



Fair Share and the Support of Public Schools
and
Public Institutions of Higher Education



First Edition

Preface

The Fair Share Amendment is a proposal to amend the Massachusetts Constitution, creating an additional tax of 4 percentage points on the portion of a person’s annual income above \$1 million. The new revenue, approximately \$2 billion annually, would be spent on “quality public education and affordable public colleges and universities, and for the repair and maintenance of roads, bridges and public transportation.” One of our Commonwealth’s greatest strengths is our world-class education system, and the success of our economy depends on the state remaining a leader in education. The Fair Share Amendment would help ensure that the state can support public education in prekindergarten through college.

This paper explores and explains five ways this dedicated funding can be used to support public education:

- Increasing teacher salaries.
- Reducing class sizes.
- Investing in healthy and safe buildings.
- Creating debt-free public higher education.
- Addressing teacher shortages.

The revenue derived from the Fair Share Amendment is necessary to continue investing in our public schools and give all our students access to a complete education. This is especially true of our most marginalized students, such as those who often are low-income, students of color, immigrant students, and emergent bilingual, or those who have special needs.

This document represents the first edition of staff analysis. It is intended to be interactive. Later editions will include revisions in response to member feedback.

Table of Contents

Data Supporting Increasing Educator Salary.....	4
Fair Share Can Make Smaller Classes Possible.....	7
Policy Research and State and National Data Support Investing in Healthy and Safe Buildings.....	10
Debt-Free Public Higher Education.....	15
Teacher Shortages.....	18

Data Supporting Increasing Educator Salary



State-by-State Data

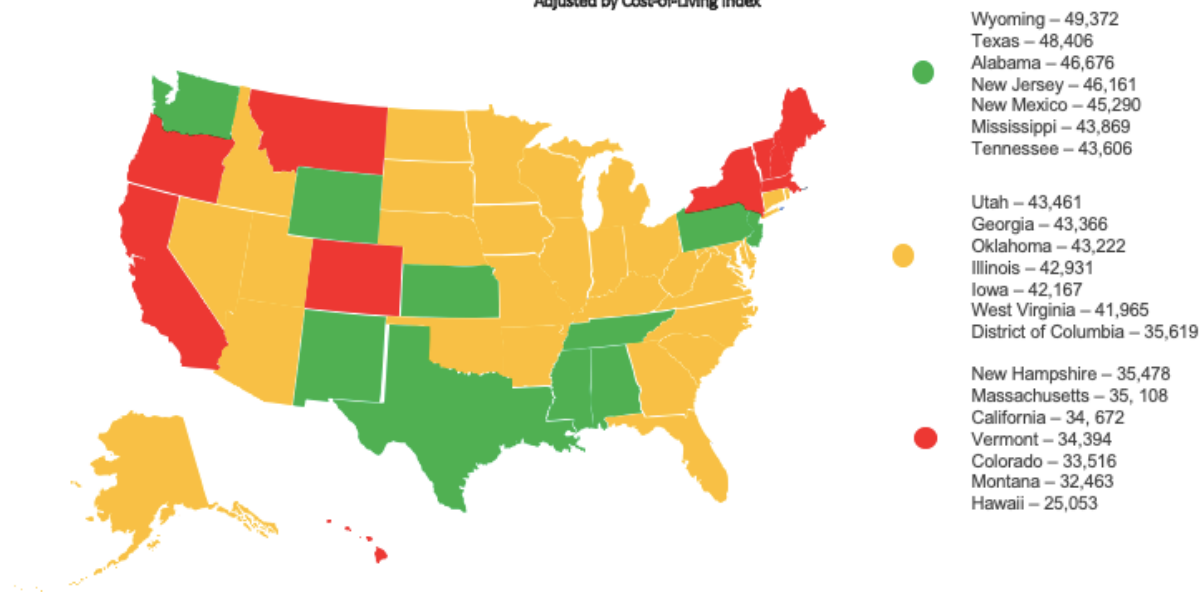
The National Education Association's most recent Teacher Salary Benchmark Reportⁱ provides the average starting teacher salaries by state, as well as the District of Columbia, in the 2019-2020 school year. This data showed the averages ranged from \$32,871, in Montana, to \$56,313, in Washington, D.C., with Massachusetts ranking number 8 at \$47,396. However, the data does not consider the starkly different costs of living in each state.

The 2021 Annual Cost of Living Indexⁱⁱ produced by the Missouri Economic Research and Information Center gives us that relative cost of living. Based on a U.S. average of 100 percent, the cost-of-living index ranged from 83.3 percent, in Mississippi, to 193.3, in Hawaii. Massachusetts ranked in fifth place at 135 percent. The index reflected the average cost of living on an annualized basis in 2021, and did not account for recent price increases attributed to inflation.ⁱⁱⁱ According to the center's index, housing ranked as most expensive in Massachusetts, costing about 77.6 percent more than the national average.^{iv}

To get the true picture of teachers' starting salaries in each state, we divided the starting salaries by the relative cost of living in each state. With this calculation, we see the starting salaries ranged from \$25,053, in Hawaii, to \$50,003, in Wyoming. The Massachusetts ranking dropped to number 43, at \$35,108.

Teacher Starting Salaries By State

Adjusted by Cost-of-Living Index



A National Education Association report published in March also documents the profound effects of the pandemic on higher education.^v Mandatory furloughs and layoffs have affected thousands. Previously, for several years, the number of faculty teaching full-time had increased. Faculty purchasing power, which declined during and just after the 2008 Great Recession, due to inflation, had recovered and rose to pre-recessionary levels. After decades of disinvestment, federal and state funding of higher education were on the rise. The pandemic caused a decrease in the number of full- and part-time faculty between 2019-2020 and 2020-2021. Faculty at all levels experienced a sharp drop in purchasing power in 2020-2021. These declines ranged from \$600 to \$2,600, or from 1 to 3 percent, depending on faculty rank. The current high rate of inflation is likely to undermine any gains. New revenue is necessary to counteract inflation.

During the pandemic, \$77 billion dollars in federal relief funds nationally were directed to colleges and universities. Half of that amount was spent on student aid. An additional \$7.5 billion was disbursed to states. The Higher Education Emergency Relief Fund, as the name implies, must be spent on pandemic-related expenses and it is not a permanent source of funding. Winning approval of the Fair Share Amendment and providing a continuous and predictable stream of funding is critical, particularly given the undesirability of tuition increases.

