



In Debt: Student Loan Burdens Among Teachers

Emma García, Wesley Wei, Susan Kemper Patrick,
Melanie Leung-Gagné, and Michael A. DiNapoli Jr.

Acknowledgments

The authors thank our Learning Policy Institute (LPI) colleagues Linda Darling-Hammond, Laura Lynn, Jennifer McCombs, and LPI interns Marguerite Franco and Tiffany Tan for their contributions to and review of our report. In addition, we thank the members of the LPI Communications team for their invaluable support in editing, designing, and disseminating this report.

This research was supported by the Carnegie Corporation of New York and the Skyline Foundation. Core operating support for LPI is provided by the Heising-Simons Foundation, William and Flora Hewlett Foundation, Raikes Foundation, Sandler Foundation, and MacKenzie Scott. We are grateful to them for their generous support. The ideas voiced here are those of the authors and not those of our funders.

External Reviewers

This report benefited from the insights and expertise of two external reviewers: Lisa Lachlan-Haché, Director, Center on Great Teachers and Leaders, American Institutes for Research; and Ashley L. White, Fellow for Equity, Access, and Opportunity, NAACP Center for Education Innovation and Research and Assistant Professor, Education and Disability Policy, at University of Wisconsin–Madison. We thank them for the care and attention they gave the report.

Suggested citation: García, E., Wei, W., Patrick, S. K., Leung-Gagné, M., & DiNapoli, M. A., Jr. (2023). *In debt: Student loan burdens among teachers*. Learning Policy Institute. <https://doi.org/10.54300/497.986>

This report can be found online at <https://learningpolicyinstitute.org/product/student-loans-among-teachers>.

This work is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/>.



Document last revised December 26, 2023

Table of Contents

Executive Summary	iv
Introduction	1
Costs of Becoming and Staying a Teacher	3
The Costs for Teachers and Teacher Candidates	3
The Financial Supports Available to Teachers and Teacher Candidates	3
The State of Student Loan Borrowing and Repayment Among Teachers	5
Widespread Prevalence of Student Loan Borrowing and Repayment.....	5
Student Loan Borrowing and Repayment Across Groups of Teachers.....	6
Consequences on Teachers’ Employment and Well-Being	13
Working Multiple Jobs Due to Student Loan Borrowing	13
Stress Due to Student Loan Repayment.....	14
Policy Recommendations	17
Conclusion	21
Appendix A: Figures and Tables	22
Appendix B: Technical Appendix	25
Endnotes	32
About the Authors	41

List of Figures

Figure 1: Teachers’ Student Loan Borrowing and Repayment Status	6
Figure 2: Teachers’ Student Loan Borrowing and Repayment Status by Age	7
Figure 3: Share of Teachers Reporting Borrowing by Educational Attainment and Years of Experience	8
Figure 4: Share of All Teachers’ and Special Education Teachers’ Student Loan Borrowing and Repayment Status by Educational Attainment	10
Figure 5: Teachers’ Student Loan Borrowing and Repayment Status by Race and Ethnicity	11
Figure 6: Share of All Teachers and Black Teachers Reporting Owning Some or All of Their Student Loans by Years of Experience.....	12
Figure 7: Share of Teachers Having Ever Worked Multiple Jobs Because of Student Loan Borrowing.....	13

Figure 8: Share of Teachers Having Ever Worked Multiple Jobs Because of Student Loan Borrowing by Monthly Repayment Amounts and Years of Experience 14

Figure 9: Share of Teachers by Reported Levels of Student Loan-Related Stress 15

Figure 10: Share of Teachers Reporting Strongly Agreeing That the Stress and Disappointments in Teaching Are Not Worth It by Student Loan-Related Stress 16

Executive Summary

Recruiting and retaining a well-prepared, stable, and diverse teacher workforce is a critical endeavor to advance student learning and development. However, the persistent teacher shortages across the nation's schools challenge this mission. The teaching profession has been characterized by relatively lower levels of compensation compared to other professions that require equivalent levels of educational attainment, and salaries are often cited both as a reason why college students do not pursue teaching and as a driver of attrition among current teachers.

Another barrier to entering and staying in the teaching profession is the cost of investments to become a teacher, along with the cost of attaining a higher degree or additional credential—requirements that have become not only more common for career advancement but also more expensive over time. Costs can also impact the quality of preparation that teachers receive, which may shape turnover decisions. Challenging teaching conditions and job-related stressors—including unsafe environments for teaching and learning, test-related accountability, and limited classroom autonomy—can further contribute to teacher attrition.

This report analyzes one condition that is intertwined with teacher compensation, preparation and credentialing, and job-related stress: student loan debt. Student loan repayments reduce the income that teachers have for living costs, family expenses, or saving; the prospect of accumulating student loans could deter teacher candidates from pursuing comprehensive preservice preparation with extended, well-supervised student teaching, which is higher in quality but may take longer to complete and thus incur greater costs. In some cases, costs dissuade potential candidates from pursuing teaching as a career; overall, student loans and debt repayment have the potential to exacerbate the level of job-related stress currently reported.

For many teachers over the past 3 years, monthly payments on federal student loans—which account for over 90% of total student loans—have not been an immediate concern due to a student loan moratorium first put in place in March 2020 in response to the COVID-19 pandemic. This moratorium, also referred to as the freeze, or pause, set interest rates on student loans at 0% and suspended payments for federal student loan borrowers. This moratorium meant that college graduates, including many new teachers, who completed their degrees during the freeze were not required to begin repayment on their federal student loans until the freeze ended in August 2023 and payments became due again in October 2023.

Against the backdrop of the current state of teaching, the strains arising from student loans and the return to repayment could pose additional challenges not only for teachers but also for policymakers and school leaders who want to support a highly qualified, stable, and diverse teaching workforce. Using data from the National Teacher and Principal Survey from 2020–21, this report describes the state of student loan borrowing and repayment among full-time, public school teachers and explores whether student loan burdens differ by teacher characteristics. The analyses also examine the extent to which student loan debt is associated with teachers' well-being and employment decisions. The report concludes with recommendations that support the expansion of programs that alleviate or minimize the costs of comprehensive teacher preparation and credentialing; improve teaching conditions; and promote high-quality preparation, career advancement, and retention.

Findings

Most teachers have taken out student loans to support their education. Just over 60% of all full-time, public school teachers—about 2.1 million—have taken out student loans to pay for their education. Rates of borrowing among teachers are similar to the borrowing rates of all individuals who have recently completed a bachelor’s or a master’s degree. Among all teachers, 55.5% of teachers with a bachelor’s degree and 63.2% of teachers with a master’s degree have ever borrowed for their education, whereas 60.8% of all individuals who completed a bachelor’s degree and 66.2% of those who completed a master’s degree in any major in 2020 had taken out student loans. In addition, the borrowing rates among program completers who majored in education are higher than the average program completer in any major at both the bachelor’s (75.9%) and master’s (76.4%) degree levels of educational attainment.

Many teachers are still repaying their student loans. Roughly 1.3 million teachers are repaying their student loans, suggesting that the resumption of student loan repayments affects close to 4 of every 10 teachers (37.2%), nearly one third of whom (11.5% of all teachers) still owe their entire balance. As expected by the typical timing and structure of student loans and teachers’ ability to repay over time, the portion of teachers who carry loan balances decreases as teachers age and gain teaching experience. Still, a sizeable portion of teachers carry loan debt well into their careers: For example, almost 2 of every 10 teachers over 61 years old are still repaying loans. On average, teachers who were repaying their student loans report paying \$342 a month, which exceeds the amount the typical borrower pays toward their student loans monthly (\$200–\$299).

Student loan debt is widespread, affecting all groups of teachers, but beginning teachers, special education teachers, and Black teachers are more likely to have taken out loans and to still owe payments. The need for borrowing appears especially acute for newer teachers: Around 65% of teachers in their first 10 years of teaching have ever taken out loans, compared to about 41% of teachers with more than 30 years of experience. The higher reliance on loans over time may reflect the rising costs of preparation and credentialing, and it comports with overall trends on student loan borrowing rates over time. It may also be that teachers who took out student loans are more likely than their peers who did not take out a student loan to leave the profession before they become highly experienced.

Compared to teachers in other subject areas, special education teachers are the most likely to have ever taken out student loans (65.2%) and the most likely to owe their entire balance (15.4%). Many special education teachers obtain a master’s degree or other advanced degrees after they have earned a bachelor’s degree and licensure, resulting in more costs and, potentially, increased borrowing and repayment amounts to teach in a subject area that is facing one of the most intense shortages nationwide.

Relative to other racial and ethnic groups studied, the rates of student loan borrowing and repayment are the highest among Black teachers, with about 71% of Black teachers having ever taken out student loans, and almost 60% still in repayment. Moreover, 31.4% of all Black teachers still owe their entire balance—close to 3 times larger than the share of all teachers who owe the full amount. These disparities of loan debt hold true across levels of educational attainment and continue as teachers gain experience, signaling potential systemic barriers that make Black teachers more reliant on student loans and more likely to hold debt, and potentially posing a barrier for districts that are seeking to diversify their workforce.

Many teachers have worked multiple jobs because of their student loan debt. Over a third of borrowing teachers (36.7%) reported having worked multiple jobs at the same time because of their student loans. The proportion of teachers having worked multiple jobs is larger for those with larger monthly repayment bills.

Most teachers who are repaying their student loans report high levels of loan-related stress. About 60% of teachers who have outstanding loans reported high or very high levels of stress due to their student loan debt. Only about 14% of teachers who are repaying their loans reported that their loan-related stress levels were low or very low.

Student loans for teachers in repayment are correlated with their overall job-related stress. Larger shares of teachers who indicated high or very high levels of loan-related stress reported feeling stressed and disappointed with their jobs, compared to teachers who felt less stressed by loans.

Policy Recommendations

There are multiple policy approaches at the federal, state, and local levels that could reduce student loan debt burdens for prospective and current teachers and help support the recruitment and retention of a diverse teaching workforce. With over 90% of outstanding student loans being administered or held by the U.S. Department of Education, the federal government is in a particularly strong position to directly address teachers' loan-induced financial strains.

- 1. Expand loan forgiveness and service scholarship programs to reduce student loan-related financial strains and to strengthen recruitment and retention.** Loan forgiveness programs cancel accrued loan debt, while service scholarships provide upfront aid that reduces or eliminates an individual's need to borrow. Federal programs, including the Teacher Loan Forgiveness, Public Service Loan Forgiveness, and TEACH grant service scholarship programs, as well as various state-level programs, could be expanded, improved upon, and better administered to alleviate the student loan burdens teacher candidates and teachers face. The federal government could also make the monthly student loan payments on behalf of public school teachers while they are teaching and ensure the debt is retired after 10 years of service.
- 2. Expand the affordability and availability of high-retention preparation pathways.** Some high-retention pathways into teaching, such as residency programs, offer high-quality preparation along with financial support that underwrites all or most of the cost of tuition and living expenses in exchange for a service commitment. The federal government could provide robust and sustained funding to programs that fund high-retention pathways into teaching, including through the Teacher Quality Partnership, the Individuals with Disabilities Education Act Part D Personnel Preparation, and the Augustus F. Hawkins Centers of Excellence programs. Further, the federal government can also leverage increased funding to support state capacity to grow high-retention pathways.
- 3. Increase teachers' salaries to bolster their capacity to repay their student loans.** Raising teachers' total compensation reduces the financial strains teachers experience, not just from student loan repayment obligations, but also from other expenses, including housing and child care costs.

Federal incentives and state and local education agency actions to raise and equalize salaries can help increase teachers' ability to contribute toward their student loan repayments, savings, or other expenses.

4. **Bolster teachers' net compensation through tax credits and housing subsidies.** Non-salary supports such as tax credits and housing subsidies can effectively increase teachers' net compensation. A federal and/or state refundable tax credit for educators could be designed to incentivize service in high-need areas, where there are fewer state and local resources than in wealthier areas and salaries are often lower. Policymakers could also provide housing support and other subsidies to educators by offering down payment assistance or low- or no-interest home loans, especially in areas where housing options are limited or expensive, adding strains on top of teachers' lower salaries.
5. **Incentivize and underwrite the costs of earning high-need, advanced credentials.** Federal, state, and local governments and education agencies can help teachers access and earn high-need, advanced credentials by underwriting coursework and certification costs. These investments could be targeted to encourage teachers to earn credentials that are in high demand, such as those for special education, bilingual, math, and science.

