

# Investigating the Relationship between Adherence to Connecticut's Teacher Education and Mentoring Program Requirements and Teacher Retention

Connecticut is one of many states that implements an induction program for beginning teachers to mitigate high turnover and lower efficacy among early-career teachers. The state's Teacher Education and Mentoring (TEAM) Program requires beginning teachers to complete five instructional modules, have a certain number of contact hours with a mentor, and submit four reflection papers. This study was conducted to explore the relationship between adherence to TEAM Program requirements and the outcome of interest—teacher retention. The results suggest that teachers who completed more of the program requirements were more likely to stay in the same district and in the Connecticut public school system. Adherence varied across program requirements; completion rates were highest for the requirements related to module completion and lowest for the requirements related to contact hours with mentors. For the program requirements related to module completion and teacher–mentor contact hours, adherence was higher for teachers in the state's 30 lowest performing districts than for teachers in higher performing districts.

## Why this study?

Early-career teachers tend to leave the profession at a higher rate<sup>1</sup> and demonstrate lower efficacy in the classroom<sup>2</sup> than more experienced teachers. To mitigate these challenges, school districts and states often implement formal teacher induction programs to support beginning teachers. Connecticut is one of 29 states that require beginning teachers to complete an induction program.<sup>3</sup> Its two-year Teacher Education and Mentoring (TEAM) Program includes five instructional modules that help beginning teachers align their instruction with the state's standards for educators—the Common Core of Teaching.<sup>4</sup> The modules cover classroom environment and student engagement and commitment to learning, planning for active learning, instruction for active learning, assessment for learning, and professional responsibilities. The program also assigns a specially trained mentor to beginning teachers. Teachers, in conjunction with their mentor, develop a Professional Growth Action Plan for each module and submit reflection papers documenting their new learning and how they implemented it in the classroom. The first cohort of beginning teachers participated in the program in fall 2010.

1. Borman, G. D., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analysis and narrative review of the research. *Review of Educational Research*, 78(3), 367–409; Guarino, C., Santibanez, L., & Daley, G. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research*, 76(1), 173–208.
2. Hanushek, E., Kain, J. F., O'Brien, D. M., & Rivkin, S. G. (2005). *The market for teacher quality* (NBER Working Paper No. 11154). National Bureau of Economic Research; Ladd, H. F., & Sorensen, L. C. (2015). *Returns to teacher experience: Student achievement and motivation in middle school* (CALDER Working Paper No. 112). National Center for Analysis of Longitudinal Data in Education Research; Papay, J., & Kraft, M. (2015). Productivity returns to experience in the teacher labor market: Methodological challenges and new evidence on long-term career improvement. *Journal of Public Economics*, 130(1), 105–119.
3. Goldrick, L. (2016, March). *Support from the start: A 50-state review of policies on new educator induction and mentoring*. <https://newteachercenter.org/wp-content/uploads/2016CompleteReportStatePolicies.pdf>.
4. Connecticut State Department of Education. (2010). *2010 Common Core of Teaching: Foundational skills*. <https://portal.ct.gov/-/media/CA1519B5964A47DBA11BC29CE99E857E.pdf>.

The Connecticut State Department of Education wants to know how program adherence is associated with in-district and in-state retention of beginning teachers. It also wants to understand the extent to which participating teachers adhere to the TEAM Program’s requirements (see box 1). The department is particularly interested in the results for the 30 lowest performing districts in the state, called Alliance districts, which have high rates of students living in poverty. Among Alliance districts the state is most concerned about the 10 lowest performing: Opportunity districts. The department can use the study results to understand whether there is evidence that the program is supporting teacher retention and where support for implementation is needed.

---

### Box 1. Requirements of Connecticut’s Teacher Education and Mentoring Program

Each district develops and implements its own Teacher Education and Mentoring (TEAM) Program that incorporates the requirements from the state legislation. Responsibility for completing the requirements rests primarily with teachers. Districts ensure that teachers are supported through the process by providing a mentor and by monitoring progress through mentor logs. Mentors are responsible for documenting contact hours with their mentees. The Connecticut State Department of Education monitors all teachers and reminds them of their responsibility to complete the program and the deadline by which they must do so.

