



# Teacher Licensure and Workforce Quality: Insights from Covid-Era Emergency Licenses in Massachusetts

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Much recent debate among policymakers and policy advocates focuses on whether states should reduce teacher licensure requirements to ease the burdens of recruiting high quality teachers to the workforce. We examine the effectiveness of individuals who entered the teacher workforce in Massachusetts during the pandemic by obtaining an emergency license, which requires only a bachelor's degree. Our results show that, in 2021-22, newly hired emergency licensed teachers: 1) were largely rated as proficient (82%) in their performance evaluation ratings and 2) had similar measures of student test score growth as their traditionally licensed peers. However, we find suggestive evidence that emergency licensed teachers with no prior employment in Massachusetts public schools and no prior engagement with the teacher pipeline (i.e., enrollment in teacher preparation, attempting licensure exams) received lower performance ratings and had lower measures of student test score growth in English Language Arts. Taken together, these results encourage the creation of additional flexibility in licensure requirements for those who have demonstrated prior efforts to join the educator pipeline.

VERSION: April 2024

Suggested citation: Chi, Olivia L., Andrew Bacher-Hicks, Ariel Tichnor-Wagner, and Sidrah Baloch. (2024). Teacher Licensure and Workforce Quality: Insights from Covid-Era Emergency Licenses in Massachusetts. (EdWorkingPaper: 24-936). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/g5gf-wn55>

**Teacher Licensure and Workforce Quality:  
Insights from Covid-Era Emergency Licenses in Massachusetts<sup>1</sup>**

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March 2024

**Abstract:**

Much recent debate among policymakers and policy advocates focuses on whether states should reduce teacher licensure requirements to ease the burdens of recruiting high quality teachers to the workforce. We examine the effectiveness of individuals who entered the teacher workforce in Massachusetts during the pandemic by obtaining an emergency license, which requires only a bachelor's degree. Our results show that, in 2021-22, newly hired emergency licensed teachers: 1) were largely rated as proficient (82%) in their performance evaluation ratings and 2) had similar measures of student test score growth as their traditionally licensed peers. However, we find suggestive evidence that emergency licensed teachers with no prior employment in Massachusetts public schools and no prior engagement with the teacher pipeline (i.e., enrollment in teacher preparation, attempting licensure exams) received lower performance ratings and had lower measures of student test score growth in English Language Arts. Taken together, these results encourage the creation of additional flexibility in licensure requirements for those who have demonstrated prior efforts to join the educator pipeline.

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<sup>1</sup> The authors are grateful to the Massachusetts Department of Elementary and Secondary Education (DESE) for providing data access, feedback, and comments throughout the research process, with particular thanks to Claire Abbott, Matt Deninger, Liz Losee, Elana McDermott, and Aubree Webb. The findings and conclusions in this paper are those of the authors and do not represent the positions or policy of the Massachusetts Department of Elementary and Secondary Education. This work was supported by DESE contract 22EPAW1.

## INTRODUCTION

Every state in the nation imposes teacher licensure requirements to ensure that teachers have an acceptable level of skill and training (Putnam and Walsh, 2021). However, the relationship between licensure requirements and teacher effectiveness is mixed, prompting substantial recent policy debate (e.g., Aldeman, 2024; Sakariassen, 2021; Yglesias, 2024). For instance, research using data from Massachusetts documents positive and statistically significant relationships between licensure exam scores and on-the-job performance (Cowan et al., 2020), while research from other states has found only modest relationships (e.g., Rockoff et al., 2011; Orellana & Winters, 2023). Moreover, licensure exam requirements are criticized for disproportionately deterring teacher candidates of color, who are less likely than white candidates to pass licensure exams (e.g., Cowan et al., 2020), but provide large and significant academic benefits for students of color (e.g., Dee, 2005; Gershenson et al., 2022).

When the Covid-19 pandemic began in 2020, many states – including Massachusetts, the context we study – temporarily altered licensure requirements to prevent a pandemic-induced teacher shortage (DeArmond et al., 2023; Slay et al., 2020). In this study, we examine whether and how teachers who entered the workforce with Covid-era reduced licensure requirements differ with respect to measures of effectiveness; the findings offer valuable insights for shaping current and future teacher licensure policy.