Introduction

Recruiting and retaining a well-prepared, stable, and diverse teacher workforce is a critical endeavor to advance student learning and development. However, the persistent teacher shortages across the nation's schools challenge this mission. The teaching profession has been characterized by relatively lower levels of compensation compared to other professions that require equivalent levels of educational attainment, and salaries are often cited both as a reason why college students do not pursue teaching and as a driver of attrition among current teachers.¹

Another barrier to entering and staying in the teaching profession is the cost of investments to become a teacher, along with the cost of attaining a higher degree or additional credential—requirements that have become not only more common for career advancement but also more expensive over time. Costs can also impact the quality of preparation that teachers receive, which may shape turnover decisions.² Challenging teaching conditions and job-related stressors—including unsafe environments for teaching and learning, test-related accountability, and limited classroom autonomy—can further contribute to teaching attrition.³

This report analyzes one condition that is intertwined with teacher compensation, preparation and credentialing, and job-related stress: student loan debt. Student loan repayments reduce the income that teachers have for living costs, family expenses, or saving; the prospect of accumulating student loans could deter teacher candidates from pursuing comprehensive preservice preparation with extended, well-supervised student teaching, which is higher in quality but may take longer to complete and thus incur greater costs. In some cases, costs dissuade potential candidates from pursuing teaching as a career; and overall, student loans and debt repayment have the potential to exacerbate the level of job-related stress currently reported.⁴

For many teachers over the past 3 years, monthly payments on federal student loans—which account for over 90% of total student loans—have not been an immediate concern due to a student loan moratorium first put in place in March 2020 in response to the COVID-19 pandemic. This moratorium, also referred to as the freeze, or pause, set interest rates on student loans at 0% and suspended payments for federal student loan borrowers.⁵ This moratorium meant that college graduates, including many new teachers, who completed their degrees during the freeze were not required to begin repayment on their federal student loans until the freeze ended in August 2023 and payments became due again in October 2023.⁶

While student loans affect individuals in all professions, a large number of teachers rely on loans to finance their education.⁷ Complementary evidence suggests that teachers may be more likely to borrow than other college graduates and that teachers' monthly payments toward their student loan balances typically exceed those of the average borrower.⁸ Against the backdrop of the current state of teaching, the financial strains arising from student loans and the return to repayment could pose additional challenges not only for teachers but also for policymakers and school leaders who want to

The financial strains arising from student loans and the return to repayment could pose additional challenges not only for teachers but also for policymakers and school leaders who want to support a highly qualified, stable, and diverse teaching workforce.

support a highly qualified, stable, and diverse teaching workforce. Therefore, it is important to understand the landscape of student loan borrowing and repayment among the teaching workforce, as well as the implications of student loan debt for teachers.

Using nationally representative data from the 2020–21 National Teacher and Principal Survey (NTPS), this report offers evidence on the status of loan repayment burdens for full-time, public school teachers. Administered by the National Center for Education Statistics (NCES), the NTPS, alongside its previous version, the Schools and Staffing Survey, has served as the main source for analyses of teachers and teacher labor markets since the 1987–88 school year. The 2020–21 iteration of the NTPS was the first to include a series of questions on student loans, which helped to gather data on the number of teachers who had taken out loans, the status of their repayment, and the stress levels and career choices they faced as a result of carrying student loan debt. Prior to the addition of this set of questions to the NTPS, a limited number of studies and nationally representative data sources offered breakdowns of student loan debt figures for and within the teaching profession.⁹

This report first examines the cost of teacher preparation and credentialing and the financial supports available to teachers. It then discusses the status of teacher student loan borrowing and repayment and explores whether student loan burdens differ by teacher characteristics. It also examines how student loan debt affects teachers' well-being and employment decisions. The report concludes with recommendations that support the expansion of programs that alleviate or minimize the costs of teacher preparation and credentialing; improve teaching conditions; and promote high-quality preparation, career advancement, and retention. Details on the data and the analytical approach are provided in Appendix B: Technical Appendix.

Costs of Becoming and Staying a Teacher

Becoming and staying a teacher requires significant investment. Teachers face costs at multiple stages during their education, preparation, and careers. These include the costs of obtaining the educational degrees; paying for licensure, including multiple tests required to enter the profession; and earning advanced degrees or credentials, as well as professional development units required to renew their license and progress in their careers. This section discusses the costs of preparation and credentialing, as well as some of the sources of financial support available to teachers.

The Costs for Teachers and Teacher Candidates

The costs of teacher preparation and credentialing vary depending on the duration, structure, and state requirements. At a minimum, nearly all states require that teachers have a bachelor's degree to earn a standard initial teaching license, and most states require teacher candidates to complete an approved teacher preparation program.¹⁰ About 55% of teachers report entering the teaching profession through an undergraduate teacher preparation program.¹¹ The average net price (i.e., what students or families pay after grant aid) for undergraduate education has increased by close to 50% over the past 2 decades, and in 2022–23, the average net price was \$19,250 per year for public, 4-year institutions and \$32,800 per year for private, 4-year institutions.¹² The average amount owed among those who completed a bachelor's degree in 2020 with an education major and took out loans to pay for their education was \$29,250.¹³

A large and rising percentage of teacher candidates and public school teachers are pursuing master's or other advanced degrees, increasing from 47% in 1999–2000 to 61% in 2020–21.¹⁴ Some states require a postbaccalaureate or master's degree in order to obtain a full teaching license. For example, Connecticut and New York are two states that require teachers to obtain a master's degree as a basic prerequisite to advance their initial, provisional licenses to a permanent, professional license; many teachers enter the profession with a master's degree for this reason.¹⁵ Teachers may also pursue a first or additional master's degree later in their career to obtain specialized and advanced skills or obtain specialized certifications for certain subjects, such as special education. Many states and districts, seeking these advanced skills, incentivize advanced degrees and credentials through higher pay.¹⁶ The tuition costs and median amount of debt taken out for graduate degrees have risen even faster than for bachelor's degrees.¹⁷ For graduate degree completers in 2020 who took out student loans to pay for their education, the average amount owed for those who completed master's degrees in education was \$38,230; the average amount owed for those who completed any advanced degree in education (including a master's degree) was \$42,480.¹⁸

The Financial Supports Available to Teachers and Teacher Candidates

Similar to how typical borrowers can finance their education, teacher candidates and teachers pay for the costs of teacher preparation and credentialing through a combination of personal sources such as savings and family contributions. They can also seek out external sources of aid in the form of need- or merit-based scholarships or grants, work-study opportunities, federal subsidized and unsubsidized loans, and private loans, among other sources.

Teacher candidates and teachers have access to a few financial supports through the federal government to offset these costs.¹⁹ These supports include grant aids, such as the Pell Grant, awarded primarily to students obtaining their first degree who display exceptional financial need, as well as the TEACH grant, the federal government's teacher service scholarship. The TEACH grant offers \$4,000 per year to undergraduate and graduate students who are preparing for a career in teaching and who commit to teaching a high-need subject for 4 years in a school that serves students from low-income backgrounds.

The federal government also offers support for teachers who graduate with education debt. The Teacher Loan Forgiveness (TLF) program provides \$5,000 worth of loan cancellation for teaching in a school labeled as "high-need" and \$17,500 if this teaching is done in select high-need subjects.²⁰ The Public Service Loan Forgiveness (PSLF) program cancels the remainder of federal student loans after 120 monthly repayments toward these loans while working in a public service profession such as teaching. Beyond federal supports, many states also offer service scholarships for teachers or state-run loan forgiveness programs.²¹

However, government investments to defray the costs of entering or remaining in the teaching profession are not enough to offset the rising costs of education, with tuition, fees, and living expenses nearly doubling at public 4-year institutions over the past 20 years, after adjusting for inflation.²² Nearly 50 years ago, the Pell Grant covered more than three quarters of the cost

Government investments to defray the costs of entering or remaining in the teaching profession are not enough to offset the rising costs of education.

of attending a 4-year public college. Today, that coverage has declined to approximately one quarter of the cost of attendance, the lowest share in the program's history.²³ Meanwhile, the TEACH grant's aid amount has not increased while higher education costs have been increasing, and today it covers only a small percentage of typical annual costs of preparation. Moreover, even fewer financial supports exist for graduate students, who generally do not have access to the federal Pell Grant or subsidized loans.²⁴ In addition, programs such as PSLF offer no support for teachers in their first 10 years on the job since teachers must still repay their loans until they become eligible for loan forgiveness through this program, which is also when teachers' salaries are lowest and they are most likely to leave the profession.²⁵

Depending on personal finances and access to other financial supports, teachers and teacher candidates pursuing career advancement may have to allocate significant resources to their preparation and credentials. Their ability to afford the different options could influence the pathways they pursue, especially when compared against anticipated or actual salaries. Anticipated repayment burdens can be harsh for careers with lower starting salaries, and individuals may opt to pursue a different major or to pursue other, higher-paying careers that require the same level of education.²⁶ For teachers, these costs could influence when and how they pursue career advancement opportunities. For teacher candidates, the costs could lead them to choose shorter programs or less comprehensive preparation in exchange for lower costs—but potentially at the expense of preparation quality and the likelihood of remaining in the profession.²⁷

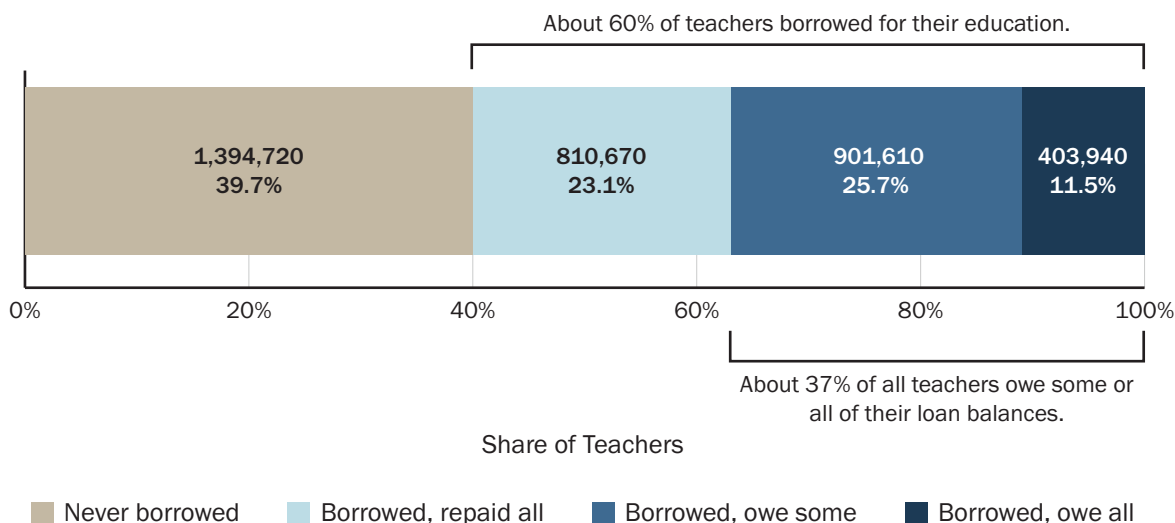
The State of Student Loan Borrowing and Repayment Among Teachers

In this section of the report, the analyses use data from the 2020–21 National Teacher and Principal Survey (NTPS) to describe the status of student loan borrowing and repayment among full-time, public school teachers (also referred to as “all teachers” hereafter) and explore disparities among teacher characteristics—including by age, years of experience, field of main teaching assignment, and race and ethnicity. These analyses are based on the answers to three questions from the NTPS: (1) whether the respondent had taken out student loans to help pay for their education; (2) whether they owed none, some, or all of the amount borrowed; and (3) the amount they pay each month on their student loans.

Widespread Prevalence of Student Loan Borrowing and Repayment

Just over 60% of all full-time, public school teachers have ever taken out student loans to pay for their education.²⁸ As depicted in Figure 1, this accounts for about 2.1 million out of the approximately 3.5 million teachers in the United States. For reference, the following statistics offer some context about borrowing rates (i.e., share of teachers who have ever borrowed) among different groups of individuals, including recent program completers in general and among those majoring in education. First, borrowing rates among all teachers (without yet accounting for variation over time) and among recent program completers appear to be similar: Around 60.8% of individuals who completed a bachelor’s degree and 66.2% of those who completed a master’s degree in 2020 in any major had ever taken out student loans. In comparison, 55.5% of all teachers who obtained a bachelor’s degree and 63.2% of those with a master’s degree reported having ever borrowed for their education (see Table A1 in Appendix A).²⁹ Second, the borrowing rates among program completers who majored in education are higher than the average program completer in any major at both the bachelor’s (75.9%) and master’s (76.4%) degree levels of educational attainment. This evidence signals that students pursuing teaching may rely on loans more than students in other fields.³⁰

Figure 1: Teachers' Student Loan Borrowing and Repayment Status



Note: Percentages may not sum to 100% due to rounding. Numbers of teachers are rounded to the closest 10. Results are based on full-time, public school teachers who have at least a bachelor's degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Among teachers who took out loans for educational purposes, loan repayment status varies. Just under one quarter of all teachers (23.1%, about 810,000 teachers) have taken out student loans and have repaid them in full. Roughly 1.3 million teachers (37.2% of all teachers) are in debt from student loans, suggesting the resumption of student loan repayments affects close to 4 of every 10 teachers.³¹ While many teachers have progressed in loan repayment (25.7% of all teachers), a smaller but notable portion of teachers still owe their entire balance (11.5% of all teachers). Of note, teachers who report owing some or all of their balance are not concentrated only among younger or novice teachers but also among older teachers or teachers who are well into their careers.

