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## Outcomes for the Central Carolina Teaching Initiative: A Summative Evaluation

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In this brief, EPIC presents results from our summative evaluation of the Central Carolina Teaching Initiative (CCTI) program. These analyses focus on five program cohorts—2017–18 through 2021–22—and compare outcomes for CCTI teachers versus traditionally prepared and alternative entry/residency teachers working in the same districts and schools. Overall, we find that: (1) 82 percent of program entrants complete their program coursework and 64 percent are recommended for a continuing license; (2) CCTI teachers feel positively about the quality of their preparation, especially in comparison to alternative entry/residency teachers; (3) CCTI teachers perform comparably to traditionally prepared and alternative entry/residency teachers; and (4) CCTI teachers are more likely to persist in teaching than traditionally prepared and alternative entry/residency teachers. Our results suggest that CCTI is an effective preparation program and highlight the potential of district-run preparation programs to make positive contributions to the educator workforce.

### Introduction

In 2016, the North Carolina State Board of Education (NCSBE) issued a request for proposals (RFP) for school districts to initiate their own teacher preparation programs (TPP). The motivation for this request was straightforward: allowing local districts to prepare teachers offered an opportunity to meet demand in high-need regions or subjectareas and to ensure that teachers possess the content knowledge and pedagogical skills valued by participating districts. The NCSBE awarded this opportunity to Wake County and the Central Carolina Regional Education Service Alliance

(CCRESA)<sup>1</sup> who created the Central Carolina Teaching Initiative (CCTI). Since the 2017–18 school year, CCTI has served as an alternative entry/residency preparation program for teachers working in CCRESA school districts.<sup>2</sup> In particular, CCTI provides beginning teachers with coursework and coaching and recommends program completers for conversion to a continuing license.

In addition to the creation of a district-based TPP, the NCSBE also issued a RFP for an independent evaluator of the preparation program. In response, the Education Policy Initiative at Carolina (EPIC) submitted a proposal and was

<sup>&</sup>lt;sup>1</sup> The CCRESA is made up of 16 member school districts: Chapel Hill-Carrboro, Durham, Edgecombe, Franklin, Granville, Greene, Johnston, Nash, Orange, Person, Pitt, Roanoke Rapids, Vance, Wake, Warren, and Wilson.

<sup>&</sup>lt;sup>2</sup> CCTI started as an alternative entry model. With changes in state statute, CCTI became a residency preparation program in 2019.

chosen as the external evaluator for CCTI. It is important to note that EPIC's evaluation of CCTI is separate from North Carolina's TPP accountability model and NCDPI's evaluation of preparation programs. As part of this evaluation, EPIC released a research brief in fall 2020 focused on outcomes for the 2017–18 and 2018–19 CCTI cohorts.<sup>3</sup> In this research brief, we provide summative results from analyses across all five CCTI cohorts. Specifically, we answer the following questions: (1) What percentage of participating teachers complete the CCTI program? (2) How do CCTI teachers perceive the quality of their preparation? (3) How effective are CCTI teachers? and (4) Do CCTI teachers remain in teaching? These results can inform preparation practices for the CCTI program and provide state and local education officials with evidence regarding the effectiveness of district-run teacher preparation.

### Background

In this summative brief, we present outcomes for the CCTI program and its teachers in the 2017–18 through 2021–22 school years. CCTI started as an alternative entry preparation program, however, with changes in state policy, it became a residency preparation program in 2019–20. Throughout its history, CCTI has predominantly prepared middle and high school teachers employed by CCRESA districts. To enroll participants, CCTI partnered with districts and recruited inservice teachers who needed to complete an initial licensure program. This means that CCTI did not recruit individuals into teaching. Rather, among in-service teachers needing to complete an initial licensure program within CCRESA districts, CCTI competed against other preparation providers