### **The Massachusetts Context**

Prior to the pandemic, individuals seeking teaching positions in Massachusetts public schools typically needed to obtain a *provisional* or *initial* license. Provisional licenses require a bachelor's degree and passing all required Massachusetts Tests for Educator Licensure (MTELs).

Initial licenses require the completion of an educator preparation program and obtaining required endorsements, in addition to a bachelor's degree and passing required MTELEs.

The onset of the COVID-19 pandemic disrupted these traditional licensure pathways into teaching. Teacher candidates completing their student teaching could no longer attend their practicum sites, and individuals preparing to take required licensure tests found test centers closed. To prevent a pandemic-induced teacher shortage, Massachusetts authorized an emergency teaching license in June 2020, which only required a bachelor's degree to become eligible for teaching positions in public schools (An Act Relative to Municipal Governance During the COVID-19 Emergency, 2020), thereby substantially reducing the requirements for entering the teacher workforce.

In our prior work, we found that the creation of the emergency license in Massachusetts not only offered a pathway to teaching for individuals who were otherwise on-track to enter via traditional licensure, but also attracted new individuals to the supply of available teachers. These newcomers include individuals who were previously unable to pass required licensure exams, out-of-state educators, and individuals who wanted to try the profession (Bacher-Hicks et al., 2023). We also found that newly hired teachers with emergency licenses were more racially and ethnically diverse than their traditionally licensed peers, and they overwhelmingly intended to obtain permanent licensure to remain in the profession.

### **Current Study**

The creation of the emergency license achieved the immediate intended goal of maintaining a steady supply of teachers during the pandemic and had the additional benefit of increasing the racial and ethnic diversity of the teacher workforce. However, open questions

remain regarding the effectiveness of emergency licensed teachers (ELTs) who entered the workforce with reduced licensure requirements.

To our knowledge, only one other study examines the teacher effectiveness of those who entered under reduced requirements during the pandemic. Backes and Goldhaber (2023) use data from New Jersey to examine the creation of the Temporary Certificate of Eligibility (Temporary CE). Individuals who had a) enrolled in or completed a preparation program, and b) completed at least 50 preservice hours could obtain this certificate to become a classroom teacher in a New Jersey public school while deferring licensure exam requirements to the following year. The authors find that Temporary CE holders are at least as effective at raising math or ELA test scores as other novice teachers. They also find that Temporary CE holders received lower performance ratings than did their peers, but the lower ratings were largely attributable to differences in the Temporary CE holders' school and classroom characteristics.

It is important to note that the Massachusetts context differs from the New Jersey context on an important dimension. In Massachusetts, the emergency license represented a greater reduction in requirements; anyone with a bachelor's degree was eligible, whereas New Jersey restricted access to the Temporary CE to only those who had been enrolled in (or completed) a preparation program and completed preservice hours. The consequences of this greater reduction in licensure requirements and whether teacher effectiveness varies across those with and without prior engagement with the teacher preparation pipeline are worthy of examination.

To further our understanding of the relationship between reduced teacher licensure requirements and teacher effectiveness, we use data from the Massachusetts Department of Elementary and Secondary Education (DESE) to examine:

1. What is the distribution of performance evaluation ratings among newly hired ELTs, and how do their ratings compare to those of their more traditionally licensed peers?
2. How do the mean student growth percentiles of newly hired ELTs compare to those of new hires with provisional and initial licenses?

We find that, in 2021-22, the vast majority (82%) of newly hired ELTs were rated Proficient or above, and their ratings were similar to those of their provisionally licensed peers. Newly hired ELTs in tested grades and subjects had similar mean student growth percentiles in math and English Language Arts (ELA) as their peers with provisional and initial licenses. However, we find suggestive evidence that the subgroup of ELTs with *no* prior employment in Massachusetts public schools *and no* prior engagement with the teacher pipeline (i.e., enrollment in teacher preparation, attempting licensure exams) were more likely to receive below proficient ratings and had lower mean student growth percentiles in ELA.