Massachusetts Data

The erosion of wages and compensation for teachers, relative to that of other college graduates and those who have earned a master's degree, persists nationally as well as in Massachusetts. This is particularly concerning given the challenge of staffing needs. A [report](#) released in 2020 by the Economic Policy Institute and the Center on Wage and Employment Dynamics^{vi} found that the “teacher wage penalty” has grown substantially since the mid-1990s. The wage penalty refers to “how much less, in percentage

terms, public school teachers are paid in weekly wages relative to other college-educated workers (after accounting for factors known to affect earnings such as education, experience, and state residence).” Comparing samples of public-school teachers with samples of nonteacher graduates within Massachusetts reveals an 18 percent, regression-adjusted teacher wage penalty in data pooled from 2014 through 2019. This means that teachers make 18 percent less than other comparable college-educated workers in the state. According to U.S. Bureau of Labor Statistics [data](#), the average salary in virtually all business and financial operations occupations in the state exceeds \$90,000. The figures range from \$96,960 for project management specialists to \$102,170 for computer programmers.

The salaries of teachers are not the only concern. A recent NEA report explained that Massachusetts ranks seventh nationally for an average faculty salary, among those who hold nine- or 10-month contracts, at four-year public higher education institutions. The average salary for faculty at two-year public institutions in the state ranked 19th nationally, significantly below other high-cost, northeastern states such as New York, New Jersey, and Connecticut.^{vii}

The average salary for faculty on a nine- or 10-month contract at a public four-year institution is \$101,745. At a public two-year institution, it is \$68,956. Aside from cost of living, many faculty members also carry considerable student loan debt. According to the Education Data Initiative, the average debt among those who have earned a master’s degree is \$71,287. Among faculty who have earned a doctoral degree, it’s \$159,625.^{viii}

Increasing the wages of Education Support Professionals in preK-12 and that of professional staff in higher education is crucial. The average paraprofessional wage in the state is \$18.59 per hour. Many preK-12 educators must work additional jobs to live in the community where they work. According to an almanac published by The Chronicle of Higher Education, many of the 1.5 million full-time workers in noninstructional roles in U.S. colleges had average incomes below \$50,000.^{ix} The inequities that contingent faculty face are severe. Contingent appointments, whether contract-renewable or adjunct, are the least secure, lowest remunerated and least supported faculty positions, according to the American Association of University Professors Annual Report on the Economic Status of the Profession, 2020-21.^x This year, the Department of Chemistry and Biochemistry at UCLA sought applications for an assistant adjunct professor on a without-salary basis. This is among many examples in which the pandemic has damaged the professional status of faculty labor. This is especially true for women and people of color who are concentrated in lower-rank and contingent positions.

Conclusion

It’s imperative that Massachusetts raise the salaries of educators to ensure competitiveness with other states, especially given the relatively high cost of living in the Commonwealth. Providing the state’s educators with a decent starting salary commensurate with other professionals of similar educational background is critically important to recruitment, retention, and equity. Increasing the wages of Education Support Professionals and seeking both pay parity and job security for contingent faculty is a matter of justice.

Fair Share Can Make Smaller Classes Possible



Parents and educators value small classes and education policy research has demonstrated that small class sizes can improve the quality of the education students receive. The evidence shows that they can be particularly beneficial for low-income students and students of color. With additional funding, many more schools in Massachusetts could create small class sizes that would benefit their students academically, as well as creating a better environment for their social and emotional well-being.

The policy research on smaller class sizes is compelling:

Bruce Baker, a leading Education Policy Researcher at the Learning Policy Institute finds:^{xi}

“A significant body of research points to the effectiveness of class-size reduction for improving student outcomes and reducing gaps among students, especially for younger students and those who have been previously low-achieving.^{xii} These reductions for young children have long-term effects on outcomes many years into the future.^{xiii} Often studies find that the effects of class size reduction on achievement are greatest when certain smaller class thresholds (such as 15 or 18) are reached and are most pronounced for students of color and those in schools serving concentrations of students in poverty.”^{xiv}

Colin Jones of the Massachusetts Budget and Policy Center, describes evidence from the STAR class size reduction program in Tennessee:^{xv}

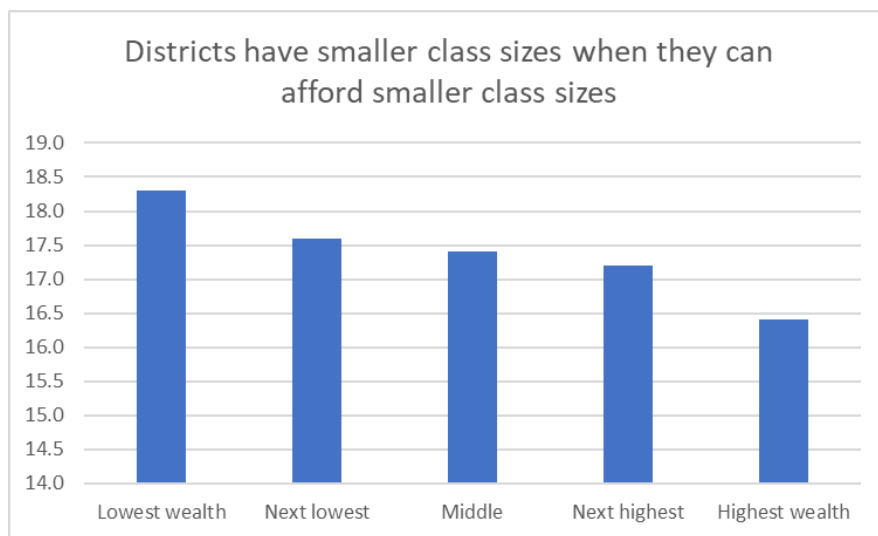
“Project STAR supported small class sizes for early elementary students (kindergarten to 3rd grade) over four years. Research on this effort has consistently found positive academic improvement for kids whose classes were reduced to roughly 15 students. Kids in these smaller classes continued to do better throughout the later grades and did better on college entrance exams. The positive impacts were greatest for low-income students, students of color, and those in urban schools.... The STAR program allowed the most rigorous evaluation because it randomly assigned teachers and students to either large classes with 22 to 26 students or small classes with 13-17 students.^{xvi} This ensured that any differences in academic performance could be attributed to smaller classes.”