Table 1: Descriptive Data on CCTI Teachers and Schools

	OVERALL	2018 COHORT	2019 COHORT	2020 COHORT	2021 COHORT	2022 COHORT
Unique Teacher Count	279	81	67	57	38	36
Teacher-by-Year Count	818	326	227	157	72	36
Unique Schools	161	81	61	49	33	33
Unique LEAs	27	17	15	8	7	15
% Female	68.70	72.70	68.28	65.60	59.72	66.67
% Teacher of Color	50.00	54.29	53.74	40.13	48.61	33.33
Age	35.47	36.56	35.37	34.03	36.22	31.11
Avg Years Experience	1.67	2.20	1.72	1.37	0.53	0.14
% License: Elem	1.10	1.53	1.76	0.00	0.00	0.00
% License: EC	18.46	24.23	11.89	17.20	20.83	8.33
% License: Career	18.46	18.71	20.70	11.46	20.83	27.78
% License: Middle Grades Stem	14.79	15.34	19.38	10.19	9.72	11.11
% License: Middle Grades Humanities	11.49	7.67	11.45	21.02	8.33	11.11
% License: Secondary Stem	14.79	18.40	18.06	8.92	2.78	11.11
% License: Secondary Humanities	6.84	6.44	10.57	1.91	6.94	8.33
% License: Arts	7.21	7.98	2.64	8.28	16.67	5.56
% License: PE/Health	0.49	0.00	1.76	0.00	0.00	0.00
% License: Foreign Language	5.26	4.91	3.96	8.28	5.56	2.78
% Elementary	11.61	16.56	3.08	12.10	16.67	8.33
% Middle	38.02	32.21	43.61	44.58	36.11	30.56
% High	45.97	46.63	49.78	37.58	44.44	55.56
% Other	4.40	3.60	3.52	5.73	2.78	5.56
% City/Suburb	50.37	54.29	42.29	54.78	48.61	50.00
% Low Income	55.38	57.92	56.15	55.67	45.54	45.98
% Minority	67.65	69.52	68.39	68.34	59.13	60.15
Performance Composite	43.20	43.85	42.59	38.41	45.36	50.11

Note: This table displays descriptive data on CCTI teachers—overall and by cohort—and the schools in which they work. Data cover the 2017–18 through 2021–22 academic years.

<sup>&</sup>lt;sup>3</sup> Please see the following for our initial CCTI brief: https://epic.unc.edu/wp-content/uploads/sites/1268/2023/04/EPIC-CCTI-Policy-Brief Final.pdf

to enroll participants. Over time, CCTI has refined and made changes to its preparation components. However, the program has consistently included coursework, coaching/mentoring, and the completion of a capstone performance assessment.<sup>4</sup>

**Table 1** presents descriptive data on CCTI teachers and the schools in which they work. We display these data for all CCTI cohorts, combined, and for each CCTI cohort, separately.<sup>5</sup> In total, there have been 279 CCTI teachers across five program cohorts. Nearly 70 percent of these teachers are female, 50 percent are a person of color, and

their most common licensure areas include special education, career/technical education, and middle/secondary grades STEM. CCTI teachers predominantly work in middle and high schools and in schools where, on average, 55 percent of students are low-income and 68 percent are students of color. The remaining columns of Table 1 indicate that CCTI cohorts have decreased in size over time—from 81 teachers in the 2017–18 cohort to 36 teachers in the 2021–22 cohort—with fewer teachers of color in recent cohorts. Across cohorts, special education and career/technical education have been common licensure areas for CCTI teachers.

Table 2: Descriptive Data on CCTI and Comparison Sample Teachers/Schools

		WITHIN THE SAME LEA		WITHIN THE SAME SCHOOL	
	CCTI OVERALL	TRAD	ALT/RES	TRAD	ALT/RES
Unique Teacher Count	279	17164	7080	3004	1337
Teacher-by-Year Count	818	36862	16007	6012	2665
Unique Schools	161	1189	1105	157	158
Unique LEAs	27	27	27	27	27
% Female	68.70	82.41	73.16	72.46	67.62
% Teacher of Color	50.00	22.14	52.63	19.15	49.98
Age	35.47	29.11	32.64	28.72	32.25
Avg Years Experience	1.67	2.04	1.84	2.05	1.97
% License: Elem	1.10	52.55	25.30	22.95	9.26
% License: EC	18.46	14.01	14.15	12.76	16.06
% License: Career	18.46	2.51	7.33	5.59	11.36
% License: Middle Grades Stem	14.79	8.55	12.76	13.56	14.22
% License: Middle Grades Humanities	11.49	11.27	10.02	19.21	13.85
% License: Secondary Stem	14.79	6.99	10.71	15.34	12.72
% License: Secondary Humanities	6.84	13.17	8.85	25.49	14.52
% License: Arts	7.21	6.94	5.69	8.21	4.14
% License: PE/Health	0.49	1.69	0.89	2.77	1.13
% License: Foreign Language	5.26	1.65	3.00	2.38	4.40
% Elementary	11.61	56.36	32.04	18.78	9.46
% Middle	38.02	18.39	29.12	31.61	39.29
% High	45.97	20.91	32.20	46.44	48.78
% Other	4.40	3.78	5.85	3.16	2.48
% City/Suburb	50.37	73.14	70.28	68.14	54.78
% Low Income	55.38	51.81	59.63	48.37	56.39
% Minority	67.65	65.57	75.07	63.99	71.68
Performance Composite	43.20	51.47	43.45	51.15	44.45