## **DATA AND METHODS**

We draw upon administrative data from Massachusetts DESE, which includes all teachers employed in Massachusetts public schools between 2019-20 through 2021-22. These records include teacher characteristics (e.g., race/ethnicity, gender), school assignments, and licensure information. For school-year 2021-22, the records also contain teacher performance evaluation ratings and teacher-student links, as well as student-level administrative data, including demographic characteristics, school and class assignments, and student growth percentiles (SGPs) in math and ELA in grades 4 through 8. We leverage (1) performance evaluation ratings and (2) mean SGPs to examine measures of teacher quality among newly hired teachers.

### **Performance Evaluation Ratings**

Newly hired teachers are required to be evaluated annually using the Massachusetts Educator Evaluation Framework. Teachers receive a summary rating of Exemplary, Proficient, Needs Improvement, or Unsatisfactory, which is an overall assessment summarizing performance across four domains. Due to the pandemic, we only have valid ratings from the 2021-22 school year. Our analysis includes the comparison of ratings of 4,680 newly hired teachers, of whom 1,766 hold emergency licenses, 732 hold provisional licenses, and 2,182 hold initial licenses.<sup>2</sup> Table 1 Columns 1-3 provide summary statistics for the analytic sample by license type. ELTs are more likely to (a) be Black and Hispanic/Latinx, and (b) teach in schools with higher shares of low-income students and students of color than their traditionally licensed peers.

To examine the relative likelihood that newly hired ELTs are rated below proficient in 2021-22, we estimate:

$$BelowProf_j = \alpha_1 Provisional_j + \alpha_2 Emergency_j + \delta_k + \varepsilon_j, \quad (1)$$

where  $BelowProf_j$  is a binary indicator of whether teacher  $j$  received an Unsatisfactory or Needs Improvement rating in 2021-22.  $Provisional_j$  and  $Emergency_j$  are each binary indicators of whether teacher  $j$  holds a provisional license and an emergency license, respectively. Initial license holders serve as the omitted group. Since teachers with different licenses may systematically sort into schools with different characteristics, we include school fixed effects,  $\delta_k$ . Therefore,  $\alpha_1$  represents the within-school difference in likelihood that a newly hired provisional license holder receives a below proficient rating, as compared to their peers with initial licenses.  $\alpha_2$  represents the analogous for emergency license holders.

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<sup>2</sup> These newly hired teachers with ratings represent 83%, 74% and 81% of newly hired teachers holding emergency, provisional, and initial licenses, respectively, in the employment records.

## Mean SGPs

SGPs provide a measure of the percentile rank of a student compared to students with similar score histories (Castellano and Ho, 2013). The SGPs in our data are calculated by DESE and are based on students' progress on the Massachusetts Comprehensive Assessment System (MCAS). SGPs range from 1 to 99, where higher SGPs represent higher relative growth.<sup>3</sup> To measure teachers' contributions to student test scores, we calculate teachers' mean SGPs (mSGPs) by linking individual teachers to their students in grades 4 through 8 in core math and ELA classes, and then taking the simple average of their students' subject-specific SGPs.<sup>4</sup> Our analysis of mSGPs is restricted to include only data from 2021-22, as valid SGPs were unavailable for the prior year due to the pandemic's interference with MCAS administration in 2020. As mSGPs are only available for math and ELA teachers in grades 4 through 8, our samples of newly hired teachers with mSGPs are naturally smaller than our sample with performance ratings described above. We observe math mSGPs for 636 newly hired teachers, of whom 205 hold emergency licenses, 95 hold provisional licenses, and 336 hold initial licenses. In ELA, we observe mSGPs for 639 new hires, of whom 188 hold emergency licenses, 99 hold provisional licenses, and 352 hold initial licenses. Table 1 Columns 4-6 and 7-9 provide summary statistics for the math and ELA analytic samples, respectively, by license type.