Although the NTPS did not ask teachers to report their total outstanding student loan balances, teachers in repayment were asked to report their monthly student loan repayment amounts. On average, these teachers report paying \$342 a month, which exceeds the amount the typical borrower pays toward their student loans monthly (\$200–\$299).³² On average, teachers' monthly payments represent 7.6% of their reported base salary.³³ In comparison, teachers' average monthly repayment amount would represent less than 6% of their monthly salary if they earned salaries closer to the average salaries of other college graduates.³⁴

Student Loan Borrowing and Repayment Across Groups of Teachers

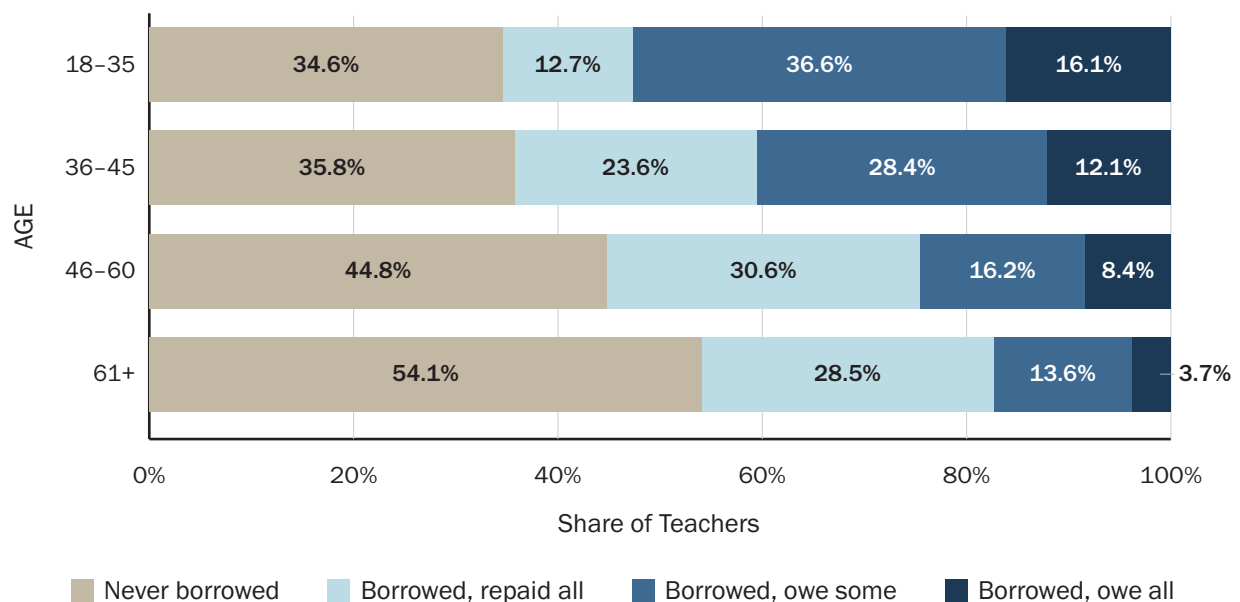
Student loan debt is widespread, affecting teachers across all subgroups, including gender, race and ethnicity, age, experience, educational attainment, and field of main teaching assignment. Additionally, the characteristics of the school in which a teacher works are not significantly related to rates of student loan borrowing or repayment (see Appendix B: Technical Appendix for details on variables and terminology

used).³⁵ Despite the trend across all teachers, some groups of teachers are more adversely affected by student loans than others. These groups include teachers at the beginning of their careers; special education teachers, a teaching area with the most intense shortages nationwide; and Black teachers, which can potentially pose a barrier for districts that are seeking to diversify their workforce.

Trends by age and experience

Although no subgroup of teachers is immune to borrowing and repaying student loans, significant differences exist between teachers based on age and years of experience.³⁶ As shown in Figure 2, a larger share of younger teachers report having borrowed in order to pay for their education, compared to older teachers. For example, around 65% of teachers between 18 and 35 years old have ever taken out loans, compared to about 46–55% of teachers over 46 years old. This difference may be due to a general increase in the cost of higher education, and it mirrors overall trends that show an increase in student loan borrowing rates over time. Not surprisingly, younger teachers are also more likely than their older peers to be repaying their loans. It may also be that teachers who took out student loans are more likely than their peers who did not take out a student loan to leave the profession before they become highly experienced, though the survey design limits an analysis of this possibility.

Figure 2: Teachers’ Student Loan Borrowing and Repayment Status by Age



Note: Percentages may not sum to 100% due to rounding. Results are based on full-time, public school teachers who have at least a bachelor’s degree.

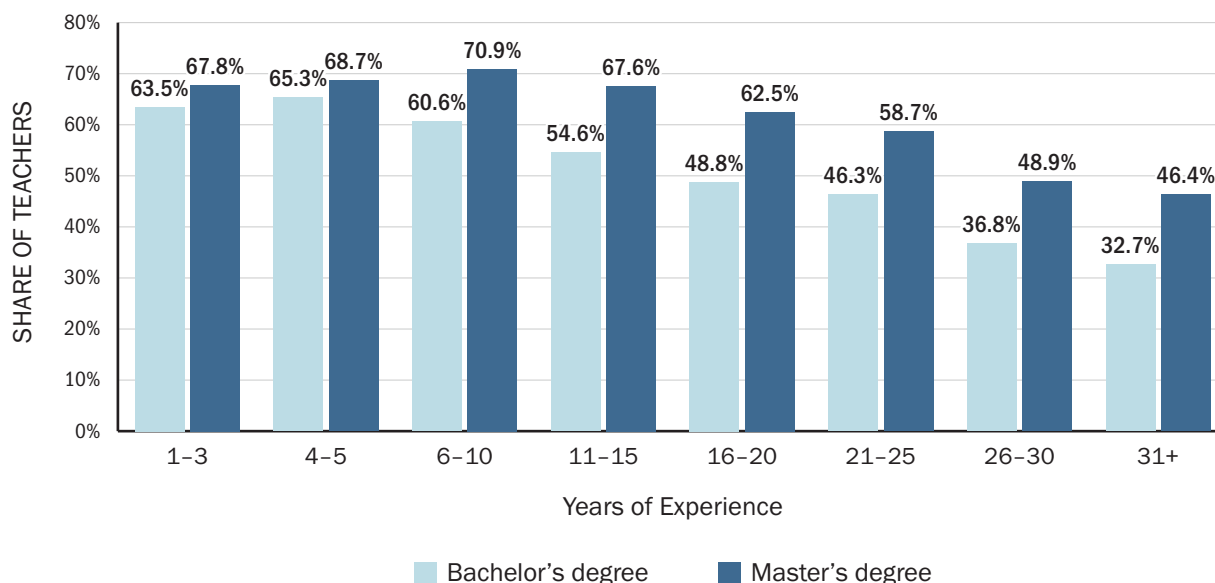
Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

These patterns of student loan borrowing and debt by age are similar to patterns along the experience continuum (see Figure A1 in Appendix A). For example, around 65% of teachers in their first 10 years of teaching have ever borrowed for their education. In comparison, groups of teachers with more years of experience, who likely completed their teacher preparation earlier in time, borrowed at much lower rates (41.4% of teachers with more than 30 years of experience and 46.4% of teachers with

26–30 years of experience). More than half of the teachers with up to 10 years of experience are repaying their student loans—and their monthly repayments represent a larger share of their base salaries compared to the average share among all teachers (9.3% compared to 7.6%). Since novice teachers begin their careers at the bottom of district pay scales, student loan debt constitutes a larger percentage of base salaries for teachers at the beginning of their careers than for all teachers on average.³⁷

These patterns of higher rates of student loan borrowing and repayment for teachers with less experience than those further along in their careers hold regardless of their degree attainment.³⁸ As evidenced in Figure 3, almost two thirds of teachers with only a bachelor’s degree and less than 6 years of experience took out student loans, compared to about one third of those with more than 25 years of experience. Similar trends exist among teachers with a master’s degree, which may be obtained before or after entering teaching. Across all years of experience categories, the share of teachers who have ever taken out student loans is higher among teachers with a master’s degree than among teachers with a bachelor’s degree. For example, among teachers with 11–20 years of experience, about 63%–68% of teachers with a master’s degree reported borrowing, compared to about 49%–55% of those with only a bachelor’s degree.

Figure 3: Share of Teachers Reporting Borrowing by Educational Attainment and Years of Experience



Note: Results are based on full-time, public school teachers who have at least a bachelor’s degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Both the age profile and the breakdown by years of experience demonstrate that teachers at the beginning of their careers increasingly rely on student loans to finance their education, and the rising costs of education may partially explain these gradients. As expected by the typical timing and structure of student loans and teachers' ability to repay over time, the portion of teachers who carry loan balances decreases as teachers age and gain teaching experience.³⁹ Still, a sizeable portion of teachers carry loan debt well into their careers: For example, almost 2 of every 10 teachers over 61 years old are still repaying loans.

Public school teachers are generally eligible to receive some form of loan forgiveness through the Teacher Loan Forgiveness (TLF) and Public Service Loan Forgiveness (PSLF) programs after 5–10 years of teaching, as described earlier. However, they must make loan payments for all of those initial years until they reach forgiveness, despite their lower incomes. In addition, close to 30% of all teachers with 16–20 years of experience report still holding outstanding debt balances despite these programs' existence for over a decade and a half.⁴⁰ While loan forgiveness programs can provide debt relief to teachers, the design and administration of these programs can present hurdles that prevent eligible teachers from receiving loan forgiveness. For example, under PSLF, the 120 payments required to achieve loan forgiveness are counted separately for loans used toward different degrees; if separate student loans are consolidated thereafter, the payment counter toward PSLF eligibility resets in many cases.⁴¹ Further, legacy loans from federal programs that have been discontinued are not eligible unless converted to the Federal Direct Loan program. Moreover, teachers are prohibited from concurrently earning credit for eligible service under both the TLF and PSLF programs. Lack of streamlined communication sometimes hinders awareness and uptake of these programs. Congress and the Department of Education have worked to address issues when administering TLF and PSLF, including in the conversion of grants to loans or the denial of loan forgiveness for teachers who were in the process of fulfilling or had fulfilled their service commitment; however, the work to ensure proper programmatic administration continues. Further, there can be a range of personal and financial reasons for why teachers may still hold debt balances despite access to loan forgiveness programs.⁴²

Trends by field of main teaching assignment

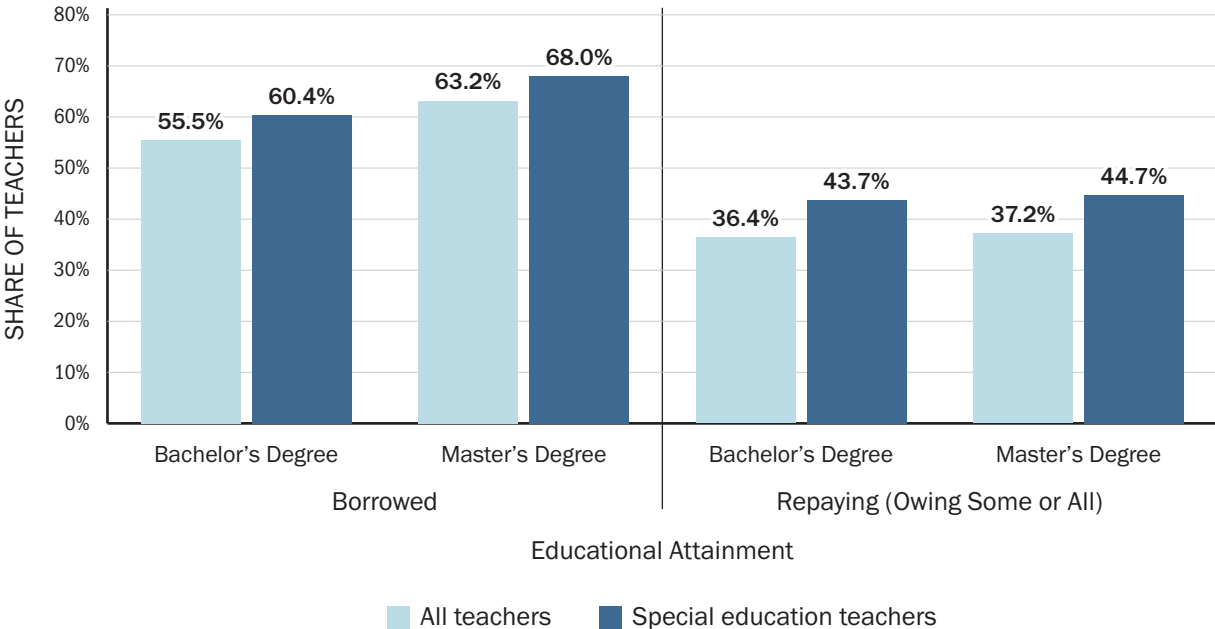
Certification and credentialing requirements can vary by subject area. For example, though the requirements to become a teacher in a special education classroom vary across states, the pathway typically requires different methods of preparation, including a specialist degree or a specific form of certification. Many special education teachers obtain a master's degree or other advanced degrees after they have earned a bachelor's degree and licensure, resulting in more costs and, potentially, increased borrowing and repayment amounts.⁴³

For these reasons, it is not as surprising that special education teachers have higher student loan borrowing rates and are more likely to still owe their full balance, as compared to teachers working in other subject areas (as shown in Table A2 in Appendix A). Compared to teachers in other subject areas, teachers working on behalf of students with disabilities are the most likely to have ever taken out student loans (65.2%).⁴⁴

Compared to teachers in other subject areas, teachers working on behalf of students with disabilities are the most likely to have ever taken out student loans.

Furthermore, 44.4% of all special education teachers report owing some or all of their student loans. Special education teachers are also the most likely to owe their entire balance (15.4%). These loan borrowing and repayment statistics are consistently higher for special education teachers than for teachers overall for both bachelor's and master's degree holders, as demonstrated in Figure 4.

Figure 4: Share of All Teachers' and Special Education Teachers' Student Loan Borrowing and Repayment Status by Educational Attainment



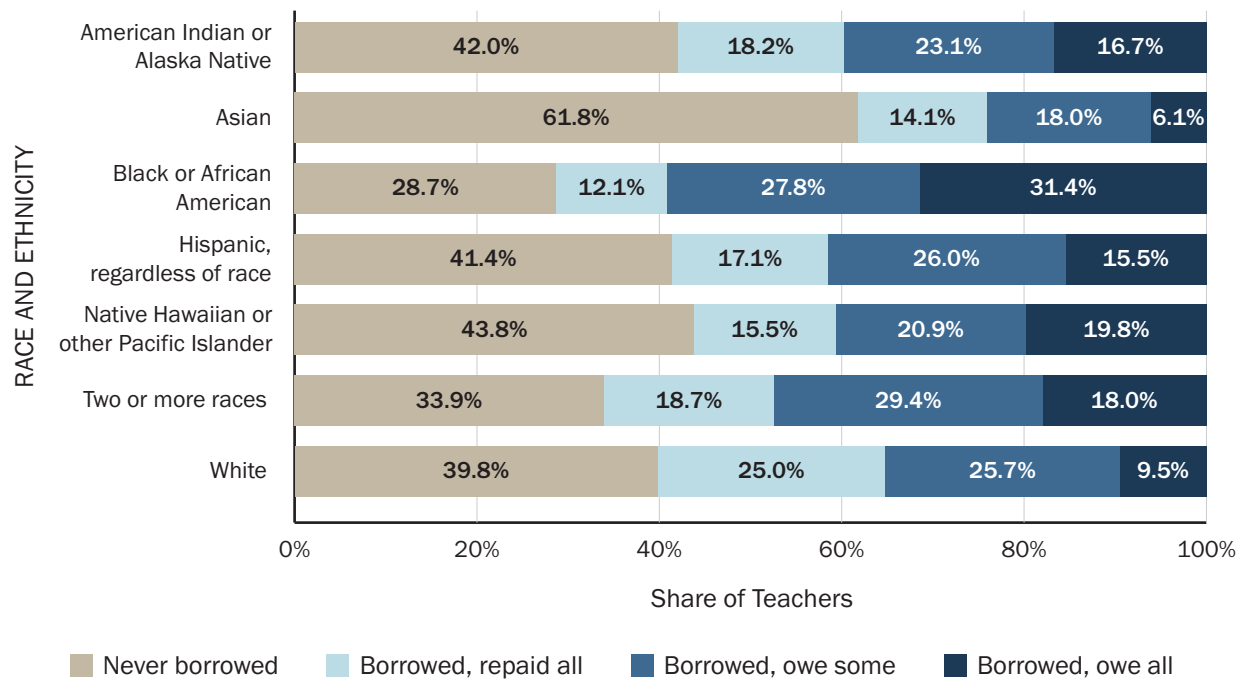
Note: Results are based on full-time, public school teachers who have at least a bachelor's degree.
 Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Trends by race and ethnicity

The most noticeable trends in student loan borrowing and repayment are those among Black teachers. The rates of student loan borrowing and repayment are the highest among Black teachers relative to teachers in other racial and ethnic groups and the highest among all subgroups studied.

As shown in Figure 5, about 71% of Black teachers have ever taken out student loans, regardless of repayment status. Teachers who identify as two or more races also have relatively high rates of student loan borrowing (66.1%). Asian teachers are the least likely racial and ethnic group of teachers to borrow, with only about 38% of Asian teachers reporting that they have taken out a loan to finance their education.

Figure 5: Teachers' Student Loan Borrowing and Repayment Status by Race and Ethnicity



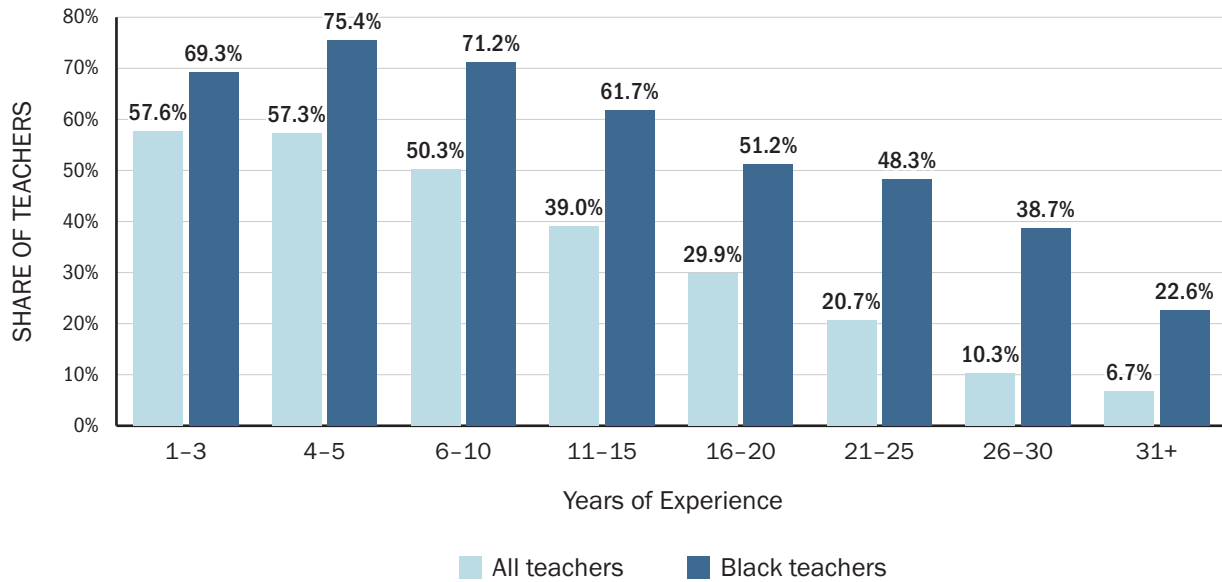
Note: All races and ethnicities outside the category “Hispanic, regardless of race” only include non-Hispanic-identifying individuals of that race and ethnicity. Racial and ethnic categories reflect those used in the original source. Percentages may not sum to 100% due to rounding. Results are based on full-time, public school teachers who have at least a bachelor’s degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Black teachers are also more likely than teachers from other racial and ethnic groups to still be in some form of loan repayment, with almost 60% of all Black teachers reporting that they owe some or all of their entire balance. Additionally, the share of Black teachers who owe all of the amount they borrowed is the largest among all groups (31.4%), close to 3 times larger than the share of all teachers who owe the full amount (11.5%, see Figure 1). With the exception of Asian teachers, most other teachers of color in the survey (e.g., teachers who are American Indian or Alaska Native, Black, Hispanic, Native Hawaiian or other Pacific Islander, or two or more races) report owing some or all of their balance at higher rates compared to White teachers.

These disparities between Black teachers and teachers from other racial and ethnic groups hold true across levels of educational attainment (Figure A2 in Appendix A) and years of experience (Figure 6). The share of Black teachers who owe some or all of their student loans is approximately 12 percentage points larger than the share among all teachers at the beginning of their careers. This disparity continues as teachers gain experience, and at 26–30 years of experience, Black teachers are nearly 4 times as likely as the average teacher to still owe some or all of their student loans.⁴⁵

Figure 6: Share of All Teachers and Black Teachers Reporting Owning Some or All of Their Student Loans by Years of Experience



Note: Black teachers only include non-Hispanic-identifying Black teachers. Racial and ethnic categories reflect those used in the original source. Results are based on full-time, public school teachers who have at least a bachelor's degree. Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Given the persistent racial wealth gap caused by systemic racism, against Black people in particular, it is not as surprising that Black teachers are more reliant on student loans and are more likely to hold debt compared to teachers from other racial and ethnic groups. Based on these existing disparities, it is likely that the end of the repayment pause induced disproportionate financial strain on Black teachers due to higher rates of both borrowing and owing their entire balance.⁴⁶ These patterns among teachers reflect overall racial inequities in loan borrowing and debt. One recent analysis found that 86% of Black bachelor's degree holders nationally had borrowed for their education and that the average amount borrowed by Black graduates outpaced that of White graduates.⁴⁷ Many structural factors contribute to this inequity, including a long history of exclusionary policies that made it difficult for Black families to build wealth, racial discrimination in the labor market, and persistent underfunding of historically Black colleges and universities.⁴⁸

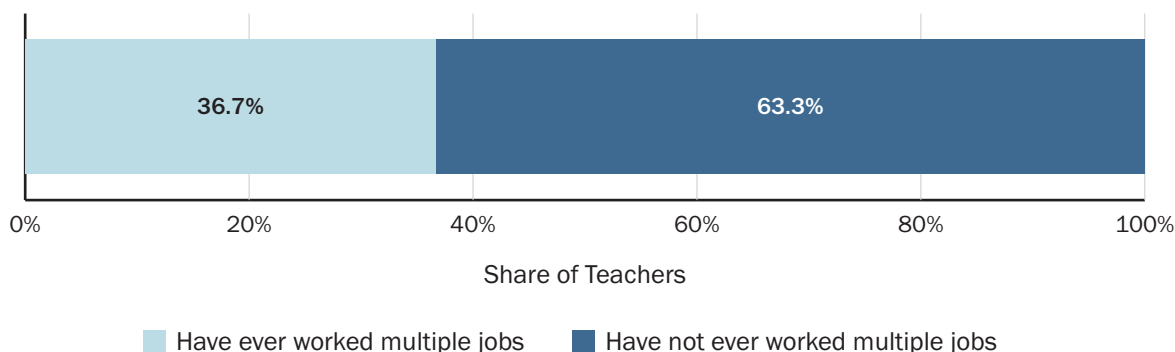
Consequences on Teachers' Employment and Well-Being

The findings on the prevalence and distribution of student loan borrowing and repayment patterns offer evidence about teachers' financial responsibilities as a result of student loans. Additionally, the information in the National Teacher and Principal Survey (NTPS) can be used to examine the links between student loan borrowing and working multiple jobs, as well as between student loan repayment and loan-related stress and overall job-related stress.⁴⁹

Working Multiple Jobs Due to Student Loan Borrowing

All teachers who borrowed were asked whether loans had influenced their employment decisions, such as having to work more than one job because of their student loan debt. Although teachers' responses do not indicate the recency, timing, duration, or type of second job, the evidence derived from this question illustrates some of the consequences that student loans may have for teachers.⁵⁰ As depicted in Figure 7, more than one third of borrowing teachers (36.7%) reported having ever worked multiple jobs at the same time because of student loans.

Figure 7: Share of Teachers Having Ever Worked Multiple Jobs Because of Student Loan Borrowing



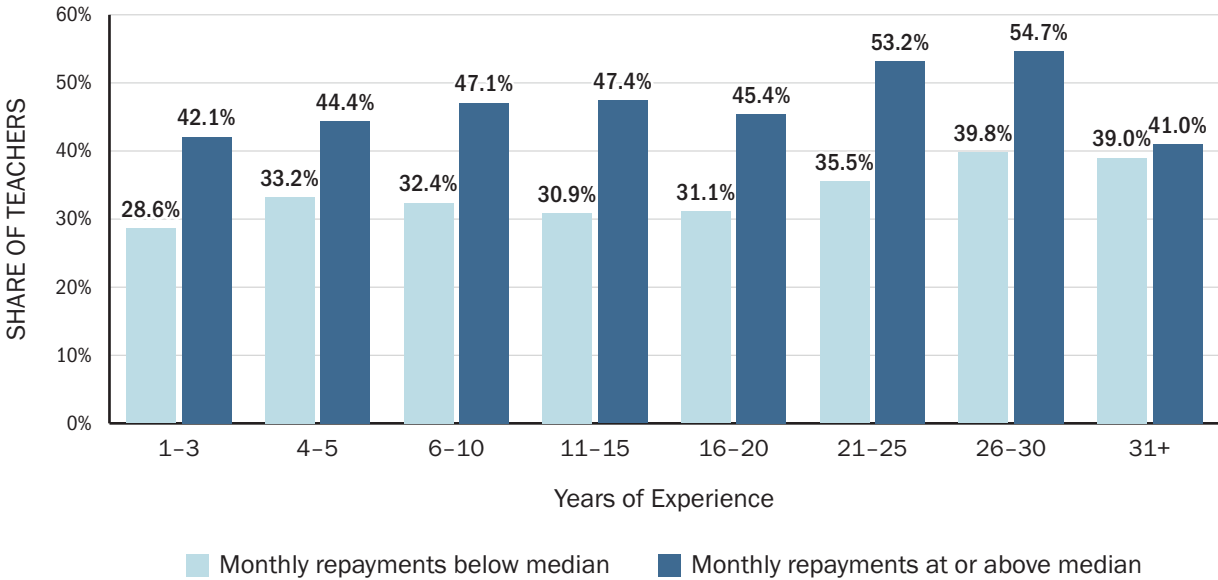
Note: The question about working multiple jobs was answered by teachers reporting borrowing. Results are based on full-time, public school teachers who have at least a bachelor's degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Similar to the trends in student loan borrowing and repayment, though there is some variation between subgroups, no fewer than 1 in 3 teachers in each subgroup who borrowed reported having worked multiple jobs due to student loan borrowing.⁵¹ The analysis also indicates that the shares of teachers who report having ever worked multiple jobs due to student loan borrowing remain consistently high across levels of experience. For teachers further into their careers, it is possible that they have been in the workforce for a longer time and therefore had a longer time horizon to take on a second job. However, for beginning teachers who have not been in the workforce for nearly as long, higher borrowing rates and increased costs could be behind the already high rates of having worked multiple jobs.

The analyses also show that, regardless of experience, a teacher’s monthly student loan repayment amount is correlated with having worked at more than one job simultaneously because of their student loan debt. Figure 8 shows that larger shares of teachers have worked multiple jobs if their monthly repayment amount is higher than the median compared to teachers paying amounts below the median. For example, among teachers who have 16–20 years of experience, 45.4% of teachers whose repayment amount exceeds the median reported having worked at more than one job simultaneously, compared with 31.1% of teachers paying amounts below the median.

Figure 8: Share of Teachers Having Ever Worked Multiple Jobs Because of Student Loan Borrowing by Monthly Repayment Amounts and Years of Experience

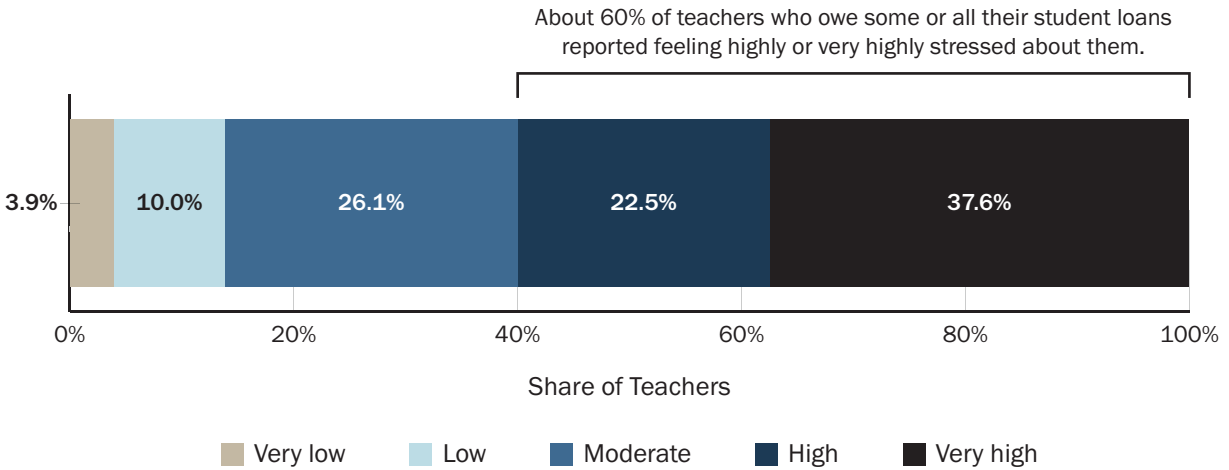


Note: The median monthly repayment is \$280. The question about working multiple jobs was answered by teachers reporting borrowing. Results are based on full-time, public school teachers who have at least a bachelor’s degree.
 Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Stress Due to Student Loan Repayment

Teachers who reported owing some or all of their student loan debt were asked to indicate their level of stress regarding their student loan debt on a scale ranging from “very low” to “very high.”⁵² As depicted in Figure 9, about 60% of teachers who owe some or all of their student loans reported feeling highly or very highly stressed about them. Only about 14% of teachers who are repaying their loans noted that their loan-related stress levels were low or very low, whereas 26.1% reported a moderate loan-related stress level.

Figure 9: Share of Teachers by Reported Levels of Student Loan-Related Stress



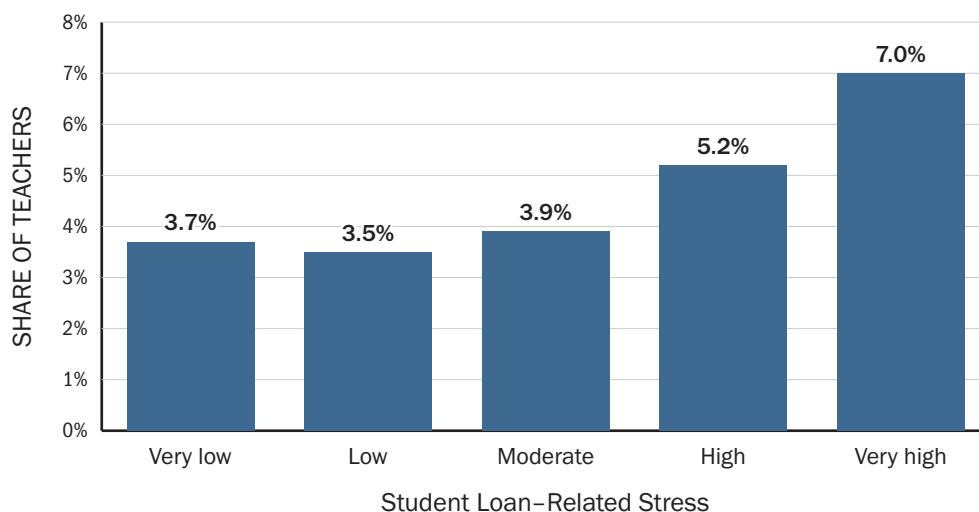
Note: The question about loan-related stress was answered by teachers who owe some or all of their student loans. Percentages may not sum to 100% due to rounding. Results are based on full-time, public school teachers who have at least a bachelor's degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Similar to the trends in having ever worked multiple jobs, teachers across all demographic groups and subject area assignments reported high levels of stress. While some variation across subgroups exists, more than half of teachers in any given subgroup reported high or very high levels of loan-related stress.⁵³ For example, teachers across different age and experience groups reported high levels of loan-related stress. Though teachers do not report the specific reasons behind their stress (e.g., older teachers, who likely have some of the highest salaries due to their years of experience, may also be planning for retirement), the data show that, even for the oldest and most experienced teachers with outstanding loan balances, student loan-related stress does not dissipate with age.

In addition, teachers' student loan-related stress is correlated with general job stress and dissatisfaction—a predictor of attrition.⁵⁴ As shown in Figure 10, larger shares of teachers with high or very high loan-related stress reported strongly agreeing with the statement that the stress and disappointments in teaching at their school are not worth it, compared to teachers who felt less stressed by loans. For example, the share of teachers with very high loan-related stress levels who strongly agreed with the statement was nearly twice as large as the share among teachers with very low to moderate loan-related stress levels. Assuming that the teaching conditions are not necessarily different or worse for teachers who feel stressed about their jobs compared to those who do not feel as stressed about their jobs, it is plausible that the financial stress from student loans combined with the stress faced in teaching conditions creates higher levels of job dissatisfaction.

Figure 10: Share of Teachers Reporting Strongly Agreeing That the Stress and Disappointments in Teaching Are Not Worth It by Student Loan–Related Stress



Note: The variable “stress and disappointments in teaching” is measured using a 4-point Likert scale on the extent of agreement with the statement “The stress and disappointments involved in teaching at this school aren’t really worth it.” The question about loan-related stress was answered by teachers who owe some or all of their student loans. Results are based on full-time, public school teachers who have at least a bachelor’s degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Despite the limitations of these two survey questions, the descriptive evidence suggests that decisions to work multiple jobs and loan-related stress affect all groups of teachers and persist over time. At least one third of teachers in any subgroup who have ever taken out loans have worked second jobs due to their debt, and at least half of teachers in any subgroup with outstanding student loan debt feel high levels of stress about their debt. The consequences of student loan borrowing and repayment could contribute to already challenging working conditions facing the profession. For example, for the current cohort of novice teachers, some of these consequences may affect a growing number of teachers as they gain experience, because they have faced rising costs of preparation and credentialing and have been more likely to borrow. For more experienced teachers, these findings could imply that the sets of financial supports available to teachers, including existing loan forgiveness programs, have yet to fully assist them in paying off their student loans and to minimize the consequences on their well-being despite their years of service.

The consequences of student loan borrowing and repayment could contribute to already challenging working conditions facing the profession.

Policy Recommendations

There are multiple policy approaches at the federal level, as well as the state and local levels, that could reduce student loan debt for prospective and current teachers. These approaches include loan forgiveness programs, service scholarships, and funded residencies, in addition to other levers that would boost teachers' total compensation. With over 90% of outstanding student loans being administered or held by the U.S. Department of Education, the federal government is in a particularly strong position to directly address teachers' loan-induced financial strains.⁵⁵ Policies that offer sufficient and well-implemented financial benefits could alleviate teachers' financial strains directly and enable them to avoid borrowing or pay off their loans more easily. Such policies could also help strengthen and stabilize the profession as they reduce barriers to high-quality preparation and support retention. These levers also support the recruitment and retention of teachers of color, who often face higher barriers at each stage of the teacher pipeline and have higher levels of attrition than White teachers, often in schools with the highest need for resource investments.⁵⁶ Furthermore, these policies aid states and districts experiencing persisting difficulties in staffing classrooms with qualified teachers, including in special education and other high-need subject areas.⁵⁷ Policy recommendations include the following:

Expand loan forgiveness and service scholarship programs to reduce student loan–related financial strains and to strengthen recruitment and retention. Loan forgiveness and service scholarship programs provide financial support to teachers in return for a service commitment. Loan forgiveness programs cancel accrued loan debt, while service scholarships provide upfront aid that reduces or eliminates the need to borrow. Current research suggests that when the financial benefit meaningfully offsets the cost of a teacher's preparation, these programs aid in both teacher recruitment and retention.⁵⁸ Both federal and state governments have existing loan forgiveness and service scholarship programs accessible to teacher candidates that create a financial package to lower the costs of teacher preparation and encourage candidates to pursue higher-quality routes into the profession.⁵⁹ These programs could be expanded and improved upon to alleviate the student loan burdens teacher candidates and teachers face.

Federal loan forgiveness programs, primarily the Teacher Loan Forgiveness (TLF) and Public Service Loan Forgiveness (PSLF) programs, relieve some or all of teachers' outstanding student loan balances after the fulfillment of a service requirement. However, these programs require teachers to shoulder monthly payments for years with salaries that are lower than those of similarly educated professionals, especially in the first few years of teaching.⁶⁰ The federal government could make the monthly student loan payments on behalf of public school teachers while they are teaching and ensure the debt is retired after 10 years of service—an incentive for both recruitment and retention. The federal government could provide even more support to teachers working in high-need schools and in early childhood education, where salaries are lower, by not only covering their monthly federal student loan payments for as long as they are teaching, but also speeding up the time at which they completely retire their debt (for example, to 5 years of service).⁶¹

Similarly, service scholarships offer another avenue to reduce teachers' loan burden up front. The TEACH grant offers \$4,000 per year in grant aid to postsecondary students who commit to teaching a high-need subject for 4 years in a school that serves students from low-income backgrounds. However, this grant amount has not increased since its initial authorization in 2007, despite the increasing costs of preparation and credentialing.⁶² The grant can also convert to a loan with backdated interest if

teachers do not complete the 4-year service commitment. To make the TEACH grant better function as a recruitment strategy for teachers in areas of high need, the program could be revamped to increase the award amount to better align with the full cost of comprehensive preparation, reform the loan conversion penalty, and allow early childhood educators (who are not currently covered) to be eligible for benefits.⁶³

In addition to federal programs, multiple states, including Delaware and Illinois, offer educator loan repayment programs in which the state directly pays teachers' student loan providers.⁶⁴ These programs offer a way for states to directly address the loan burdens their teachers face. Numerous states have also offered state-specific service scholarships to support teacher candidates. For example, California's Golden State Teacher Grant Program awards up to \$20,000 to students enrolled in a California preparation program in exchange for teaching for 4 years at a California school qualifying as "high-need."⁶⁵ Likewise, the North Carolina Teaching Fellows program offers \$4,125 per semester for candidates enrolled in certain teacher preparation programs at the undergraduate or graduate level who commit to teaching in certain high-need subject areas, such as math, science, and special education.⁶⁶

Finally, a key feature of effective loan forgiveness and service scholarship programs is that they are well structured, implemented, and managed.⁶⁷ Administrative issues can undermine these programs' appeal and benefits. For example, at the federal level, poor administration and servicing of the TEACH grant and PSLF programs resulted in the conversion of grants to loans or denial of loan forgiveness for teachers who were in the process of, or had fulfilled, their service commitment. Although Congress and the U.S. Department of Education have worked to address these administrative issues, these programs would benefit from continued attention and reforms.⁶⁸

Expand the affordability and availability of high-retention preparation pathways. Teacher candidates who complete comprehensive preservice preparation programs, in which they receive intensive student teaching under the supervision of an expert mentor teacher with coursework in children's learning and development and content-specific knowledge and pedagogy, are more likely to remain in the profession than candidates who enter teaching through routes that do not offer these features, especially alternatives that skip student teaching.⁶⁹ Additionally, certain types of comprehensive preparation programs offer financial support that underwrites all or most of the cost of teacher preparation and offer stipends in exchange for a service commitment. These financial supports can reduce or eliminate the need to borrow. Some residency programs also subsidize the costs of tuition, lowering the overall costs for candidates. This type of comprehensive preparation and early-career support appears in programs with teacher residencies and is also reflected in many Grow Your Own programs.⁷⁰

Not only does increasing the availability of high-retention preparation pathways serve as a lever for reducing the cost of preparation and credentialing, but it also produces desirable outcomes for the teaching profession, such as improving teacher retention, boosting teacher effectiveness, addressing high-need subject area shortages, and helping diversify the teacher pipeline. For example, research on residencies indicates that these programs recruit more teacher candidates of color than other pathways, and some residencies have been found to produce more instructionally effective teachers.⁷¹ Grow Your Own programs also enable state and local education agencies to attract diverse local talent and target recruitment to subject areas of acute shortages.⁷²

At the federal level, programs that fund high-retention pathways into teaching, including the Teacher Quality Partnership, the Individuals with Disabilities Education Act (IDEA) Part D Personnel Preparation, and the Augustus F. Hawkins Centers of Excellence programs, have been chronically underfunded.⁷³ The federal government could provide robust and sustained funding to these programs and additionally leverage such increases to support state capacity to grow high-retention pathways.

Increase teachers' salaries to bolster their capacity to repay their student loans. Teachers' salaries are typically lower compared to those of similarly educated professionals. A substantial body of research suggests that the wage penalty affects not only the recruitment of new teachers into the profession but also teachers' decisions of where to teach and their likelihood of remaining in the classroom.⁷⁴ Raising teachers' total compensation would reduce the financial strains teachers experience, not only from student loan repayment obligations but also from other expenses such as housing and child care costs.

Federal incentives and state and local education agency actions to raise and equalize salaries can help increase teachers' ability to contribute toward their student loan repayments, savings, or other expenses. In fact, 26 governors committed to raising teacher pay in 2022 or 2023, and some states—including Maryland, New Mexico, and Tennessee—have enacted salary equalizations and raises through legislation; still, such adjustments have yet to help reduce the teacher pay penalty.⁷⁵

Bolster teachers' net compensation through tax credits and housing subsidies. Although salaries are the most direct and efficient source of financial support that can lessen prospective and current teachers' financial strain, other non-salary supports, such as tax credits and housing subsidies, can effectively increase teachers' net compensation.

A federal and/or state refundable tax credit for educators could be designed to incentivize service in high-need areas, where there are fewer state and local resources than in wealthier areas and salaries are lower.⁷⁶ For example, such a program could provide tax credits on a sliding scale to provide the largest credit to teachers in schools classified as having the highest need.

In addition, policymakers in federal, state, and local governments could provide housing support and other subsidies to educators, especially in areas where housing options are limited or expensive, adding strain to teachers' lower salaries. The federal government could make existing housing subsidies more readily available and offer additional housing supports through down payment assistance, low- or no-interest home loans, or support to governmental entities to build or purchase affordable housing for teachers. Some states and districts have also taken steps to lower housing costs and expand these incentives.⁷⁷

Incentivize and underwrite the costs of earning high-need, advanced credentials. Ensuring that teachers can access high-need, advanced credentials offers them an opportunity to increase their income by moving to a higher pay scale.⁷⁸ These credentials are particularly beneficial for current teachers at the beginning of their careers, as they have faced the highest need to rely on loans, often start at the lower end of their districts' pay scales, face the longest time horizon until their debts can be forgiven, and are the most likely to make a career switch.⁷⁹ These credentials also help provide career advancement opportunities to midcareer teachers; for example, they can become mentoring and induction leaders themselves to support future early-career teachers. The pervasiveness of loan debt across the teaching career ladder suggests that financial supports to earn high-need, advanced credentials could impact a wide range of teachers.

Federal, state, and local governments and education agencies can help teachers earn high-need, advanced credentials by underwriting coursework and certification costs. These investments not only lift the burden of additional financial strain from individual teachers but also allow schools to build on the expertise of current teachers, both of which serve as effective retention strategies.⁸⁰ These investments could encourage teachers to earn credentials that are in high demand, such as those for special education, bilingual, math, and science. Over time, experienced and accomplished teachers could then serve as leaders in mentoring, induction, and coaching for novice teachers, a potentially sustainable strategy to retain teachers once they enter the profession while also enhancing teaching quality.

For example, states and districts can provide financial incentives to train and support beginning teachers to become National Board certified by underwriting certification costs. Teachers who are National Board certified have been found to be highly effective as teachers, mentors, and colleagues, raising both the level of practice and student outcomes.⁸¹ Many states offer support to pay for, award annual stipends, or raise salaries for National Board certification.⁸² The National Board for Professional Teaching Standards 2022–23 policy change also allows teachers to begin their process of Board certification before completing 3 years of teaching rather than wait until they complete 3 years of teaching, which enables beginning teachers to initiate the process immediately upon classroom entry.⁸³

Conclusion

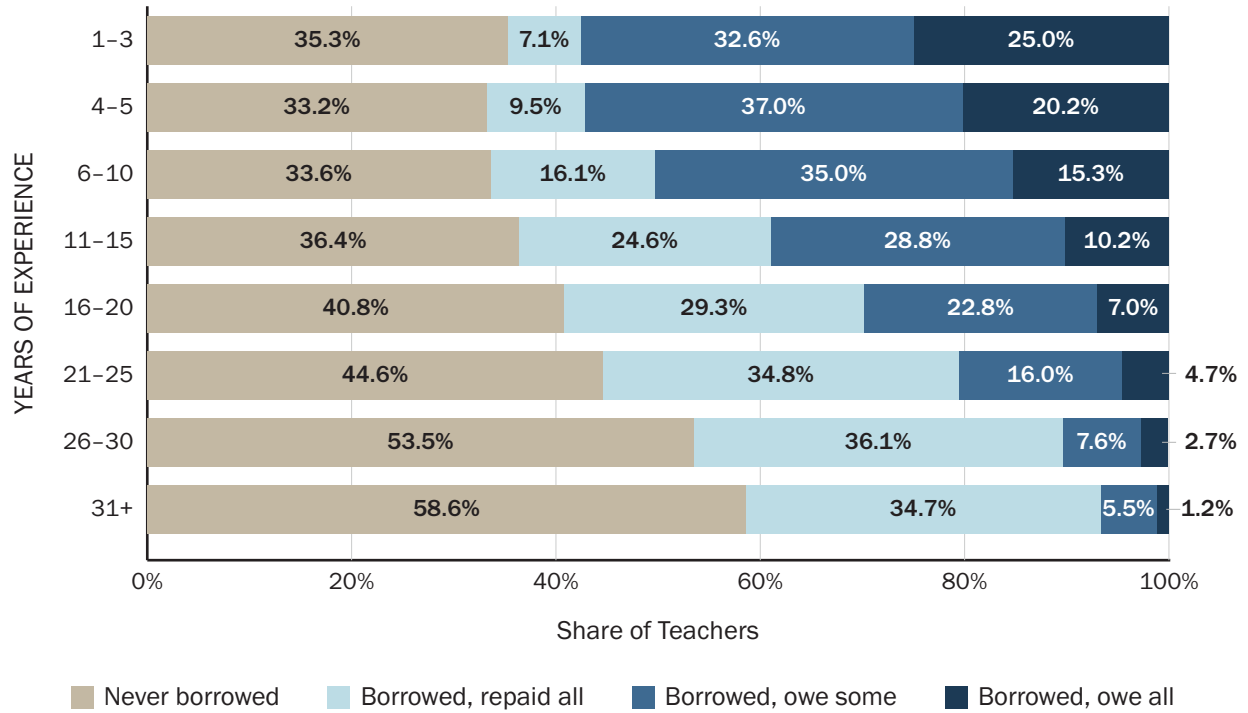
The resumption of federal student loan repayments after a three-and-a-half-year hiatus during the COVID-19 pandemic comes at a time in which teachers are facing myriad stressors. Student loan repayments add strains to the current status of the teaching profession—one that is facing rising teacher preparation costs, relatively lower teacher pay, and heightened job-related stress. Such stressors influence teachers' decisions to exit the profession; deepen ongoing teacher shortages; and create hurdles to building a well-prepared, stable, and diverse teacher workforce.

This report's analyses showed that teachers' strains from high rates of loan borrowing and repayment are both prevalent and widely distributed. Student loan debt bears consequences for many teachers, including the necessity to take second jobs to pay their loans and high levels of loan-related stress. For current teachers, student loan repayments may compound other financial, professional, or personal stressors, potentially further fueling attrition. It is important to underscore that the highest borrowing and repayment rates are among Black teachers, beginning teachers, and special education teachers. This report's findings suggest that student loans could also influence efforts to diversify the profession and to resolve ongoing shortages of teachers of color and teachers in high-need subject areas. These patterns indicate the need for systematic policy approaches to reduce student loan reliance and burdens through the expansion and improvement of loan forgiveness and service scholarships; investments in high-quality and affordable pathways into the profession; increased compensation; and the underwriting of high-need, advanced credentials.

These analyses indicate that many teachers can anticipate another layer of financial strains and renewed stressors with the resumption of student loan repayments. Future studies could contribute to clarifying the total amount of student loan debt among teachers, the composition of their student loans, and how student loan debt for teachers and other professionals compare beyond recent graduate borrowing rates. Additional research could further examine the consequences of student loan debt, including with choices made about preparation and credentialing, prospective teachers' desires to enter the profession, and current teachers' potential decisions to leave the profession. All in all, the priority should be to better understand the degree to which student loans pose a barrier to building a well-prepared, stable, and diverse teacher workforce, as well as the efficacy of the recommendations outlined in this report.

Appendix A: Figures and Tables

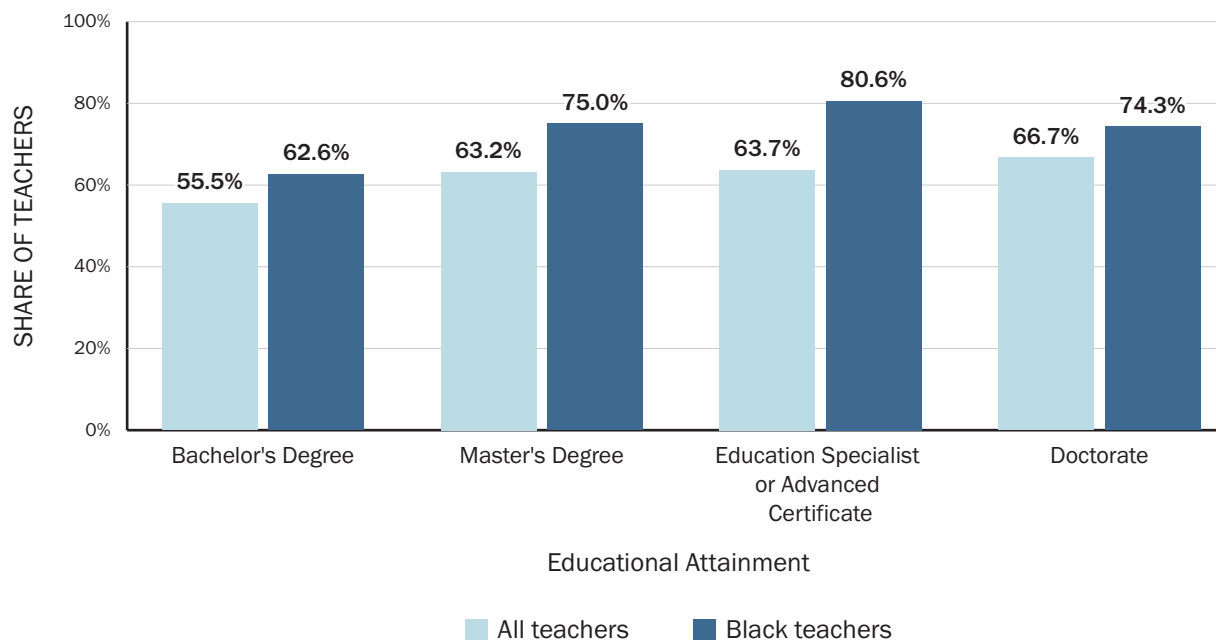
Figure A1: Teachers' Student Loan Borrowing and Repayment Status by Years of Experience



Note: Percentages may not sum to 100% due to rounding. Results are based on full-time, public school teachers who have at least a bachelor's degree.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020-21. (2023).

Figure A2: Share of All Teachers and Black Teachers Reporting Borrowing by Educational Attainment



Note: Black teachers only include non-Hispanic-identifying Black teachers. Racial and ethnic categories reflect those used in the original source. Results are based on full-time, public school teachers who have at least a bachelor's degree. Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Table A1: Teachers' Student Loan Borrowing and Repayment Status by Educational Attainment

Educational attainment	Never borrowed	Borrowed			
		Repaid all	Owe some	Owe all	Owe some or all
Bachelor's degree	44.5%**	19.1%**	25.4%	11.0%	36.4%
Master's degree	36.8%**	26.0%**	25.6%	11.5%	37.2%
Education specialist or certificate	36.3%**	24.1%	26.6%	13.0%	39.6%*
Doctorate or professional degree	33.3%*	21.1%	29.2%	16.4%*	45.6%**
Master's degree or more (combined)	36.6%**	25.7%**	25.8%	11.8%	37.7%

Note: Percentages may not sum to 100% due to rounding. Results are based on full-time, public school teachers who have at least a bachelor's degree. Statistical tests were conducted to compare teachers from each group with teachers overall. * $p < .05$; ** $p < .01$.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Table A2: Teachers' Student Loan Borrowing and Repayment Status by Field of Main Teaching Assignment

Field of main teaching assignment	Never borrowed	Borrowed			
		Repaid all	Owe some	Owe all	Owe some or all
Arts or Music	37.4%	23.1%	30.0%**	9.6%**	39.6%*
Career or Technical Education	43.3%*	21.6%	24.0%	11.1%	35.1%
Early Childhood or General Elementary	41.5%**	22.8%	24.4%*	11.3%	35.7%*
English and Language Arts	36.7%**	24.2%	26.7%	12.5%	39.2%*
ESL or Bilingual Education	45.1%	20.1%	22.4%	12.4%	34.8%
Foreign Languages	43.1%	22.8%	23.9%	10.2%	34.1%
Health Education	45.1%**	23.4%	24.2%	7.3%**	31.5%**
Mathematics	41.9%*	24.7%	24.0%	9.4%**	33.4%**
Natural Sciences	38.3%	25.6%*	25.6%	10.5%	36.1%
Social Sciences	37.5%	25.6%*	25.9%	11.0%	36.9%
Special Education	34.8%**	20.7%**	29.0%**	15.4%**	44.4%**
All Other	45.3%	18.0%	22.3%	14.4%	36.7%

Note: Percentages may not sum to 100% due to rounding. Results are based on full-time, public school teachers who have at least a bachelor's degree. Statistical tests were conducted to compare teachers from each group with teachers overall. * $p < .05$; ** $p < .01$.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Appendix B: Technical Appendix

Data

This study uses the 2020–21 National Teacher and Principal Survey (NTPS) data. The NTPS collects information from a nationally representative sample of public and private school teachers and principals.⁸⁴ Administered by the U.S. Department of Education’s National Center for Education Statistics (NCES) every 2 to 3 years, the teacher questionnaires include core topics such as teaching assignment, preparation, employment, and demographic background information. In addition, each administration of the NTPS contains rotating modules on other important topics, such as professional development and working conditions, among others. For the first time in the history of the survey, teachers participating in the 2020–21 survey were asked eight questions about their student loans. NCES conducted the NTPS from October 2020 to August 2021.

Methodology

This study uses descriptive analyses. Findings represent full-time, public school teachers who have a bachelor’s degree or more (3,510,940 teachers) during the 2020–21 school year. Full-time teachers were selected because many policies typically require full-time teaching status; full-time teachers represent 94% of the survey’s respondents. In all cases, teacher observations are weighted by both the teacher and the replicate weights, as requested by NCES.⁸⁵

The focus of this report is national. Complementary information on state-level values of the share of teachers who have outstanding student loans can be found in The State of the Teacher Workforce interactive map.⁸⁶ These shares vary significantly across states, with a low of 22.8% in Rhode Island and a high of 55.7% in Mississippi. The sample for this state-by-state analysis included all teachers, not just full-time teachers with a bachelor’s degree or more.

Variables

This report examines the loan variables that ask teachers about their student loan borrowing and repayment, as well as the variables pertaining to whether teachers took multiple jobs because of loans or their stress levels due to student loan debt. Specific survey questions related to student loans are listed in Table B1.⁸⁷

The loan variables’ information was collected after the federal government announced a moratorium on federal loan repayments in March 2020.⁸⁸ The moratorium ended on August 31, 2023. Additionally, the freeze was extended 3 times during survey collection; teachers’ responses should be interpreted within this context.⁸⁹

Specifically, questions about the monthly repayment amounts repaid could have been affected by the moratorium. Consequently, only amounts for the aggregate sample are reported; amounts by individual groups are not reported, as there is variation in the repayment status across groups. Analytically, the 8.2% of individuals who reported making \$0 monthly repayments are excluded from the calculation of the average repayment amount because including teachers who report a \$0 repayment because of the

freeze would not represent their typical monthly payments and would bias the average repayment amount downward. Readers of this report should interpret the estimated repayment amounts with caution and use any additional updated information by NCES on this issue for continued analysis.

Additionally, the two variables that require teachers to report the employment and well-being consequences of having student loans also need to be interpreted with caution. The multiple jobs variable refers to work that could have happened at any time up to the present. The loan-related stress variable refers to the current levels of stress, although it potentially suffers from the same limitations as other metrics of stress that are self-reported.

Other variables used in the analysis include teacher demographic variables, two working conditions variables, and several school characteristics. These have been used to provide additional breakdowns or for assessing the consistency of the analysis (results not shown). The age variable breakdown follows categories used in other analyses of student loans among teachers.⁹⁰ The race and ethnicity variables follow the categories used in the original source, although teachers who identify as Black or African American in the survey are referred to as Black teachers in the report for brevity and clarity for readers. The full list of variables used in the analyses, alongside some descriptive statistics, is provided in Table B1.

Table B1: Variables Used in the Analysis

Variable name	Definition	Unit	Mean (SD if applicable)	In-group N	Total N
Loan and Economic Variables					
Took loans^a	Other than money you may have borrowed from family or friends, did you take out any type of student loans to help pay for your undergraduate or graduate education?	%	60.3	2,116,220	3,510,940
Has outstanding loans^a	Do you still owe all, some, or none of the amount that you borrowed?	%	37.2	1,305,560	3,510,940

Variable name	Definition	Unit	Mean (SD if applicable)	In-group N	Total N
Loan and Economic Variables					
Loan status^a	Did not take (does not owe)	%	39.7	1,394,720	3,510,940
	Owes all	%	11.5	403,940	3,510,940
	Owes some	%	25.7	901,610	3,510,940
	Repaid all	%	23.1	810,670	3,510,940
Monthly loan repayment among teachers who are paying some amount (excludes teachers reporting a zero payment)^b	How much do you typically pay each month on your student loans?	\$ per month	\$341.70 (\$315.1)	1,198,920	1,198,920
Base salary^b	What is your base teaching salary for the entire school year?	\$ per school year	\$61,650 (\$19,457)	3,510,940	3,510,940
Loan repayment (among teachers who are paying some amount) as a proportion of base salary	(Derived) Monthly loan repayment amount as a proportion of base salary (1/12 of base salary)	%	7.6 (7.4)	1,198,920	1,198,920

Variable name	Definition	Unit	Mean (SD if applicable)	In-group N	Total N
Loan and Economic Variables					
Took multiple jobs because of loans	Please indicate whether your student loan debt has influenced your employment plans and decisions in any of the following ways: Did you have to work at more than one job at the same time because of your student loan debt?	%	36.7	775,910	2,116,220
Stress due to loans	Please indicate your level of stress regarding your student loan debt. Would you say your level of stress is: Very low/Low/Moderate/High/Very high (Stress from loans is High/Very high, relative to others)	%	60.1	783,990	1,305,560
Stress on the job	To what extent do you agree or disagree with each of the following statements? The stress and disappointments involved in teaching at this school aren't really worth it. Strongly disagree/Somewhat disagree/Somewhat agree/Strongly agree (Strongly agree, relative to others)	%	4.6	160,240	3,510,940

Variable name	Definition	Unit	Mean (SD if applicable)	In-group N	Total N
Teacher Demographic Characteristics, Educational Background, Field of Main Assignment, and School Characteristics					
Gender	Female	%	76.7	2,691,190	3,510,940
	Male	%	23.3	819,760	3,510,940
Race and ethnicity^c	American Indian or Alaska Native	%	0.4	14,460	3,510,940
	Asian	%	2.4	82,440	3,510,940
	Black or African American	%	6.1	215,140	3,510,940
	Hispanic, regardless of race	%	9.6	336,050	3,510,940
	Native Hawaiian or Other Pacific Islander	%	0.2	5,620	3,510,940
	Two or more races	%	1.6	56,950	3,510,940
	White	%	79.8	2,800,280	3,510,940
	Age	18–35	%	30.1	1,056,040
	36–45	%	28.7	1,008,060	3,510,940
	46–60	%	35.1	1,232,480	3,510,940
	61+	%	6.1	214,370	3,510,940
Years of experience	1–3	%	11.6	407,440	3,510,940
	4–5	%	8.8	307,120	3,510,940
	6–10	%	19.9	697,020	3,510,940
	11–15	%	17.1	601,140	3,510,940
	16–20	%	16.5	581,030	3,510,940
	21–25	%	13.4	472,070	3,510,940
	26–30	%	7.3	257,550	3,510,940
	31+	%	5.3	187,570	3,510,940

Variable name	Definition	Unit	Mean (SD if applicable)	In-group N	Total N
Teacher Demographic Characteristics, Educational Background, Field of Main Assignment, and School Characteristics					
Educational attainment (highest degree)	Bachelor's degree	%	39.3	1,378,930	3,510,940
	Master's degree	%	51.1	1,793,950	3,510,940
	Education specialist or certificate of advanced graduate studies	%	8.3	291,560	3,510,940
	Doctorate or professional degree	%	1.3	46,500	3,510,940
Educational attainment: Master's or higher	(Derived): Master's degree or higher	%	60.7	2,132,020	3,510,940
Field of main teaching assignment	Arts or Music	%	6.2	216,730	3,510,940
	Career or Technical Education	%	3.8	134,480	3,510,940
	Early Childhood or General Elementary	%	35.8	1,256,010	3,510,940
	English and Language Arts	%	10.2	356,550	3,510,940
	ESL or Bilingual Education	%	1.9	65,080	3,510,940
	Foreign Languages	%	2.5	87,300	3,510,940
	Health Education	%	3.8	133,290	3,510,940
	Mathematics	%	8.1	283,210	3,510,940
	Natural Sciences	%	6.9	241,450	3,510,940
	Social Sciences	%	6.5	228,320	3,510,940
	Special Education	%	13.7	482,670	3,510,940
	All Other	%	0.7	25,870	3,510,940

Variable name	Definition	Unit	Mean (SD if applicable)	In-group N	Total N
Teacher Demographic Characteristics, Educational Background, Field of Main Assignment, and School Characteristics					
School concentration of students eligible for the National School Lunch Program	0–25%	%	19.2	653,180	3,401,950
	>25–50%	%	25.9	879,480	3,401,950
	>50–75%	%	21.4	727,670	3,401,950
	>75–100%	%	33.6	1,141,610	3,401,950
Urbanicity	City	%	27.9	978,140	3,510,940
	Suburb	%	38.6	1,356,970	3,510,940
	Town	%	11.9	418,880	3,510,940
	Rural	%	21.6	756,960	3,510,940

^a Data not broken down by source.

^b Amounts are not adjusted for cost-of-living differences across the country.

^c All races and ethnicities outside the category “Hispanic, regardless of race” only include non-Hispanic-identifying individuals of that race and ethnicity. Racial and ethnic categories reflect those used in the original source.

Note: Numbers of teachers are rounded to the closest 10. Results are based on full-time, public school teachers who have at least a bachelor’s degree. Racial and ethnic categories reflect those used in the original source.

Source: Learning Policy Institute analysis of the National Teacher and Principal Survey, 2020–21. (2023).