Note: This table displays characteristics of teachers and the schools in which they work for CCTI teachers and comparison sample teachers. Data come from the 2017–18 through 2021–22 school years. Comparison sample teachers have less than five years of experience and are working in the same LEAs or schools as CCTI teachers. Trad=traditionally prepared teachers; Alt/res=teachers prepared through alternative entry or residency programs.

<sup>&</sup>lt;sup>4</sup> CCTI currently requires that its candidates complete and pass the edTPA.

<sup>&</sup>lt;sup>5</sup> In additional analyses we separately consider outcomes for early CCTI cohorts (2017–18 and 2018–19) and late CCTI cohorts (2019–20, 2020–21, and 2021–22). Early CCTI cohorts primarily consisted of alternative entry participants; late CCTI cohorts consist of residency participants.

For this evaluation, we identified several groups of teachers to serve as comparison samples: (1) traditionally prepared early-career teachers (less than five years of experience) working in the same districts and schools as CCTI teachers and (2) other alternative entry/residency early-career teachers working in the same districts and schools as CCTI teachers. With these groups we can assess CCTI outcomes relative to peers with traditional, university-based preparation and relative to peers who entered teaching without having completed licensure requirements.

**Table 2** presents data for CCTI (overall) and comparison sample teachers. Our comparison samples include over 17,000 traditionally prepared and 7,000 alternative entry/residency teachers working in the same districts as CCTI teachers and 3,000 traditionally prepared and 1,300 alternative entry/residency teachers working in the same schools as CCTI teachers. Demographically, those in the CCTI program are older than peers in the comparison sample and are more likely to be a teacher of color than their traditionally prepared peers. Relative to the comparison samples, CCTI teachers are more likely to hold a career/technical education license and are less likely to hold a K–6 or secondary humanities license. Given their employment in the same districts and schools, school characteristics for our comparison samples are generally similar

to those for CCTI teachers. However, traditionally prepared teachers tended to work in schools with higher performance composites and lower percentages of low-income students and students of color.

# What percentage of participating teachers complete the CCTI program?

For each CCTI cohort, **Figure 1** illustrates the percentage of program entrants who completed program coursework and were recommended for a continuing license by CCTI.<sup>6</sup> Generally, more than 80 percent of program entrants complete CCTI coursework—ranging from 73 percent in cohort 2 to 87 percent in cohort 3—and more than 60 percent are recommended for a continuing license—ranging from 58 percent in cohort 4 to 68 percent in cohort 1. There are three common reasons why individuals are not recommended for a continuing license by CCTI: they resigned from teaching, their contract was not renewed by their school district, or they did not complete program requirements (e.g. coursework, earning a passing score on a capstone performance assessment).

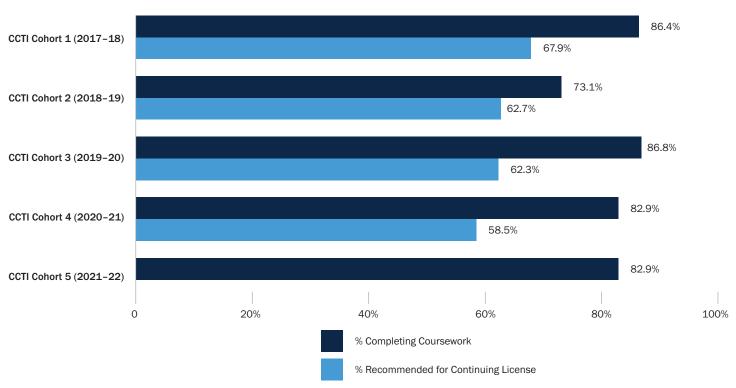


Figure 1: Percentage of CCTI Entrants Completing Program Coursework and Being Recommended for a Continuing License

Note: For each CCTI cohort, this figure displays the percentage of program entrants who completed CCTI coursework and who were recommended for a continuing license by CCTI. Licensure data for Cohort 5 (2021–22) are not available until Summer 2023.