Susan Dynarski of Harvard, on smaller classes increasing college attendance, with effects more than twice as large for Black students.^{xvii}

“We find that assignment to a small class increases the probability of attending college by 2.7 percentage points, with effects more than twice as large among blacks. Among those whose predicted probability of attending college is in the bottom quintile, smaller classes increase the college attendance rate by 11 percentage points. Smaller classes increase the likelihood of earning a college degree by 1.6 percentage points and shift students towards high-earning fields such as STEM (science, technology, engineering, and medicine), business and economics.”

Data on small class sizes

In Massachusetts, there is evidence that districts that can afford smaller class sizes have smaller class sizes. Chapter 70 divides districts into five categories based on the wealth and incomes of each school district. The data shows that as wealth and income increases, class sizes get smaller:¹



While some of our highest-wealth districts have relatively smaller class sizes, many of our lower- and middle-income districts have average class sizes that are larger than the size the research suggests can create the best learning conditions. While the evidence suggests that districts that serve more low-income

¹ [DESE methodology](#) on data:

This analysis is from before COVID-19. Enrollment declines have created anomalies in the most recent years.

Figures are based on district reported and certified data from three collection sources: SIMS, SCS, and EPIMS.

Total # of Classes: Number of classes is based on classes that could be linked between SIMS, EPIMS, and SCS by School, Course, Section, and Term. The class must have a class count greater than 1 (one) and have students in the class who have a SCS enrollment status of enrolled, completed, or incomplete.

Average Class Size: Average Class Size is calculated by dividing the total number of students in classes by the total number of classes. Students taking multiple classes will be included in multiple class size averages.

Number of Students: This figure is de-duplicated count of students at the subject, district, and school levels.

source: [SIMS](#), [SCS](#), [EPIMS](#)

students would benefit the most from smaller classes, the data shows those districts are least likely to have them.

Data from local contracts shows the same pattern. While there is wide variation, many districts have provisions that aim to cap class size at about 25 students, but for some lower-income districts the cap is as high as 30. As school districts work to provide safe learning environments and address the social, emotional, mental health, and academic impacts of COVID-19, class size and the influence it has on the ability to meet the needs of the most vulnerable students is even more pronounced.

Very few states across the country provide the funding needed for optimal class sizes. Massachusetts has a better teacher-to-pupil ratio than most (12.8-to-1, compared to a national average of 15.9-to-1). This likely contributes to our school performance ranked at the top of the nation. But there are eight states with better teacher-to-pupil ratios. (Note: since there is not good comparative data on class size, the teacher-to-pupil ratio is used as a proxy.) Our positive showing is likely driven by our more affluent districts and does not reflect the reality in school systems serving more low-income students.

It is also useful to compare how class sizes in the most elite schools in Massachusetts compare to what we can afford in our public schools. Many of the schools identified as the “best” private schools in Massachusetts tend to have teacher-to-student ratios of about 6-to-1, which translates to twice as many teachers per student as most of our public schools.^{xviii}

Policy Research and State and National Data Support Investing in Healthy and Safe Buildings



Policy research on the need to ensure students and educators work in safe buildings

The 2021 State of Our Schools report from the 21st Century School Fund, the International WELL Building Institute and the National Council on School Facilities finds that no matter how good the curriculum, teachers or administrators, we can't achieve world-class education with crumbling school facilities. The report estimates that our nation is now underinvesting in school buildings and grounds by \$85 billion each year, up by \$25 billion since 2016. With chronic underfunding of capital needs, building and site deficiencies accumulate. Facility deficiencies have negative effects on human health and safety, the quality of the educational experience, working conditions for teachers and other school staff, as well as a depressive effect on community vitality. Our school facility infrastructure is facing a national emergency. Such severe and routine underinvestment is eroding the country's ability to provide quality student education in a safe, healthy, and sustainable setting. Examining spending data from 13,483 public school districts across the country tells the same unacceptable story: districts with the highest-need students continue to see the lowest funding levels when it comes to spending on maintenance and operations and school construction.^{xix}

Washington Post staff writer Valerie Strauss noted in an article, "What Education Secretary Cardona Didn't Mention in His Vision for Education," the sorry state of many of America's school buildings. More than half of U.S. public schools need to update or replace multiple systems or features in more than half their buildings. The failure to address them could pose health and safety problems for children and adults, according to a 2020 report from the U.S. Government Accountability Office.^{xx} Mary Filardi, a school facilities expert and executive director of the 21st Century School Fund, said Secretary Cardona's Vision for Education in America said nothing about how critical for America's future it is to have safe, healthy, and modern learning and teaching environments. In 2020, the Government Accountability Office issued a major report that found nearly 50 percent of the nation's public-school districts required upgraded heating-and-ventilation and air-conditioning systems in more than half of

their school buildings. Crumbling facilities are a barrier to teaching and learning, and to the socio-emotional and instructional benefits that come with modern public-school buildings and grounds.^{xxi}

The Massachusetts Public Education Infrastructure Profile 2021 examined elementary and secondary public school facilities in Massachusetts, with a focus on understanding the gap between current levels of funding for facilities and the level of investment necessary to provide healthy, safe, sustainable and equitable spaces for all students to learn and thrive. School buildings require continuous maintenance to be healthy, safe, and operationally efficient. The COVID-19 pandemic caused the necessary closure of schools statewide. This heightened public awareness of just how poor school HVAC systems were and prompted efforts to repair or update them. However, revenue was needed, and is still needed, to ensure all our school buildings have proper ventilation. School district responsibilities for school buildings and grounds fall into two categories:

1. Maintenance and operations: regular and routine facilities maintenance and operations, including cleaning, groundskeeping, preventive maintenance, minor repairs, utilities and building security, which are funded from the annual operating budget.
2. School construction capital outlay: periodic major facilities projects that involve planning, design, construction, renovation, retrofitting, and replacing of buildings, and building systems, components, and features, as well as site acquisition, site improvements, and new construction, which are funded from a multiyear capital budget, and usually financed with bonds.

Massachusetts public school districts spent an annual average of \$1.3 billion, about 8.1 percent of their total education spending, on maintenance and operations of facilities for fiscal years 2017 through 2019. Compared to the 3 percent current replacement value, maintenance and operations budget benchmark, public-school districts in the state are under-funded for annual maintenance and operations by \$1.3 billion every year.

M&O Annual Average Standard for Good Stewardship, Actual Expenditures, and Projected Gap

Massachusetts Maintenance & Operations of Plant	Total	Per Student 2018-19	Per Gross Square foot
Standard: M&O (3% of CRV)	\$2,610,796,929	\$2,895	\$14.39
Actual: M&O – Annual Avg FY2017-19	\$1,342,541,000	\$1,489	\$7.40
Gap: Annual Shortfall for M&O	\$1,268,255,929	\$1,406	\$6.99

Meeting the 3% M&O standard means increasing district operating budgets for facilities by \$1.3 billion a year, or \$1,406 per student.

In Massachusetts, school district maintenance and operations and school construction capital investments vary by student family income, race/ethnicity, and by geography. Students who are economically disadvantaged, of minority race or ethnicity, and who live in rural communities disproportionately attend schools that have not had the funding needed for school facility modernization.

Where students live is a factor that affects the level of investment in public school facilities. School districts in rural and small communities have had, on average, lower spending per school on maintenance and operations and school construction than any other geographic area. The Massachusetts School Building Authority data indicates that students of color and/or whose families have low socioeconomic status disproportionately attend older, poor quality school buildings.

If we are to address widening educational disparities, our buildings must be part of the solution.

FY18 Average M&O Expenditures per School, by School District Locales (actual \$)



iii

The American Society of Civil Engineers gave America’s public K-12 infrastructure a D+ grade in its [2021 Report Card for America’s Infrastructure](#), the same terrible grade as in its prior 2017 report.^{xxii} Fifty-three percent of schools, the report found, need improvements just to rise to a ranking of “good” condition. Twenty-four percent were rated “fair” or “poor.” Thirty-one percent had temporary buildings — which spikes the “fair” or “poor” rate to 45 percent. And 40 percent of schools lack a long-term educational facility plan to address these challenges.^{iv}

Carolyn Goldthwaite of the Northeast Energy Efficiency Partnerships finds fifty-three percent of public-school districts report the need to update or replace multiple building systems, including HVAC systems.^{xxiii} Schools in the NEEP region, on average, are more than 50 years old. And generally, they are not being properly maintained, updated, or replaced. This is not due to lack of effort. More often, maintenance budgets get cut due to budget shortfalls, and this creates inefficient systems at the budgeting and planning level. We have a systemic problem across the country of not maintaining our school buildings. Schools are the center of our communities; they should be the center of the infrastructure plan. The air quality issues, the lack of proper building maintenance, and the challenges within our schools are not new. States and communities should focus on upgrading their infrastructure – especially HVAC systems. For too long, our students, teachers, and staff have had to contend with high rates of asthma and absenteeism due to poor indoor air quality. We need to provide safe and healthy

environments that are conducive to learning for children of all ages and backgrounds. School buildings need to be in good condition and provide working heating and air conditioning, clean water, and modern technology to fulfill a host of other functions. We should take “returning to normal” off the table and instead put schools at the center of the infrastructure plan.^v

In a news report, Maria Godoy, the senior science and health editor at NPR, noted that Tracy Enger, who works at the [Environmental Protection Agency's Indoor Environments Division](#), has been fighting to improve the air quality inside America’s schools. Getting school districts to prioritize indoor air quality hasn’t been easy even when asthma rates were escalating. When the COVID-19 pandemic arrived, its spread by virus particles could easily build up in indoor air and linger, sometimes for hours. The key to clearing out those infectious particles was good ventilation and filtration. [Anisa Heming](#), director of the [Center for Green Schools](#) at the [U.S. Green Building Council](#) noted that in the past, it's been hard to make a health case for improving air quality in schools because the health impacts tend to be longer term. But research [shows the health and academic benefits are substantial](#) – and go beyond Covid. When a room is better ventilated, influenza rates, asthma attacks and absenteeism go down, and reading and math test scores go up. Less carbon dioxide accumulating in a room helps students think more clearly.^{vi}

Mindy Domb, Patricia A. Duffy and David Allen Robertson wrote a petition (accompanied by a bill, H. 2268, [An Act for Healthy and Green Public Schools](#)), which asked the state Department of Public Health and the state Department of Elementary and Secondary Education to implement a healthy and green public schools' initiative.^{xxiv} Massachusetts is an education leader in the U.S. The quality of our schools is a great indoor environmental justice issue – but it is also an education crisis. Research from the [Harvard T. H. Chan School of Public Health](#) shows that both indoor and outdoor environmental quality are fundamentally linked to human health, thinking and performance, particularly in our schools.^{vii}

Erika Eitland and her colleagues on [The Nine Foundations of a Healthy Building](#) synthesized more than 40 years of scientific research.^{xxv} The research led to insights into how the indoor environment influences student health, well-being, and productivity. School building conditions such as ventilation, indoor air quality, thermal comfort, acoustics, noise and lighting and views play an important role in a student’s ability to focus, process new information and feel engaged at school. These environmental factors can have both detrimental and positive impacts on student health and performance. The report examines when and how these various building conditions affect a student and pays special attention to articulating the nuanced effects these parameters have on how our students feel, think, and perform.^{viii}

Claudia L. Persico, an assistant professor at American University, [in an article for the Brookings Institution](#), wrote that COVID-19 has changed the way we understand school building ventilation and its importance in keeping us safe from viruses and bacteria in the air.^{xxvi} The pandemic has motivated many school leaders to invest in improvements to ventilation systems, but the benefits of investing in a safe learning environment extend far beyond protecting children from the coronavirus. The evidence suggests that pollution exposure is not only a factor in student academic outcomes but also a major driver of inequality in outcomes between wealthier and lower-income children, and between white and non-white children.^{ix}

The U.S. Centers for Disease Control and Prevention and the Environmental Protection Agency [outline ways that schools and IHEs can improve ventilation](#), including:

- Bringing in as much outdoor air as possible.
- Using heating, ventilation, and air conditioning settings to maximize ventilation.
- Ensuring exhaust fans in restrooms and kitchens.

-
- Filtering and/or cleaning the air. CDC guidance on [ventilation in the home](#) may be relevant for residential dormitories.
 - Considering the use of portable carbon dioxide monitors.
 - Communicating clearly to school communities, parents, students, faculty, and staff on college, or university webpages. Walking through school or higher education buildings with custodial engineers. ^{xxx}

In addition, the CDC guidance for institutions of higher education recommends:

- Checking for hazards such as mold, Legionella, and lead and copper contamination from plumbing that has corroded. The temporary shutdown or reduced operation of college institutions and reductions in normal water use can create hazards for returning students, faculty, and staff.
- Institutions improve ventilation in indoor settings for sporting events, training, practices, locker rooms, and other facilities by bringing as much fresh air into buildings as possible. ^{xxxii}

Writer Jon Marcus, in the Hechinger Report, [wrote that long-neglected maintenance threatens to further escalate the cost of college](#), and that after years of budget cuts and continuing austerity, universities and colleges collectively face a shortfall of a record \$30 billion for what they variously call deferred maintenance or “deferred renewal” to deteriorating buildings and other infrastructure.

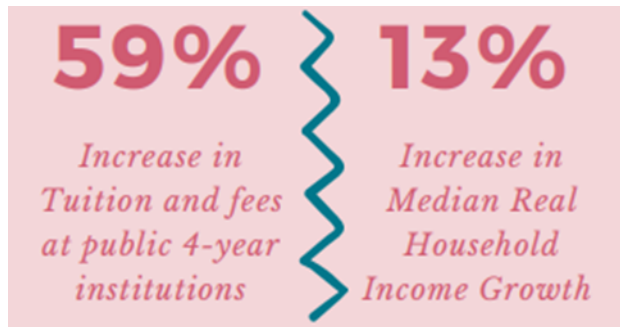
All of this complicates even the most innovative attempts to reduce the price of college. Along with pension liabilities and the bill for healthcare they provide for their retired employees, it means colleges and universities face even higher, not lower, costs to do business. “It’s an endless game of chasing your tail,” said Brian Swanson, assistant vice president for university services at the University of Minnesota, told Marcus. “Every year we lose ground and costs increase. And if we don’t get the money from the Legislature, the only place we have to get it is tuition.” Students help pay for the maintenance backlog. ^{xxxiii}

Debt-free Public Higher Education



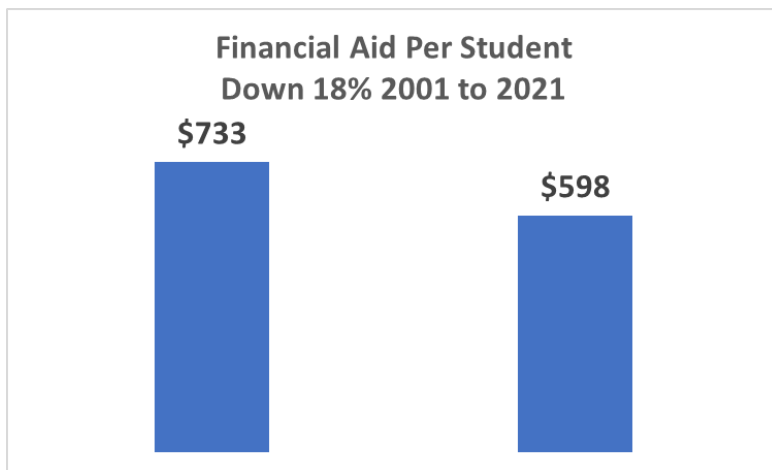
The problem: reductions in state funding have led to higher tuition and fees, less financial aid, obstacles to access and rising debt for all students, particularly students of color.

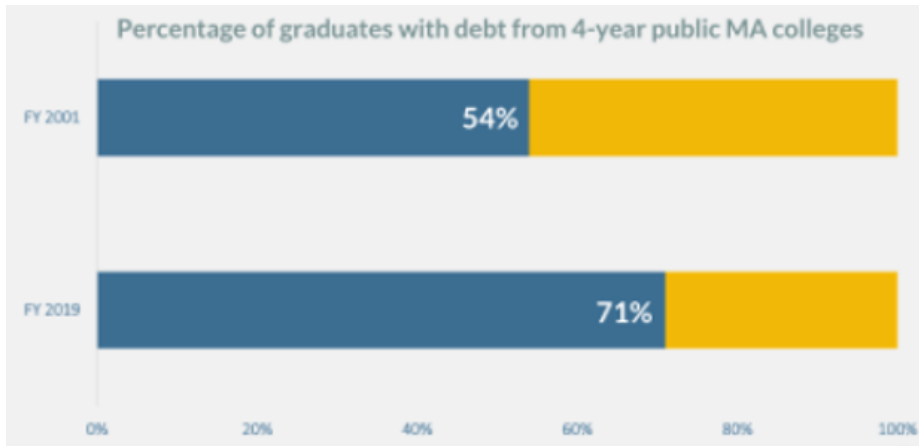
Our Commonwealth is strongest when we make sure that each of us has the capacity to reach our full potential. When hardworking young people and adults want to be able to attend college but financial barriers keep them from enrolling and staying in school, we harm those individuals and the future of



our economy and society. Over the past two decades, state funding for public higher education has declined by 20 percent per full-time equivalent student, after adjusting for inflation. As a result, tuition, fees, and debt have increased dramatically. Between 2000 and 2020, students at community colleges saw a 52 percent increase their tuition and fees, after adjusting for inflation. At four-year public universities, the increase was 59 percent.^{xxvii}

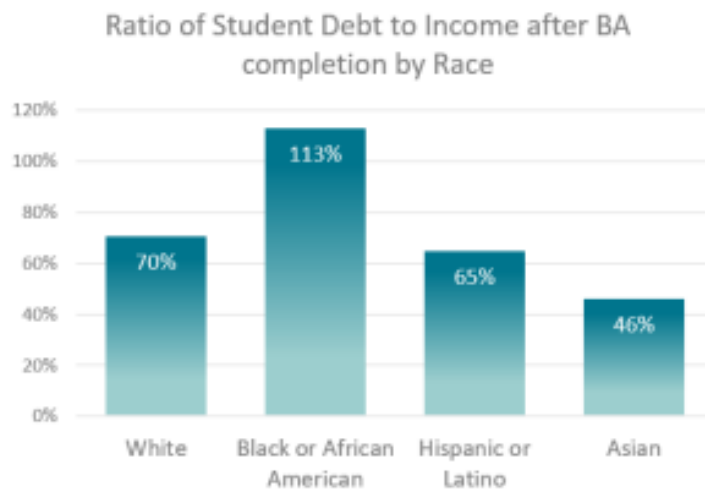
While tuition and fees have increased, the per-student state funding for scholarships has declined by 18 percent.^{xxviii} This has forced students to take on more debt. This burden has hurt all students, with the greatest impact felt by students of color.





Since fiscal year 2001, the share of graduates of public four-year colleges with debt has increased from 54 percent to 71 percent. In addition, the average amount of debt has increased by about 50 percent – from \$20,700 to \$31,900.^{xxx}

African Americans with a bachelor’s degree now carry an average debt of 113 percent of their income.^{xxx}



The dangers of these long-term structural flaws became clear in the pandemic as overall first-time enrollment in community colleges declined by 23.6 percent in fall 2020, while first-time enrollment of Black students declined by 32.6 percent.^{xxx} As we recover from the health and economic crisis brought on by COVID-19, the urgency and importance of addressing affordability and expanding access to higher education for all students – and particularly students of color – is greater than ever. But even before the pandemic, financial pressures were making it

extremely difficult for lower income students to balance long hours of work with school. For years, more than a third of full-time, first-time degree-seeking community college students have left school before their second year.^{xxxii}

The Solution: Debt Free Higher Education

Students who are willing to work hard and pay their fair share should be able to attend college without being forced to take on debt. Creating a path for debt-free higher education is not the same as making college free. It is a strategy that looks at the needs of students and provides enough financial aid so that all students can afford college without debt. For many low-income students, the elimination of tuition and fees doesn’t make college affordable because – particularly at community colleges – those costs are often only a third to a quarter of the cost of attendance. To survive while attending college, students also need to pay for housing, food, transportation, childcare if they have young children, and other basic necessities.

Students also have resources. Low-income students have Pell Grants. Middle- and upper-income students can afford a reasonable “Expected Family Contribution,” as calculated on FAFSA forms. Most students can work 10 to 15 hours-a-week without harming their ability to succeed in school. A debt-free

plan simply needs to fill the gap between those resources and the full cost of attendance, including living expenses.

With funding from the Fair Share Amendment, the state could create a debt-free path for all in-state students (including “Dreamers,” people who would have qualified for immigration protections under the never-adopted DREAM Act.) at state two- and four-year public colleges and universities.

Teacher Shortages

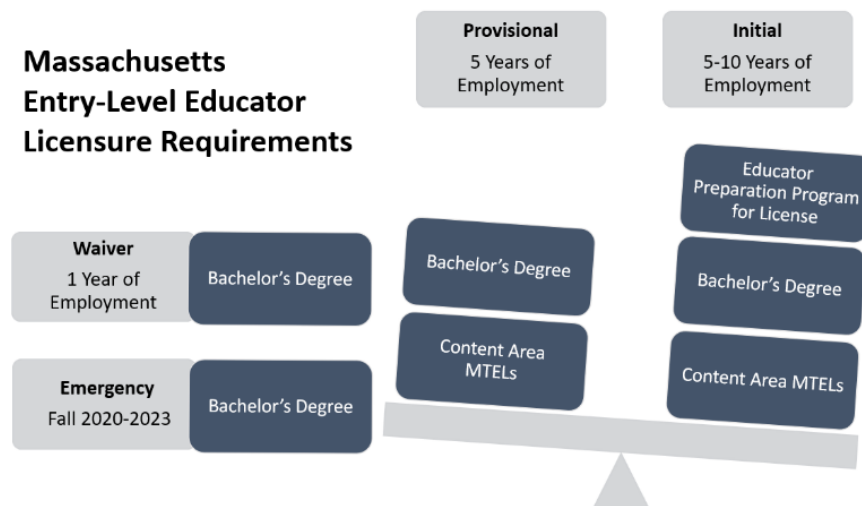


The educator preparation pipeline in Massachusetts is not meeting the staffing needs of schools and districts. Public school districts still rely on employment waivers to fill open positions in high-need areas. Waivers, provisional and emergency licenses allow districts to meet legal employment requirements without ensuring students have fully qualified educators.

Entry Level Educator Preparation

Massachusetts requires that all educators employed in a public school hold the appropriate license issued by DESE.^{xxxiii} Emergency and provisional licenses permit legal employment for a fixed period and have no coursework or preparation program requirements. When districts are unable to find licensed and qualified candidates for open positions, the district may apply for a waiver to legally employ an educator who does not hold the appropriate license.^{xxxiv} The number of waivers issued each year to districts is

one signal that the educator preparation program pipeline is not keeping up with the needs of districts.^{xxxv}



Declining Completers in High Need Programs

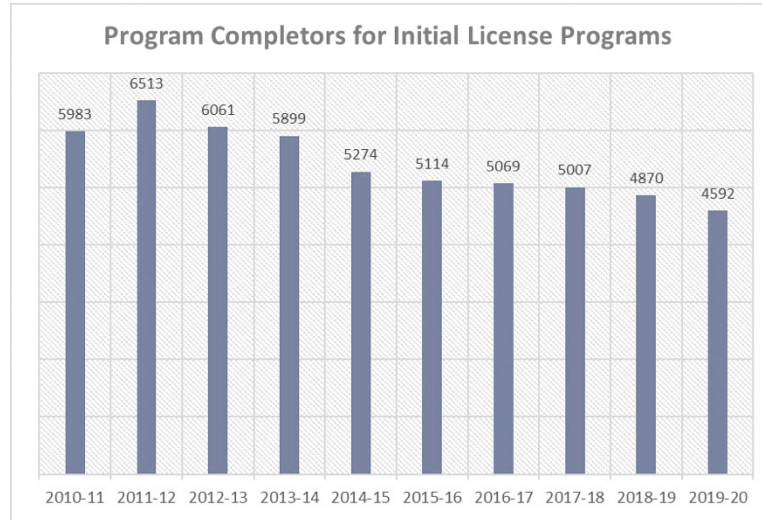
Initial licensure preparation programs are the required entry-level teacher training programs in Massachusetts. Candidates for licensure may enroll in an initial preparation program with no prior experience or coursework related to education. Each preparation program establishes its own application requirements and admission standards. There is a well-documented decline in the number of completers in all initial licensure educator preparation programs in Massachusetts.^{xxxvi} Initial preparation programs may operate at the undergraduate level as part of baccalaureate degree requirements. At the post-baccalaureate level, candidates who enroll in programs may have prior experience in education including employment as a classroom teacher under limited-term licenses or a waiver.

In the 2018-19 program year, DESE reported 3,659 candidates completed initial teacher preparation programs (excluding administrative and other education licensure programs).^{xxxvii} Program

Initial Teacher Preparation	All Completers 2019
Undergraduate	1207
Post-Baccalaureate	2191
Apprentice/Residency	261
Total	3659

Fewer individuals are studying to become teachers and preparation programs are not producing enough teachers for the specialty fields most needed by districts. The use of waivers is one measure of this gap. In the 2019-2020 school year, DESE issued 1,579 individual waivers to fill these gaps..^{xxxviii}

The deficit for qualified teachers is most visible in roles that serve high-need students. Nearly 70 percent of the waivers issued in the 2019-2020 school year were for special education, English as a second language, mathematics, and elementary and middle school science.



characteristics include undergraduate, post-baccalaureate programs in institutions of higher education, and residency programs. Each approved program undergoes a review and approval process and is subject to regulatory requirements for program content and quality.

Teacher Field	Initial Program Completers 2018-19	Waivers Issued 2019-20
Moderate Disabilities	684	572
Severe Disabilities	178	194
English as a Second Language	116	121
Mathematics	219	85
Elementary	891	81
General Science (Middle School)	65	38

MA G.L. Ch 71 Section 38 G

The preparation pipeline gap disproportionately affects urban districts. Nearly 40 percent of the waivers issued that year went to educators in Springfield, Holyoke, Lawrence, New Bedford,

The commissioner shall establish standards for the training, support and supervision of provisional educators. During the period of employment, a person holding a provisional teaching certificate pursuant to this section shall be under the direct supervision of the principal or other appropriate supervisor who shall regularly observe and evaluate the performance of assigned duties by such holder of a provisional teaching certificate. Such evaluation shall be according to relevant to nationally recognized professional standards for personnel evaluation.

Waivers by District for 2019-20	Total Waivers	Moderate Disabilities	Severe Disabilities	ESL
Springfield	179	95	0	15
Holyoke	128	32	6	10
Lawrence	105	34	0	16
New Bedford	104	28	1	17
Fall River	70	25	0	11

Each public school district seeking to hire a provisional educator must submit an provisional educator program plan to the department of education. No district shall be authorized to employ a provisional educator unless it has submitted a plan for such a program and received approval of the commissioner. Each plan shall describe the key elements of the proposed provisional educator program in accordance with guidelines established and published by the department. Such guidelines shall require that provisional educators in district-based programs meet the equivalent standards that provisional educators with advanced standing meet in approved college and university programs. Districts shall show either evidence of joint sponsorship or collaboration of training programs with (1) colleges or universities, or (2) other districts, or (3) other programs approved by the commissioner to provide such programs. The department shall issue standard district plans which districts may implement in lieu of developing original plans. The department shall coordinate the training efforts of districts, shall insure that district programs meet fair, substantive and comprehensive professional development standards and shall establish regional programs for provisional educators. The department shall also provide orientation programs for support team members. Provisional educators shall be observed by a professional support team.

and Fall River. All are urban districts where DESE partially or entirely controls the district administration. Teachers who are employed under a waiver are vetted and supervised by their district administration. These teachers may have professional backgrounds that align with the role and may also be concurrently enrolled in an initial teacher preparation program. While employment under a waiver may satisfy the legal requirements for staffing or schools, the teacher employed under this provision may not be eligible to accrue time under the Massachusetts Teachers Retirement System or toward Professional Teacher Status. Under-prepared teachers and unlicensed teachers may not return the following school year, which perpetuates the gap between the preparation pipeline and district staffing needs.

Fill the Toolbox for Districts to Support Teacher Candidates

In 2019, just over 30 percent of candidates completed initial preparation programs at the undergraduate level. DESE has failed to publish the related guidance for districts to implement the supports for teachers employed without full training and preparation. The DESE mentoring resources presume teachers enrolled in mentoring and induction program have completed educator preparation program requirements.^{xxxix} New teachers may be assigned to participate in mentoring and induction program activities without regard for gaps in preparation, licensure, pedagogy, or prior experience.

MA G.L. Ch 71 §38G presumes district-based teacher preparation programs are widely available and prohibits the employment of teachers with a provisional license unless the district has program available.

DESE does not enforce the employment conditions for teachers under provisional licenses. The statutory language and regulations for waivers and emergency licenses have no stated expectations for support or evaluation specific to the needs of teachers with limited-term licenses. The commissioner has likewise not established any standards or guidance for the “training, support and supervision of provisional educators.” The current education evaluation system established under 603 CMR 35.00 makes no mention of supports for any provisional-licensed educators.^{x1}

District-based teacher preparation pathways have better retention rates than independent apprentice/internship programs. As of 2020 reporting, only 45 percent of licensure program completers from the nonprofit Teach for America were employed in a Massachusetts public school.² The Collaborative for Education Services, Catherine Leahy Brine Institute and Cambridge College offer programs that support current teachers completing the requirements for initial licensure, and have employment retention rates at or above 90 percent.^{xli}



Districts that are not geographically close to existing preparation programs can invest in one or more areas to support their own pipeline.

End Notes

ⁱ <https://www.nea.org/sites/default/files/2021-04/2019-2020%20Teacher%20Salary%20Benchmark%20Report.pdf>

ⁱⁱ <https://meric.mo.gov/data/cost-living-data-series>

ⁱⁱⁱ Ibid

^{iv} Ibid

^v National Education Association. Collateral Damage: Effects of the Pandemic on Academe. *NEA Higher Education. Faculty Salary Analysis: 2020-21*. V.40 (1).

^{vi} The report utilized data from the U.S. Bureau of Labor Statistics (BLS) and the Current Population Survey Outgoing Rotation Groups (CPS-ORG) data.

^{vii} National Education Association (NEA). *NEA Higher Education*. V.40 (1). March 2022.

^{viii} <https://educationdata.org/average-graduate-student-loan-debt>

^{ix} <https://www.chronicle.com/article/highest-to-lowest-paid-noninstructional-employees-at-colleges-by-sector-2017-18/>

^x The report notes that “colleges and universities are not required to report detailed employment data on contingent faculty members. Since the NCES discontinued its National Study of Postsecondary Faculty in 2004, there has been a dearth of basic information about the compensation, demographics, and workload of contingent faculty members (p.12).”

^{xi} How Money Matters for Schools <https://learningpolicyinstitute.org/product/how-money-matters-brief>

^{xii} Baker, B. D. (2016). Does money matter in education? Washington, DC: Albert Shanker Institute; Finn, J. D., & Achilles, C. M. (2009). Tennessee’s class size study: Findings, implications, misconceptions. *Educational Evaluation and Policy Analysis*, 21(2), 97–109; Finn, J. D., Gerber, S. B., Achilles, C. M., & Boyd-Zaharias, J. (2001). The enduring effects of small classes. *Teachers College Record*, 103(2), 145–183; Krueger, A. (2001). Would smaller class sizes help close the black-white achievement gap? (Working Paper No. 451). Princeton, NJ: Industrial Relations Section, Department of Economics, Princeton University; Levin, H. M. (2007). The public returns to public educational investments in African American males. *Economics of Education Review* 26(6), 699–708; Konstantopoulos, S., & Chun, V. (2009). What are the long-term effects of small classes on the achievement gap? Evidence from the lasting benefits study. *American Journal of Education*, 116(1), 125–154; Krueger, A. (1999). Experimental estimates of education production functions. *Quarterly Journal of Economics*, 114(2), 497–532; Dynarski, S., Hyman, J., & Schanzenbach, D. W. (2013). Experimental evidence on the effect of childhood investments on postsecondary attainment and degree completion. *Journal of Policy Analysis and Management*, 32(4), 692–717; Chetty, R., Friedman, J. N., Hilger, N., Saez, E., Schanzenbach, D. W. & Yagan, D. (2010). How does your kindergarten classroom affect your earnings? Evidence from Project STAR (NBER Working Paper No. 16381). Cambridge,

MA: National Bureau of Economic Research; Lubienski, S. T., Lubienski, C., & Crawford-Crane, C. (2008). Achievement differences and school type: The role of school climate, teacher certification, and instruction. *American Journal of Education*, 115, 97–138

^{xiii} Kim, J. (2006/2007). The relative influence of research on class-size policy. *Brookings Papers on Education Policy*, 273–295; Glass, G. V., & Smith, M. (1979). Meta-analysis of class size and achievement. *Educational Evaluation and Policy Analysis*, 1(1), 2–16.

^{xiv} Mosteller, F. (1995). The Tennessee study of class size in the early school grades. *The future of children*, 113–127; Nye, B., Hedges, L. V., & Konstantopoulos, S. (1999). The long-term effects of small classes: A five-year follow-up of the Tennessee class size experiment. *Evaluation and Policy Analysis*, 21(2), 127–142; Kim, J. (2006/2007). The relative influence of research on class-size policy. *Brookings Papers on Education Policy*, 273–295

^{xv} The Right Size for Learning <https://www.massbudget.org/reports/pdf/Class%20Size%20Final%20Public%203.pdf>

^{xvi} Nye, Hedges, and Konstantopoulos, 130

^{xvii} Experimental Evidence on the Effect of Childhood Investments on Postsecondary Attainment and Degree Completion <https://www.atlantafed.org/-/media/documents/news/conferences/2011/employment-education/dynarski.pdf>

^{xviii} Data from <https://www.niche.com/k12/search/best-private-k12-schools/s/massachusetts/>

^{xix} 21st Century School Fund, Inc., the International Well Building Institute pbc, and the National Council on School Facilities, *2021 State of Our Schools: America’s PK-12 Public School Facilities*, pages 7, 12, 36 & 37, 55. 8 September 2021.

^{xx} 2021 Infrastructure Report Card. 21st Century School Fund Inc., U.S. Green Building Council Inc., and the National Council on School Facilities, “State of Our Schools: America’s K-12 Facilities,” 2016. “K-12 Education: School Districts Frequently Identified Multiple Building Systems Needing Updates or Replacement,” file:///G:/GRA/Word/Report%20Card/2021%20Report%20Card/Categories/Schools/GAO%20Report%20 June%202020.pdf GOA-20-949, June 2020.

^{xxi} Valeri Struass, Washington Post, “What Education Secretary Cardona Didn’t Mention in His Vision for Education”, January 13, 2022.

^{xxii} American Society of Civil Engineers (ASCE), Infrastructure Report Card, 2021.

^{xxiii} Carolyn Goldthwaite, Northeast Energy Efficiency Partners, “Making Lemonade out of Lemons”, April 2021.

^{xxiv} ^{vii} Ms. Domb of Amherst, a petition (accompanied by bill, House, No. 2268) of Mindy Domb, Patricia A. Duffy and David Allen Robertson that the Department of Public Health and the Department of Elementary and Secondary Education implement a healthy and green public schools’ initiative.

^{xxv} Erika Eitland, MPH. “Foundations for Student Success – How School Buildings Influence Student Health, Thinking, and Performance”. January 2021. Page 11.

^{xxvi} Claudia L. Persico, Assistant Professor – American University, Brookings, Brown Center Chalkboard, “Now is the Time to Invest in School Infrastructure, May 19, 2021.

^{xxvii} <https://hildrethinstitute.org/wp-content/uploads/2022/04/MA-Underfunded-Unaffordable-Unfair-Hildreth-Institute-4.8.22.pdf>

^{xxviii} <https://shef.sheeo.org/state-profile/massachusetts/?inflation=HECA#state-financial-aid-for-students-attending-public-institutions>

^{xxix} Choosing Equity: Options for Affordable Public Higher Education in Massachusetts

<https://massbudget.org/2021/03/24/choosing-equity/>

^{xxx} Underfunded, unaffordable, and Unfair <https://hildrethinstitute.org/wp-content/uploads/2022/04/MA-Underfunded-Unaffordable-Unfair-Hildreth-Institute-4.8.22.pdf>, Page 5.

^{xxxi} Data from <https://www.mass.edu/datacenter/2020enrollmenttrends.asp>

^{xxxii} <https://www.mass.edu/datacenter/success/CCFirstYrRetention.asp>

^{xxxiii} MA G.L. Ch. 71 §38G <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXII/Chapter71/Section38g>

^{xxxiv} Process to Request a Waiver for Educator Licensure <https://www.doe.mass.edu/licensure/resources/set-up-request-waiver.html>

^{xxxv} Data from the 2018-19 preparation program enrollment and 2019-20 waiver data is used in this analysis as this is the last data set prior to COVID-19.

^{xxxvi} Educator Preparation Program Completers data from https://profiles.doe.mass.edu/state_report/epppprogramcompleters.aspx.

^{xxxvii} Educator Preparation Program Employment by Program Characteristics – 2019 <https://profiles.doe.mass.edu/statereport/epppempatebyprogchars.aspx>

xxxviii Data provided by the DESE Office of Educator Licensure

xxxix <https://www.doe.mass.edu/edeffectiveness/mentor/resources.html>

xl <https://www.doe.mass.edu/lawsregs/603cmr35.html?section=all>

xli <https://profiles.doe.mass.edu/statereport/eppempratebyprogchars.aspx>