To compare the effectiveness of newly hired ELTs to the effectiveness of their more traditionally licensed peers, we estimate:

$$mSGP_{js} = \beta_1 Provisional_j + \beta_2 Emergency_j + \gamma X_{js} + \epsilon_{js}, \quad (2)$$

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<sup>3</sup> For example, a student with an SGP of 60 in math performed as well or better on her math MCAS than 60 percent of students with similar math score histories.

<sup>4</sup> We opt to calculate mean SGPs rather than median SGPs, as mean SGPs are more efficient, better aligned with expected values, and more robust to scale transformations (Castellano and Ho, 2015).



where  $mSGP_{js}$  is teacher  $j$ 's mean SGP in subject  $s$ .  $Provisional_j$  and  $Emergency_j$  are each binary indicators of whether teacher  $j$  holds a provisional license and an emergency license, respectively. Teachers holding initial licenses are the omitted group.  $X_{js}$  is a vector of teacher  $j$ 's student assignment characteristics, which includes the share of teacher  $j$ 's students who are white, Black, Hispanic/Latinx, male, qualify for special education services, English learners, low-income, and grade-level (i.e., elementary, middle). Here,  $\beta_1$  and  $\beta_2$  provide estimates of the mean differences between the mSGPs of new hires with initial licenses and new hires holding provisional and emergency licenses, respectively, conditional on student assignment characteristics.

## RESULTS

### Performance Evaluation Ratings

As shown in the third row of Figure 1, the vast majority (81.3%) of newly hired ELTs receive a Proficient rating on their evaluations by their administrators, while 17.4% receive a rating of Needs Improvement. Very few ELTs received either the lowest or highest ratings, with 0.5% obtaining an Unsatisfactory rating and 0.7% obtaining an Exemplary rating. This distribution is largely similar to that among provisional license holders (second row of Figure 1), of whom 82.4% are rated Proficient, and 15.8% are rated Needs Improvement.

When compared to initial license holders (first row of Figure 1), both provisional and emergency license holders are more likely to receive a below proficient rating. As shown in Table 2 Column 1, new hires with provisional and emergency licenses are 6.0 percentage points and 8.3 percentage points more likely to receive a rating below proficient, respectively. After the inclusion of school fixed effects (Column 2), the estimates attenuate by roughly one-third to 4.1

percentage points and 5.7 percentage points. This suggests that some of the differences in likelihood of being rated below proficient among provisional and emergency license holders, relative to initial license holders, may be driven by differences in the characteristics of schools that tend to hire them. However, there is no statistically significant difference between the likelihoods that provisional and emergency licensed teachers receive a below proficient rating ( $p = 0.33$ ).

We also examine whether the subgroups of ELTs with (a) prior employment in the state's public schools (e.g., as a paraprofessional),<sup>5</sup> (b) prior engagement in the teacher pipeline (i.e., enrollment in a teacher preparation program or taking a licensure exam),<sup>6</sup> or (c) *no* prior employment in the state's public schools and *no* prior engagement in the teacher pipeline,<sup>7</sup> are rated differently. The performance rating distributions of these groups are shown in rows 4 through 6 of Figure 1. The ratings of those (a) with prior employment and (b) with prior engagement (rows 5 and 6, respectively) are similar to those of the whole group.

However, those with (c) *no* prior employment in the state's public schools and *no* prior engagement in the teacher pipeline (row 6) are more likely to be rated below proficient, with almost 25% receiving a Needs Improvement rating. Table 2 Column 8 indicates that conditional on school fixed effects, this subgroup of emergency license holders are 9.4 percentage points more likely to be rated below proficient than initial license holders. They are also 4.8 percentage points more likely to be rated below proficient compared to their provisionally licensed peers, but this difference is not statistically significant at traditional levels ( $p = 0.10$ ).

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<sup>5</sup> ELTs are classified as *having prior employment in Massachusetts public schools* if they were employed as a staff member in a Massachusetts public school in 2019-20 and/or 2020-21.

<sup>6</sup> ELTs are classified as *having prior engagement in the teacher pipeline* if they had taken any MTEL and/or were enrolled in a Massachusetts teacher preparation program since June 1, 2017.