<sup>&</sup>lt;sup>6</sup> Complete data on those recommended for a continuing license are not yet available for the 2021–22 CCTI cohort. As such we do not report those data in Figure 1.

## How do CCTI teachers perceive the quality of their preparation?

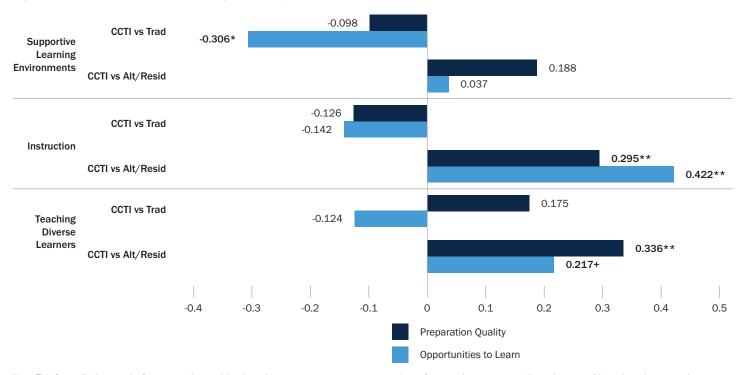
To assess teachers' perceptions of their preparation program, EPIC partners with NCDPI on an annual survey to early-career teachers. This survey has two main sections—one section asks early-career teachers to rate the quality of their preparation program (i.e. How well did your TPP prepare you to...) and the other section asks early-career teachers to report their opportunities to learn and practice key teaching tasks (i.e. In your TPP how much opportunity did you have with the following...). Prior analyses indicate that these survey items identify three constructs: (1) Instruction (i.e. survey items on planning, instruction, and assessment); (2) creating a supportive learning environment (i.e. survey items on expectations, procedures/management, and relationships); and (3) teaching diverse learners (i.e. survey items on instructing exceptional children, English learners, gifted students, etc.).

Using data from teacher surveys from the 2017–18 through 2021–22 school years, we compare the survey responses of

CCTI teachers versus traditionally prepared and alternative entry/residency teachers.<sup>7</sup> Specifically, we estimate regression models where the outcome variables are measures of preparation quality and opportunities to learn and we control for a set of teacher and school characteristics.<sup>8</sup> We include a school district fixed effect to compare the perceptions of CCTI and comparison sample teachers working in the same districts.

Figure 2 shows that CCTI teachers generally have comparable perceptions of their preparation quality and opportunities to learn/practice as traditionally prepared teachers. The one exception is opportunities to learn about creating supportive learning environments, where CCTI teachers reported significantly lower values—approximately 0.30 points—than their traditionally prepared peers. Relative to alternative entry/residency teachers, CCTI teachers report more positive perceptions of their preparation quality and opportunities to learn, especially for the *instruction* and *teaching diverse learners* constructs. For example, regarding perceptions of program quality, responses of CCTI teachers on the *instruction* and *teaching diverse learners* constructs were 0.30 and 0.34 points





Note: This figure displays results from regression models where the outcome measures are perceptions of preparation program quality and opportunities to learn in preparation programs. Models include controls for year of survey administration, teacher experience, teacher demographics, and school characteristics. Models also include an LEA fixed effect to compare the perceptions of teachers working in the same districts. There are 104 survey responses from CCTI teachers, 2489 responses from traditionally prepared teachers, and 315 from other alternative entry/residency teachers. +, \*, and \*\* indicate statistically significant differences between CCTI and comparison sample teachers at the 0.10, 0.05, and 0.01 levels, respectively.

<sup>&</sup>lt;sup>7</sup> Survey data for traditionally prepared teachers come from survey administrations in 2017–18 through 2021–22. Survey data for alternative entry/residency teachers come from 2020–21 and 2021–22. We limit the survey data to more recent years for alternative entry/residency teachers due to changes in NCDPI survey administration procedures. Specifically, in recent years, alternative entry/residency teachers only receive the survey after they have finished their preparation program.

<sup>8</sup> Models include controls for year of survey administration, teacher experience, teacher demographics, and school characteristics.

Table 3: Teacher Evaluation Results (NCEES) for CCTI and Comparison Sample Teachers

	LEADERSHIP	CLASSROOM ENVIRONMENT	CONTENT Knowledge	FACILITATING STUDENT LEARNING	REFLECTING ON PRACTICE
CCTI vs Traditionally Prepared					
CCTI vs Trad: Within District	0.005	-0.010	-0.003	-0.029	-0.033
CCTI vs Trad: Within Schools	0.007	-0.010	-0.007	-0.018	-0.030
CCTI vs Alternative Entry/Residency					
CCTI vs Alt/Resid: Within District	0.089**	0.037	0.074*	0.060*	0.025
CCTI vs Alt/Resid: Within Schools	0.088**	0.036	0.067*	0.068*	0.026

Note: This table displays results from regression models where the outcome is teachers' NCEES ratings on standards 1–5. NCEES data are from the 2017–18, 2018–19, 2020–21 and 2021-22 academic years and the sample includes teachers with less than five years of experience. Models include controls for year, teacher experience, teacher demographics, and school characteristics. Models also include an LEA or school fixed effect. +, \*, and \*\* indicate statistically significant differences at the 0.10, 0.05, and 0.01 levels, respectively.

higher, respectively, than the responses of alternative entry/ residency teachers. For perceptions of opportunities to learn, the responses of CCTI teachers were 0.42 and 0.22 points higher than those for alternative entry/residency teachers.

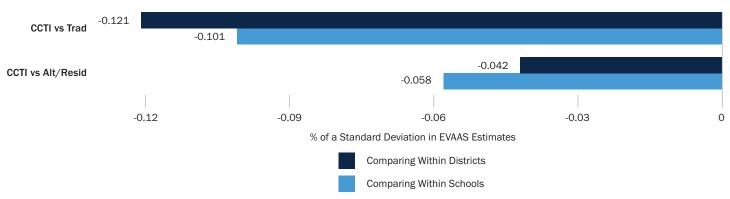
### How effective are CCTI teachers?

We assess the effectiveness of CCTI teachers with two performance measures: ratings from the North Carolina Educator Evaluation System (NCEES) and value-added estimates from the Educator Value-Added Assessment System (EVAAS). For NCEES, we estimate separate models for each of the state's five professional teaching standards—Leadership, Classroom Environment, Content Knowledge, Facilitating Student Learning, and Reflecting on Practice. For value-added, we estimate models in which the outcome measure is EVAAS

estimates standardized within year and test (e.g. Math 1, 6th grade reading) across all teachers in North Carolina public schools (NCPS). In our NCEES models, we combine data from 2017-18, 2018-19, 2020-21, and 2021-22; we combine data from 2017-18, 2018-19, and 2021-22 for EVAAS analyses.9 All models focus on teachers with less than five years of experience and include controls for year fixed effects, teacher experience, teacher demographics, and school characteristics. Models also include a district or school fixed effect to compare the effectiveness of CCTI teachers to comparison sample teachers working in the same districts or schools.<sup>10</sup>

Table 3 presents NCEES results for CCTI versus comparison sample teachers. The top panel of Table 3 shows that, relative to traditionally prepared teachers, CCTI teachers earn comparable evaluation ratings across all five professional teaching standards. Compared to alternative entry/residency

Figure 3: Teacher EVAAS Results for CCTI and Comparison Sample Teachers



Note: This figure displays results from regression models where the outcome is teachers' standardized EVAAS estimates. EVAAS data are from the 2017-18, 2018-19, and 2021-22 academic years and the sample includes teachers with less than five years of experience. Models include controls for year, teacher experience, teacher demographics, test and grade fixed effects, and school characteristics. Models also include an LEA or school fixed effect. +, \*, and \*\* indicate statistically significant differences between CCTI and comparison sample teachers at the 0.10, 0.05, and 0.01 levels, respectively.

<sup>9</sup> Due to the COVID-19 pandemic, NCEES ratings are not available in 2019-20; EVAAS estimates are not available in 2019-20 and 2020-21.

<sup>10</sup> Our EVAAS analyses also control for the subject-area (e.g. 3rd grade reading, 8th grade science) from which the EVAAS estimate comes.

teachers, the bottom panel of Table 3 shows that CCTI teachers earn higher evaluation ratings on three standards. In particular, compared to alternative entry/residency teachers working in the same schools, CCTI teachers earn ratings 0.088, 0.067, and 0.068 points higher on the Leadership, Content Knowledge, and Facilitating Student Learning standards, respectively. These results are statistically significant but modest in magnitude, as the average difference in evaluation ratings between first and second-year teachers is approximately 0.20 points. Additional analyses show that CCTI teachers in early program cohorts earn significantly lower evaluation ratings than traditionally prepared teachers; CCTI teachers in late program cohorts earn significantly higher evaluation ratings than alternative entry/residency teachers.

**Figure 3** displays EVAAS results for CCTI teachers. There are no statistically significant differences in the value-added estimates of CCTI versus traditionally prepared and alternative entry/residency teachers. Further analyses indicate that CCTI teachers in early and late program cohorts also had similar value-added estimates as comparison sample teachers.

# Do CCTI teachers remain in teaching?

We examine the retention of CCTI and comparison sample teachers with two types of analyses. First, we assess whether teachers return to teaching in NCPS, to teaching in the same district, and to teaching in the same school in the following year. These analyses include teachers with less than five years of experience and control for year fixed effects, teacher demographics, teacher experience, and school characteristics. Second, we examine whether teachers are still teaching—in NCPS, in their initial hire district, and in their initial hire school—in our most recent data period (September 2022). For CCTI teachers in the 2021-22 cohort, these analyses assess whether teachers return in the following year; for CCTI teachers in earlier cohorts, these analyses assess retention over a multi-year period. In this second set of retention analyses, the comparison groups include first-year traditionally prepared and alternative entry/residency teachers from the 2017-18 through 2021–22 school years, respectively. These models control for year fixed effects, teacher demographics, and school characteristics. Both sets of analyses include district or school fixed effects to compare the retention outcomes of CCTI teachers to those of peers working in the same districts or schools.

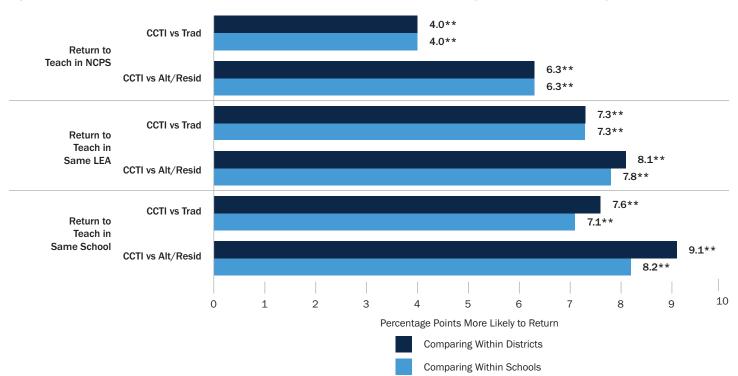


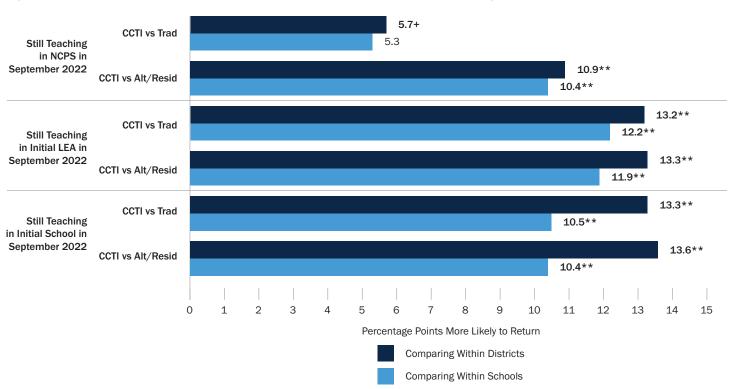
Figure 4: Teacher Retention Results for CCTI and Comparison Sample Teachers—Returning to Teach in the Following Year

Note: This figure displays results from regression models where the outcome is whether the teacher returns to teaching in NCPS, returns to the same LEA, and returns to the same school in the following year. Analyses focus on teachers with less than five years of experience. Models control for year fixed effects, teacher experience, teacher demographics, and school characteristics. Models also include an LEA or school fixed effect. +, \*, and \*\* indicate statistically significant differences between CCTI and comparison sample teachers at the 0.10, 0.05, and 0.01 levels, respectively.

**Figure 4** displays results from our first set of retention models assessing whether teachers return in the following year. Here, across outcomes, we find that CCTI teachers are significantly more likely to return than traditionally prepared or alternative entry/residency teachers. For example, relative to traditionally prepared peers working in the same school, CCTI teachers are 4 percentage points more likely to return to NCPS, 7.3 percentage points more likely to return to the same district, and 7.1 percentage points more likely to return to the same school in the following year. The results are 6.3 percentage points, 7.8 percentage points, and 8.2 percentage points, respectively, when comparing CCTI versus alternative entry/residency teachers.