Of the eight program requirements in the TEAM Program legislation, this study used the following six to measure program adherence.<sup>1</sup>

- Teacher-mentor contact hours
  1. An average of 10 contact hours with a mentor per module for modules 1–4.<sup>2,3</sup>
- Module completion
  2. Two modules in the first year.<sup>3</sup>
  3. Five modules in two years.
  4. All five modules in three years.
- Reflection papers:
  5. Two reflection papers in the first year.<sup>3</sup>
  6. All four reflection papers in two years.

#### Notes

1. One requirement in the legislation, “Assignment of a mentor within 30 days of hiring,” was not included because of data quality issues. Another requirement in the legislation, “A total of 50 contact hours during the program,” was not included because it is conflated with how long teachers stayed in the program.

2. One requirement in the legislation, “A total of 10 contact hours per module,” was replaced with “An average of 10 contact hours per module for modules 1–4,” based on the recommendation of the study’s advisory committee.

3. To assess adherence during the first year in the program, “A total of 20 contact hours with a mentor in the first year” was used as an alternative to “An average of 10 contact hours per module” because teachers were often in the middle of a module at the end of their first year. Completion of two modules in the first year and completion of two reflection papers in the first year were also used to assess adherence during the first year in the program.

Source: Connecticut State Department of Education, based on Section 10–145 of the Connecticut General Statutes passed in October 2009.

---

## What was studied and how?

The study used descriptive statistics and regression analysis incorporating data on 7,708 beginning teachers who entered the TEAM Program between 2012/13 and 2015/16 to answer three research questions:

1. Was there a relationship between adherence to the requirements of the TEAM Program and in-district and in-state retention of teachers after one year of teaching or after three years?
2. To what extent did beginning teachers in the Connecticut public school system complete the requirements of the TEAM Program?
3. Did adherence to the requirements of the TEAM Program vary by school grade span, school Title I status, or district performance category?

## Findings

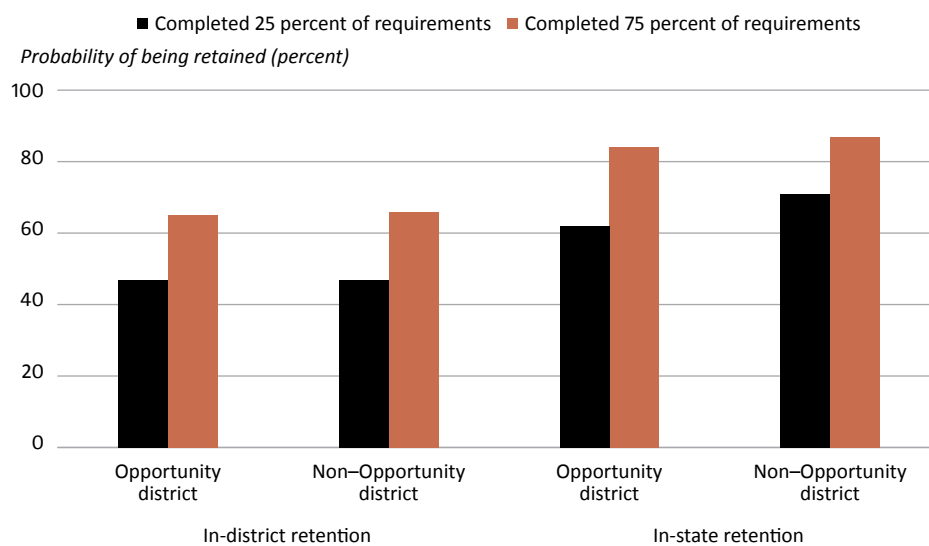
### *Program adherence was positively associated with teacher retention, including in the 10 lowest performing districts in the state*

- There was a significant and positive relationship between the percentage of requirements that each teacher completed and the probability of the teacher’s retention both in-district and in-state after one year of teaching and after three years. The probability of a teacher being in the same district after one year increased from 76 percent for a teacher who completed 25 percent of the requirements to 82 percent for a teacher who completed 50 percent of the requirements to 86 percent for a teacher who completed 75 percent of the requirements. The probability of a teacher being in the same district after three years under those three scenarios increased from 47 percent to 56 percent to 65 percent.
- Even though Opportunity districts had lower teacher retention than non–Opportunity districts did, there was a significant and positive relationship between adherence and retention after three years of teaching for teachers in Opportunity districts (figure 1). The probability of in-district or in-state retention was higher for teachers in Opportunity districts who completed 75 percent of the requirements than for teachers in those districts who completed 25 percent of the requirements.