<sup>7</sup> ELTs are classified as having *no prior employment in in Massachusetts public schools and no prior engagement in the teacher pipeline* if they fall in neither subgroup defined in Footnotes 5 and 6.

Taken together, our results suggest that overall, newly hired ELTs were largely rated proficient in 2021-22, and their ratings were similar to those of their provisionally licensed peers. However, the subgroup of ELTs with *no* prior employment in the state's public schools and *no* prior engagement in the teacher pipeline appears to be underperforming relative to their traditionally licensed peers.

### **Mean Student Growth Percentiles**

In Table 3, we present the estimated coefficients of interest from Equation (2). In math (Panel A), newly hired emergency license holders have mSGPs that are lower than those of initial license holders in models that do not control for the characteristics of students assigned to each teacher (Column 1). However, this difference shrinks in magnitude and is no longer statistically significant in our preferred model that controls for student characteristics (Column 2). In ELA (Panel B), the results are similar. Moreover, there are no statistically significant differences between the mSGPs of newly hired ELTs and provisionally licensed teachers.

In Columns 4 and 6, we examine the relative mSGPs of newly hired ELTs with (a) prior employment in the state's public schools, and (b) prior engagement in the teacher pipeline, respectively, conditional on student assignment characteristics. Again, we find no statistically significant differences between the mSGPs of these newly hired ELT subgroups and their traditionally licensed peers.

Finally, we compare the mSGPs of newly hired ELTs with (c) *no* prior employment in the state's public schools and *no* prior engagement in the teacher pipeline to those among newly hired initial and provisional license holders. As shown Column 8 of Panel A, conditional on student assignment characteristics, we find no statistically significant differences in mSGPs between this subgroup of ELTs and either initial or provisional license holders in math. However,

in ELA (Column 8 of Panel B), we find that the mSGPs of this ELT subgroup are, on average, lower than those of initial license holders by 5.15 ( $p < 0.01$ ) and lower than those of provisional license holders by 4.29 ( $p = 0.03$ ). While these differences in mSGPs in ELA are statistically significant, it is worth noting that the sample size of ELTs in this subgroup is very small ( $n=36$ ), and therefore, this result should be taken with caution. Further analysis using additional years of data will be important to confirm these patterns.

Taken together, these findings largely echo those from our analysis of performance evaluation ratings. Our results suggest that, with respect to improving student test scores, newly hired ELTs in tested grades and subjects perform similarly to their peers with provisional and initial licenses after adjusting for differences in the students they are assigned. However, at least in ELA, there may be some performance concerns with the subgroup of ELTs with *no* prior employment in the state's public schools and with *no* prior engagement in the teacher pipeline.

## CONCLUSION

Our results indicate that newly hired ELTs in 2021-22, as a whole, (1) performed similarly to their provisionally licensed peers with respect to performance ratings, and (2) had similar mSGPs in math and ELA to those of provisional and initial license holders. It is worth noting that the majority of ELTs in our sample had previously engaged with the Massachusetts teacher pipeline (i.e., enrolled in preparation program and/or took a licensure exam) and/or were previously employed in Massachusetts public schools. The subset of ELTs with *no* prior employment in Massachusetts public schools *and no* prior engagement with the teacher pipeline were somewhat more likely to receive below proficient ratings and had lower mSGPs in ELA. These insights from the creation of the emergency license support policies that increase

flexibility in fulfilling traditional licensure requirements, particularly for those who have demonstrated interest and efforts in the educator pipeline by working in public schools or attempting traditional licensure requirements.

While it may be tempting to infer that a more permanent reduction of licensure requirements would yield entrants that are similar in effectiveness to their traditionally licensed peers, doing so may be misguided. Our prior work (Bacher-Hicks et al., 2023) and current analysis indicate that many emergency license holders in 2020-21 and 2021-22 were engaged in the broader educator workforce (e.g., as paraprofessional, long-term substitutes) or attempted some licensure requirements. In other words, many of those who entered the teacher workforce under the emergency license provision during the pandemic may have been “waiting in the wings.” If a similar policy to reduce licensure requirements were to be enacted again, it may yield incoming teachers with substantially different profiles, and possibly, differing levels of effectiveness. Moreover, our results raise some concerns about reducing requirements to afford entry to those without previously demonstrated interest and efforts to join the educator pipeline.

An important limitation of our analysis is that it examines measures of teacher effectiveness from only one academic year that also overlapped with the second year of the pandemic. Additional research on the longer-run impacts of reducing teacher licensure requirements is needed to guide efforts aimed at optimizing licensure policy for building an effective and inclusive workforce. Nonetheless, it does suggest that the substantial number of teachers that were hired during the pandemic with reduced entry requirements performed largely on par with their traditionally licensed peers. As the expiration dates for pandemic-issued licenses approach, Massachusetts and other states that made similar changes should prioritize

policies that offer flexible long-term licensure pathways to retain those teachers who have demonstrated effective, on-the-job performance.

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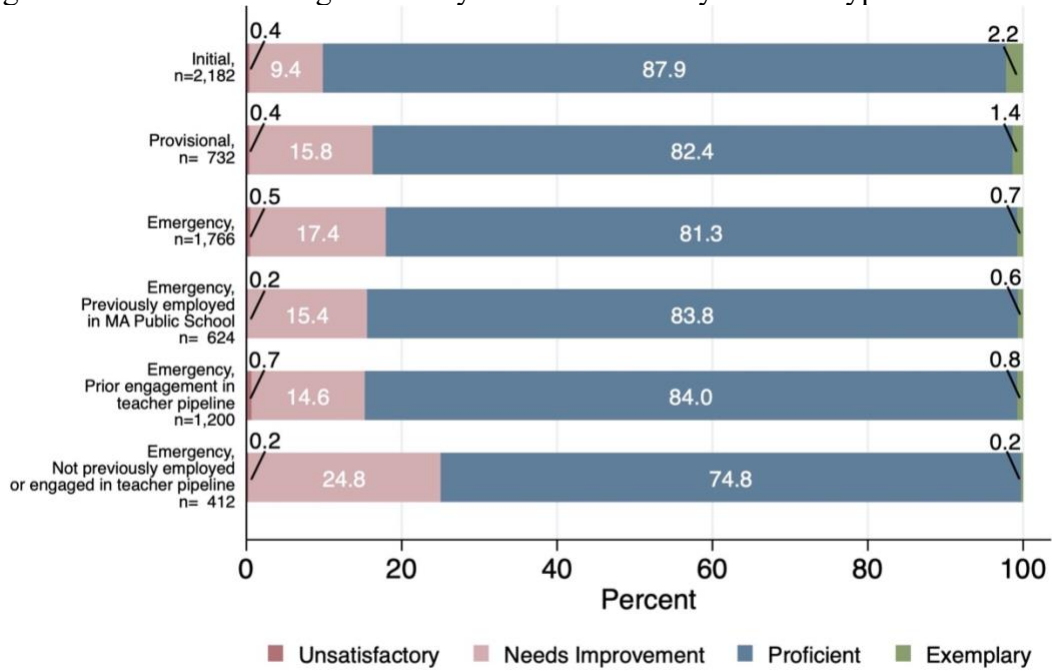
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Figure 1: Evaluation Ratings of Newly Hired Teachers by License Type



Notes: Samples include newly hired teachers with initial, provisional, or emergency licenses in 2021-22. Prior engagement in teacher pipeline is defined as a) enrollment in a Massachusetts teacher preparation program and/or b) taking any Massachusetts Tests for Educator Licensure since June 1, 2017.

Table 1: Characteristics of Analytic Samples

	Performance Evaluation Ratings Sample			Math mSGP Sample			ELA mSGP Sample		
	Emergency (1)	Provisional (2)	Initial (3)	Emergency (4)	Provisional (5)	Initial (6)	Emergency (7)	Provisional (8)	Initial (9)
Female (%)	76.3	66.3	80.4	76.1	70.5	83.9	85.1	77.8	86.6
Black (%)	10.6	5.5	2.7	10.2	5.3	2.1	12.2	7.1	2.6
Asian (%)	2.4	3.7	2.9	4.4	6.3	4.2	1.6	4.0	2.3
Hispanic/Latinx (%)	12.7	4.5	4.4	10.2	3.2	2.7	11.7	5.1	3.7
White (%)	72.9	85.1	88.7	71.7	82.1	89.6	72.3	82.8	90.1
Other Race/Ethnicity (%)	1.3	1.2	1.1	3.4	3.2	1.5	2.1	1.0	1.4
School's Percent Low Income	52.7	46.8	40.6	53.9	41.3	40.9	51.8	46.8	41.4
School's Percent Black and Hispanic/Latinx	48.9	40.2	36.5	47.7	33.0	36.6	46.0	38.9	35.8
N (teachers)	1,766	732	2,182	205	95	336	188	99	352

Notes: Samples include newly hired teachers with initial, provisional, or emergency licenses in 2021-22. Other Race/Ethnicity includes American Indian and multiracial categories.

Table 2: Likelihood of Receiving a Below Proficient Rating Relative to Initial License Holders

Emergency License Teacher Subgroup:	All		Previously employed in MA Public Schools	Prior engagement in teacher pipeline	No previous employment in MA Public Schools & no prior engagement in teacher pipeline			
	(1)	(2)				(3)	(4)	(5)
Provisional	0.060*** (0.016)	0.041** (0.016)	0.062*** (0.016)	0.047** (0.017)	0.059*** (0.016)	0.051** (0.016)	0.068*** (0.016)	0.046* (0.018)
Emergency	0.083*** (0.012)	0.057*** (0.012)	0.055*** (0.017)	0.059*** (0.017)	0.053*** (0.013)	0.047*** (0.012)	0.159*** (0.024)	0.094*** (0.026)
Constant	0.103*** (0.007)		0.103*** (0.007)		0.104*** (0.007)		0.105*** (0.007)	
School FE		Y		Y		Y		Y
N	4,315	4,315	3,102	3,102	3,727	3,727	2,863	2,863

Notes: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001. Robust standard errors are in parentheses. Sample includes newly hired teachers with initial, provisional, or emergency licenses in 2021-22.

Table 3: Mean Student Growth Percentiles Relative to Initial License Holders

Emergency License Teacher Subgroup:	All		Previously employed in MA Public Schools		Prior engagement in teacher pipeline		No previous employment in MA Public Schools & no prior engagement in teacher pipeline	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A: Math</i>								
Provisional	-0.838 (1.497)	-1.443 (1.384)	-0.838 (1.498)	-1.411 (1.402)	-0.838 (1.498)	-1.376 (1.392)	-0.838 (1.498)	-1.450 (1.394)
Emergency	-2.523* (1.158)	-0.176 (1.098)	-3.399* (1.549)	0.001 (1.648)	-1.464 (1.305)	0.515 (1.243)	-5.081** (1.887)	-2.803 (1.729)
Constant	44.236*** (0.698)		44.236*** (0.699)		44.236*** (0.698)		44.236*** (0.699)	
Student Assignment Controls		Y		Y		Y		Y
N	636	636	485	485	582	582	477	477
<i>Panel B: ELA</i>								
Provisional	-1.021 (1.191)	-0.681 (1.092)	-1.021 (1.191)	-0.928 (1.101)	-1.021 (1.191)	-0.764 (1.095)	-1.021 (1.192)	-0.860 (1.109)
Emergency	-3.155** (1.090)	-1.225 (0.998)	-4.162* (1.978)	-0.934 (1.888)	-2.193 (1.170)	-0.340 (1.074)	-6.452** (2.091)	-5.147** (1.774)
Constant	46.146*** (0.634)		46.146*** (0.634)		46.146*** (0.634)		46.146*** (0.634)	
Student Assignment Controls		Y		Y		Y		Y
N	639	639	501	501	598	598	487	487

Notes: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001. Robust standard errors are in parentheses. Sample includes newly hired teachers who hold initial, provisional, or emergency licenses and have mSGPs in 2021-22. Student assignment controls include the share of a teacher's students who are white, Black, Hispanic/Latinx, male, qualify for special education services, English learners, low-income, and grade-level.