Figure 5 displays results from our second set of retention models assessing whether CCTI and comparison sample teachers are still teaching at the start of the 2022–23 school year. Once again, we find that CCTI teachers are significantly more likely to still be teaching in our most recent data period. For example, relative to other beginning teachers who start teaching in the same district—traditionally prepared or alternative entry/residency—we find that CCTI teachers are 13 percentage points more likely to still be teaching in that initial LEA at the start of the 2022–23 school year. Likewise, relative to other beginning teachers who start teaching in the same school, CCTI teachers are 10 percentage points more likely to still be teaching in that initial school in September 2022. Lastly, we note that results are similar—for both sets of our retention analyses—for early and late CCTI cohorts.

Figure 5: Teacher Retention Results for CCTI and Comparison Sample Teachers—Still Teaching at the Start of the 2022–23 School Year



Note: This figure displays results from regression models where the outcome is whether the teacher is still teaching in NCPS, in the initial hire LEA, and in the initial hire school in September 2022. The data include five cohorts of CCTI teachers (2017–18 through 2021–22) and five cohorts of beginning teachers (traditionally prepared, alternative/residency). Models control for year fixed effects, teacher experience, teacher demographics, and school characteristics. Models also include an LEA or school fixed effect. +, \*, and \*\* indicate statistically significant differences at the 0.10, 0.05, and 0.01 levels, respectively.

### Discussion

In this brief, we presented summative results from our evaluation of the CCTI program. These analyses focused on five program cohorts—2017–18 through 2021–22—and compared outcomes for CCTI teachers versus traditionally prepared and alternative entry/residency teachers working in the same districts and schools. Overall, we have four key findings.

First, we found that a large majority of CCTI entrants (82 percent) complete their program coursework. Nearly two-thirds of program entrants (64 percent) are recommended for a continuing license by CCTI. The most common reasons for not being recommended for licensure include not finishing coursework, not completing/passing a capstone performance assessment, and resigning from teaching.

Second, CCTI teachers were positive about the quality of their preparation and their opportunities to learn and practice key teaching tasks. In particular, CCTI teachers rated the quality of their preparation experiences and opportunities to learn comparably to traditionally prepared teachers. In the areas of *instruction* and *teaching diverse learners*, CCTI teachers rated the quality of their preparation and their opportunities to learn significantly higher than other alternative entry/residency teachers. These results should be interpreted cautiously, given the possibility for bias in those who chose to respond to the survey. Nonetheless, these data provide suggestive evidence regarding the quality of CCTI programming.

Third, CCTI teachers performed comparably to other early-career teachers working in their districts and schools.

Specifically, CCTI teachers had NCEES ratings similar to those of traditionally prepared teachers and EVAAS estimates similar to those of traditionally prepared and alternative entry/residency teachers. CCTI teachers had slightly higher NCEES ratings than other alternative entry/residency teachers.

Lastly, our most robust results show that CCTI teachers are more likely than traditionally prepared and alternative entry/ residency teachers to return to NCPS, the same district, and the same school in the following year. Furthermore, CCTI teachers are more likely to persist in teaching—in NCPS, their initial hire district, and their initial hire school—into the start of the 2022–23 school year. These retention results are consistent with those from prior analyses and are particularly noteworthy given recent increases in teacher attrition in North Carolina. While higher retention rates are an important indicator of program success, it is unclear whether these differences in retention are due to CCTI practices and/or characteristics of those who enroll in the program.

Taken together, our analyses suggest that CCTI is an effective preparation program. This is especially true when comparing CCTI versus other alternative entry/residency teachers, where CCTI teachers have more positive perceptions of program quality, modestly higher evaluation ratings, and are more likely to persist in teaching. Our evaluation results highlight the potential of district-run TPPs to make positive contributions to the educator workforce. Future work should assess other district-run TPPs in North Carolina—e.g. CMS Teaching Residency, GCS Alternative Certification Track—in order to more fully understand the contributions of such programs to the state's teaching workforce.

<sup>11</sup> See recent work on educator attrition in NCPS: https://epic.unc.edu/wp-content/uploads/sites/1268/2023/02/Educator-Attrition-and-Hiring-in-NC.pdf



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