### *Program adherence was higher for module completion and reflection paper submission than for teacher–mentor contact hours*

- Approximately 86 percent of teachers completed two modules in the first year, and 75 percent of teachers completed all five modules in two years.
- Approximately 78 percent of teachers completed two reflection papers in the first year, and 77 percent of teachers completed four reflection papers in two years.
- A smaller percentage of teachers completed the required contact hours in both the first and second years. Approximately 26 percent of teachers had a total of 20 contact hours in the first year, and 36 percent of teachers had an average of 10 contact hours per module for modules 1–4. Because of the low adherence for

**Figure 1. Teachers in both Opportunity and non–Opportunity districts who completed more of the requirements of Connecticut’s Teacher Education and Mentoring Program were more likely to stay in the same district and the Connecticut public school system after three years of teaching, 2012/13–2017/18**



Note: Opportunity districts are the 10 districts with the lowest academic performance among the 170 districts in Connecticut. The sample excludes the 2015/16 cohort, for which three-year retention data were not yet available.

Source: Authors’ analysis of 2012/13–2017/18 data from the Connecticut State Department of Education.

teacher-mentor contact hours and teacher attrition, only 14 percent of beginning teachers who started the TEAM Program completed all program requirements.

### ***Completion of two of the six program requirements was higher for teachers in Alliance districts than for teachers in non–Alliance districts<sup>5</sup>***

- Approximately 43 percent of teachers in Alliance districts had an average of 10 contact hours per module for modules 1–4 compared with 31 percent of teachers in non–Alliance districts. Approximately 29 percent of teachers in the Alliance districts had a total of 20 contact hours in their first year compared with 23 percent of teachers in non–Alliance districts.
- A higher proportion of teachers in Alliance districts (92 percent) than of teachers in non–Alliance districts (89 percent) completed all five modules in three years, the maximum amount of time permitted if a teacher had extenuating circumstances.

## **Implications**

This study found a positive relationship between adherence to Connecticut’s TEAM Program and teacher retention. However, the results do not necessarily indicate that higher program adherence causes higher teacher retention. The results could be due in part to other, unobserved factors such as the motivation of teachers to stay in the district or profession, the professional culture of the school, and other factors affecting teacher morale.<sup>6</sup> More research is needed to determine whether a causal relationship exists between adherence to the requirements of teacher induction programs and retention.

In addition to finding evidence for this important relationship between adherence and retention, the study also demonstrated that adherence varied by type of program requirement. One area to which the Connecticut State Department of Education might want to direct additional support is the implementation and documentation of contact hours between beginning teachers and mentors. That having an average of 10 contact hours per module was not reliably related to retention could suggest that this requirement was not as important as others. However, the results might simply be attributable to insufficient recordkeeping. Further research might explore other reasons why logged contact hours are lower than required, including investigating teacher perceptions of the value of mentoring or time constraints for teachers or mentors in completing contact hours.

The findings also point to the potential benefits of teacher induction programs in low-performing districts. For two of the TEAM Program requirements, adherence was higher for teachers in the 30 lowest performing districts in the state than for teachers in higher performing districts. Higher adherence was related to higher in-district and in-state retention across all districts in the state, including the 10 lowest performing districts. This finding provides promising evidence that when teachers adhere to the program requirements, teacher induction programs might be an important support for teacher retention, particularly for lower performing districts, which typically experience difficulty in retaining beginning teachers.

---

5. For all six program requirements the completion rate was higher for teachers in Alliance districts than for teachers in non–Alliance districts; for two requirements the completion rate was statistically significantly higher.

6. Senechal, J., Sober, T., Hope, S., Johnson, T., Burkhalter, F., Castelow, T., et al. (2016). *Understanding teacher morale*. Virginia Commonwealth University, Metropolitan Educational Research. Retrieved July 12, 2017, from [http://scholarscompass.vcu.edu/merc\\_pubs/56](http://scholarscompass.vcu.edu/merc_pubs/56).

This brief was prepared for the Institute of Education Sciences (IES) under Contract ED-IES-17-C-0008 by the Regional Educational Laboratory Northeast & Islands administered by Education Development Center, Inc. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. The full report is available on the Regional Educational Laboratory website at <http://ies.ed.gov/ncee/edlabs>.

Hanita, M., Bailey, J., Khanani, N., Bocala, C., Zweig J., & Bock, G. (2020). *Investigating the relationship between adherence to Connecticut's Teacher Education and Mentoring Program requirements and teacher retention* (REL 2020–022). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands.