers go on to have lower evaluation ratings as novice teachers. For candidates with grade point averages in the bottom quartile for their respective EPP, black candidates

placed with black clinical teachers have higher evaluation ratings as novice teachers.

Results for teacher credentials show some benefits to clinical teacher experience. Relative to candidates assigned to a clinical teacher with five or fewer years of experience, candidates placed with more experienced clinical teachers go on to have EVAAS estimates approximately 10 percent of a standard deviation higher. These clinical teacher experience results are strongest for novice teachers in high school grades. Other credential analyses show that novice teachers earn higher evaluation ratings when their clinical teacher had higher licensure exam scores and when their clinical teacher was prepared by the same EPP. The result for the same university suggests that candidates may benefit when clinical teachers have greater knowledge of the EPP. This finding may push EPPs to assign more candidates to alumni and/or provide more in-depth training on the EPP and its student teaching requirements to clinical teachers.

Measures of prior performance for clinical teachers are related to the effectiveness of novice teachers. Candidates placed with a clinical teacher who received an evaluation rating one level higher (e.g. accomplished rather than proficient) on the NCEES Leadership standard had

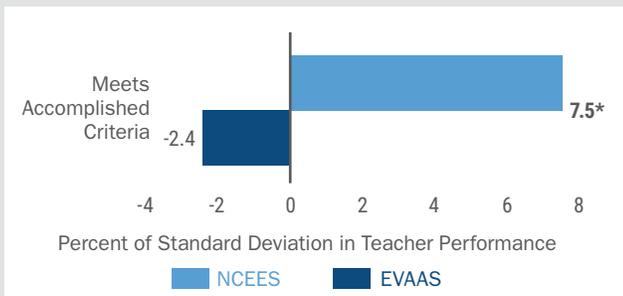
Table 3: Clinical Teacher Characteristics and Teacher Performance

	EVAAS Estimates	NCEES Composite Rating
Teacher Demographics		
Female	1.3	-3.0
Black Candidate and Black Clinical Teacher	5.7	-2.4
White Candidate and Minority Clinical Teacher	-7.4	1.0
Minority Candidate and White Clinical Teacher	3.2	-6.9*
Minority Candidate and Minority Clinical Teacher	-15.3	-7.8
Clinical Teacher Credentials		
6-10 Years of Teaching Experience	10.2*	-1.7
More than 10 Years of Teaching Experience	9.3*	-2.7
NBC	-0.0	1.6
Graduate Degree	1.2	-1.4
Licensure Exam Scores	1.4	2.8*
Prepared by the Same EPP	4.0	3.5*
Clinical Teacher Prior Performance		
Prior Leadership Rating	1.4	5.3*
Prior Facilitating Student Learning Rating	-4.2	2.6
Prior EVAAS Estimates	3.6*	-0.1
Observations	9,854	10,059

Note: This table displays the associations between clinical teacher characteristics and novice teacher performance (as measured by EVAAS estimates and NCEES evaluation ratings). All results are expressed as a percentage of a standard deviation (in EVAAS estimates or a composite NCEES rating) and come from models with a university fixed effect. '+' and '*' indicate statistical significance at the 0.10 and 0.05 levels, respectively.

composite evaluation ratings 5.3 percent of a standard deviation higher as novice teachers. Analyses focused on prior year EVAAS data indicate that a one standard deviation increase in clinical teacher value-added predicts significantly higher EVAAS estimates—by 3.6 percent of a standard deviation—for novice teachers.⁶ Taken together, these results suggest that the instructional proficiency of clinical teachers (measured by EVAAS) and the mentoring ability of clinical teachers (measured by the Leadership standard⁷) are both important to teacher candidates.

Figure 3: Requirements for Clinical Teachers to be Evaluated at Accomplished or Higher



Note: This figure illustrates whether novice teachers have higher EVAAS estimates and NCEES ratings if their clinical teacher was previously rated at accomplished or higher on the Leadership and Facilitating Student Learning standards. All results are expressed as a percentage of a standard deviation (in EVAAS estimates or a composite NCEES rating) and come from models with a university fixed effect. '+' and '*' indicate statistical significance at the 0.10 and 0.05 levels, respectively.

Lastly, given recent changes to North Carolina statute that now require clinical teachers to have prior year evaluation ratings of accomplished or higher, we created an indicator for clinical teachers that met this criteria.⁸ Figure 3 displays these results. Novice teachers whose clinical teacher met the accomplished threshold had evaluation ratings 7.5 percent of a standard deviation higher than peers placed with clinical teachers that did not meet this threshold. There was no difference in the EVAAS estimates of novice teachers if their clinical teacher met this requirement.

Discussion

Beginning teachers consistently report that student teaching was their most valuable preparation experience. Therefore, an aim of this research is to enhance the value of student teaching by better understanding the environments and mentors that benefit candidates. This work is relevant to (1) EPPs, as they work to make more intentional and evidence-based placements; (2) local school districts, which host candidates and then hire many of them to teach; and (3) state officials, who set requirements for placement sites and clinical teachers.

Overall, there are three important takeaways from this research. First, consistent with prior work, our results show that learning environments matter. Candidates placed in schools with higher ratings of teacher collaboration go on to have higher EVAAS estimates and evaluation ratings as novice teachers. Likewise, novice teachers have higher EVAAS estimates after student teaching in a high value-added school. North Carolina is currently requiring teacher candidates to have at least one clinical experience in a low-performing school. Such a placement may be very important in preparing teachers to work with underserved students and with recruiting teachers to work in those environments. However, evidence indicates that the state should also emphasize candidate placements in highly-effective schools. Second, results suggest that candidates go on to be more effective after placements in schools and classrooms with more racial/ethnic minority students. This is particularly salient since North Carolina's public schools are now majority racial/ethnic minority.⁹ Finally, this work sheds light on the two key roles of the clinical teacher: serving as a high-quality instructional model and mentoring the candidate. Our results suggest that both of these tasks predict the performance of novice teachers. This means that EPPs and school districts should ensure that clinical teachers are skilled in both of these competencies.

⁶ These results are only available for the subset of the clinical teacher sample who taught a tested grade or subject-area in the year before hosting a student teacher. Therefore, the reported estimate for prior EVAAS estimates comes from a separate model that still controls for all of the clinical teacher characteristics.

⁷ The Leadership standard includes indicators for working collaboratively with school personnel and mentoring/supporting teachers.

⁸ This requirement for clinical teachers was not in place during the data window (2011-12 through 2015-16) for our placement data.

⁹ Overall, there are more racial/ethnic minority than white students enrolled in North Carolina public schools. The distribution of racial/ethnic minority students differs across regions of the state.

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For more research on this topic

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