Endnotes

1. Sherratt, E., Lachlan, L., & Alavi, K. (2023). *Raising the bar on teacher pay*. Center on Great Teachers and Leaders at AIR & the Teacher Salary Project. https://www.air.org/sites/default/files/2023-05/Raising_the_Bar_on_Teacher_Pay.pdf; Allegretto, S. (2023). *Teacher pay penalty still looms large: Trends in teacher wages and compensation through 2022*. Economic Policy Institute. <https://files.epi.org/uploads/274103.pdf>
2. Those entering either through routes that are less comprehensive or offer less-intensive preservice preparation are more likely to turn over. See Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it*. Learning Policy Institute. <https://doi.org/10.54300/454.278>
3. DePaoli, J., & McCombs, J. (2023). *Safe schools, thriving students: What we know about creating safe and supportive schools*. Learning Policy Institute. <https://doi.org/10.54300/701.445>; Learning Policy Institute. (2023). *The state of the teacher workforce: A state-by-state analysis of the factors influencing teacher shortages, supply, demand, and equity* [Interactive map]. <https://learningpolicyinstitute.org/product/state-of-teacher-workforce-interactive>; García, E., Han, E., & Weiss, E. (2022). Determinants of teacher attrition: Evidence from district-teacher matched data. *Education Policy Analysis Archives*, 30(25). <https://doi.org/10.14507/epaa.30.6642>
4. Allegretto, S. (2023). *Teacher pay penalty still looms large: Trends in teacher wages and compensation through 2022*. Economic Policy Institute. <https://files.epi.org/uploads/274103.pdf>; Carver-Thomas, D., & Patrick, S. (2022). *Understanding teacher compensation: A state-by-state analysis*. Learning Policy Institute. <https://doi.org/10.54300/443.847>; Rothstein, J., & Rouse, C. E. (2011). Constrained after college: Student loans and early-career occupational choices. *Journal of Public Economics*, 95(1–2), 149–163. <https://doi.org/10.1016/j.jpubeco.2010.09.015>; Chapman, B., & Lounkaew, K. (2015). An analysis of Stafford loan repayment burdens. *Economics of Education Review*, 45, 89–102. <https://doi.org/10.1016/j.econedurev.2014.11.003>; Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it*. Learning Policy Institute; Learning Policy Institute. (2023). *The state of the teacher workforce: A state-by-state analysis of the factors influencing teacher shortages, supply, demand, and equity* [Interactive map]. <https://learningpolicyinstitute.org/product/state-of-teacher-workforce-interactive>; Diliberti, M. K., & Schwartz, H. L. (2023). *Educator turnover has markedly increased, but districts have taken actions to boost teacher ranks: Selected findings from the sixth American School District Panel Survey*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA956-14.html; OECD. (2020). *TALIS 2018 results (Volume II): Teachers and school leaders as valued professionals*. TALIS, OECD Publishing. <https://doi.org/10.1787/19cf08df-en>
5. The loan freeze only paused payments and interest rate accruals on the portion of borrowers' loan portfolio that is owned or issued by the Department of Education, which includes Federal Direct Loans as well as the majority of Federal Family Education Loans (FFELs) and Perkins loans. Federal Direct Loans include subsidized and unsubsidized Stafford loans, PLUS loans, and consolidation loans. Private and institutional loans, as well as FFEL and Perkins loans that were not owned by the Department of Education, were not included in the loan freeze. On average, federal student loans account for over 90% of all student loans and over 93% as of the second quarter of fiscal year 2023. See U.S. Department of Education. (n.d.). *Federal student loan portfolio*. <https://studentaid.gov/data-center/student/portfolio> (accessed 10/31/23); Board of Governors of the Federal Reserve System. (n.d.). *Consumer credit outstanding (levels)*. https://www.federalreserve.gov/releases/g19/HIST/cc_hist_memo_levels.html (accessed 10/31/23).
6. During the freeze, the Biden administration also proposed a one-time loan cancellation to offer student loan debt relief, but this was struck down by the U.S. Supreme Court. Additional efforts to cancel student loans are still underway. For more details, see The White House. (2023, June 30). *Fact sheet: President Biden announces new actions to provide debt relief and support for student loan borrowers* [Press release]. <https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/30/fact-sheet-president-biden-announces-new-actions-to-provide-debt-relief-and-support-for-student-loan-borrowers/> (accessed 10/31/23).
7. Board of Governors of the Federal Reserve System. (2023). *Economic well-being of U.S. households in 2022*. <https://www.federalreserve.gov/publications/files/2022-report-economic-well-being-us-households-202305.pdf>; Cameron, M., Johnson, R., Lacy, T. A., Wu, J., Siegel, P., ... Wine, J. (2023). *2019–20 National Postsecondary Student Aid Study (NPSAS:20): First look at student financial aid estimates for 2019–20* [NCES 2023-466]. U.S. Department of Education, National Center for Education Statistics. <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2023466> (accessed 10/31/23).

8. Board of Governors of the Federal Reserve System. (2020). *Report on the economic well-being of U.S. households in 2019, featuring supplemental data from April 2020*. <https://www.federalreserve.gov/publications/files/2019-report-economic-well-being-us-households-202005.pdf>; Allegretto, S. (2023). *Teacher pay penalty still looms large: Trends in teacher wages and compensation through 2022*. Economic Policy Institute. <https://files.epi.org/uploads/274103.pdf>
9. See, for example, Schak, J. O., Wong, N., & Fung, A. (2021). *Student debt and the class of 2020*. The Institute for College Access & Success; Fiddiman, B., Campbell, C., & Partelow, L. (2019). *Student debt: An overlooked barrier to increasing teacher diversity*. Center for American Progress; Hershcopf, M., Puckett Blais, M., Taylor, E. D., & Pelika, S. (2021). *Student loan debt among educators: A national crisis*. National Education Association.
10. Tooley, M. (2023). *National scan of pathways to becoming a first-time teacher*. New America. <https://www.newamerica.org/education-policy/reports/national-scan-of-pathways-to-becoming-a-first-time-teacher/>
11. Responding teachers were sampled from the American Educator Panels and were asked: “Which of the following teacher preparation programs did you complete?” Possible answers included undergraduate programs and postbaccalaureate programs, among other options. See Doan, S., Zuo, G., Steiner, E. D., & Grant, D. (2022). *Learn Together Surveys: 2022 technical documentation and survey results*. RAND Corporation. https://www.rand.org/pubs/research_reports/RR827-9.html
12. Estimates referred to as “Net Cost of Attendance” in the source. Grant aid typically does not need to be repaid; however, some grant aid, such as the federal TEACH grant, has a service commitment tied to the grant, which, if not fulfilled, converts to a loan that will have to be repaid. The average undergraduate costs of tuition, fees, and room and board for full-time students across all types of institutions increased by more than 10% over the past decade (2011–12 to 2021–22) and by more than 50% since 2000–01. Ma, J., & Pender, M. (2022). *Trends in college pricing and student aid 2022 full report*. College Board. <https://research.collegeboard.org/media/pdf/trends-in-college-pricing-student-aid-2022.pdf>; Delisle, J., & Cohn, J. (2022). *Master’s degree debt and earnings*. Urban Institute. <https://www.urban.org/research/publication/masters-degree-debt-and-earnings>; U.S. Department of Education. (2023). Table 330.10. [CORRECTED] Average undergraduate tuition, fees, room, and board rates charged for full-time students in degree-granting postsecondary institutions, by level and control of institution: Selected academic years, 1963–64 through 2021–22. *Digest of Education Statistics*. https://nces.ed.gov/programs/digest/d22/tables/dt22_330.10.asp
13. Amount owed is based on the principal balance (excluding interest) and was calculated only for 4-year bachelor’s degree completers who had outstanding loans. Data include federal and private student loans; see U.S. Department of Education, National Center for Education Statistics. *National postsecondary student aid study: 2020 undergraduate students* (NPSAS:UG). Data can be retrieved on NCES’s DataLab using code lhbxpo.
14. In the sample for this report, which is full-time teachers with a bachelor’s degree or more, 60.7% of teachers had a master’s degree or more (see Table B1); U.S. Department of Education. (2022). Table 209.22. Number and percentage distribution of teachers in public elementary and secondary schools, by instructional level and selected teacher and school characteristics: School years 1999–2000, 2017–18, and 2020–21. *Digest of Education Statistics*. https://nces.ed.gov/programs/digest/d22/tables/dt22_209.22.asp
15. Connecticut and New York are two states that require teachers to complete a graduate degree to advance from their initial or provisional teaching certificate to their professional teaching certificate. Connecticut State Department of Education. (2017). *Important update: Master’s degree requirement*. https://portal.ct.gov/sdecertification/-/media/SDE/Certification/Alerts/certalert_nov2017.pdf (accessed 10/31/23); New York State Education Department. (2023). *Advancing from the initial certificate to the professional certificate*. <https://www.highered.nysed.gov/tcert/certificate/advanceinitprof.html> (accessed 10/31/23); U.S. Department of Education, National Center for Education Statistics, NCES published the First Look report on NTPS in December 2022. *Teachers’ highest degree earned: Percentage distribution of public K–12 school teachers, by highest degree earned and state: 2020–21*. https://nces.ed.gov/surveys/ntps/estable/table/ntps/ntps2021_sft04_t1s
16. National Council on Teacher Quality. (2023). *Custom report. Teacher contract database* [Data set]. <https://www.nctq.org/contract-database/report?reportId=29781007>; Whinnery, E. (2021). *State information request: Teacher starting salary*. Education Commission of the States.
17. Between 1996 and 2016, the average net price for tuition and fees increased by 79% for full-time master’s students, compared to a 47% increase for full-time bachelor’s students. See Delisle, J., & Cohn, J. (2022). *Master’s degree debt and earnings: New federal data expose risks for students and the government*. Urban Institute. <https://www.urban.org/research/publication/masters-degree-debt-and-earnings>

18. Amounts owed are based on the principal balance (excluding interest) and were calculated only for graduate degree completers who had outstanding loans at the level of education indicated. Data include federal and private student loans but exclude Parent PLUS loans. The figure for master's degree holders includes completers of any Master of Education degree, while the figure for any graduate degree includes other higher degrees in education, such as doctorate degrees and postbaccalaureate or post-master's certificates; see U.S. Department of Education, National Center for Education Statistics. *National postsecondary student aid study: 2020 graduate students* (NPSAS:GR). Data can be retrieved on NCES's DataLab using code nixwab.
19. Current research suggests that these programs, when the financial benefit meaningfully offsets the cost of a teacher's preparation, aid in both teacher recruitment and retention. See Podolsky, A., & Kini, T. (2016). *How effective are loan forgiveness and service scholarships for recruiting teachers?* [Policy brief]. Learning Policy Institute; Steele, J., Murnane, R., & Willett, J. (2010). Do financial incentives help low-performing schools attract and keep academically talented teachers? Evidence from California. *Journal of Policy Analysis and Management*, 29(3), 451–478. <https://doi.org/10.1002/pam.20505>
20. For the Teacher Loan Forgiveness program, high-need subjects only include special education and secondary mathematics or science teachers.
21. For example, this includes Delaware and Illinois, which offer educator loan repayment programs in which the state directly pays teachers' student loan providers. Delaware Department of Education. (2023). *Educator loan repayment programs*. <https://education.delaware.gov/families/college-career-life/college-scholarship-financial-aid/financial-supports-for-delaware-educators/educator-loan-repayment-programs/> (accessed 10/31/23); Illinois Student Assistance Commission. (2023). *Illinois Teachers Loan Repayment Program*. <https://www.isac.org/students/after-college/forgiveness-programs/illinois-teachers-and-child-care-providers-loan-repayment-program.html> (accessed 10/31/23)
22. College Board. (2022). *Trends in college pricing and student aid 2022*. <https://research.collegeboard.org/media/pdf/trends-in-college-pricing-student-aid-2022.pdf>
23. National Association of Student Financial Aid Administrators. (2022). *Issue brief: Doubling the Maximum Pell Grant*. https://www.nasfaa.org/issue_brief_double_pell
24. Postsecondary students who are training to become teachers and are enrolled in a postbaccalaureate program that does not lead to a graduate degree, in order to meet state licensure requirements to teach, can receive a Pell Grant for such postbaccalaureate study, so long as the institution of higher education does not offer a baccalaureate program in education. See Higher Education Act, P.L. 89–329, § 401(c)(1). Heniff, B., Jr., Rybicki, E., & S. M. Mahan. (2011). *The Budget Control Act of 2011*. Congressional Research Service. <https://sgp.fas.org/crs/misc/R41965.pdf>
25. Jacob, B., Jones, D., & Keys, B. J. (2023). *The value of student debt relief and the role of administrative barriers: Evidence from the Teacher Loan Forgiveness Program* [NBER Working Paper No. w31359]. National Bureau of Economic Research. <https://doi.org/10.3386/w31359>
26. Rothstein, J., & Rouse, C. E. (2011). Constrained after college: Student loans and early-career occupational choices. *Journal of Public Economics*, 95(1–2), 149–163. <https://doi.org/10.1016/j.jpubeco.2010.09.015>; Chapman, B., & Lounkaew, K. (2015). An analysis of Stafford loan repayment burdens. *Economics of Education Review*, 45, 89–102. <https://doi.org/10.1016/j.econedurev.2014.11.003>; Paulsen, R. J. (2023). Student loan debt and the career choices of college graduates with majors in the arts. *Journal of Cultural Economics*, 1–21. <https://doi.org/10.1007/s10824-023-09474-x>
27. Baum, S., & O'Malley, M. (2003). College on credit: How borrowers perceive their education debt. *Journal of Student Financial Aid*, 33(3), 7–19. <https://doi.org/10.55504/0884-9153.1068>; Horn, C., Burnett, C., Lowery, S., & White, C. (2021). *Texas teacher workforce report*. University of Houston College of Education; Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* Consortium for Policy Research in Education; La Torre, D., Leon, S., Ong, C., Sloan, T., & Smith, T. (2021). *Diversifying California's teaching force: How teachers enter the classroom, who they serve, and if they stay*. University of California: California Teacher Education Research and Improvement Network. <https://cterin.ucop.edu/resources/cterin-briefs/policy-briefs/policy-brief-vol1no1-diversifying-ca-teaching-force.html>
28. Borrowers who reported that they did not take out any loans may still have benefited from non-loan financial assistance, including institutional, state, and federal need-based grants or merit-based scholarships.

29. Data from National Postsecondary Student Aid Study. This data source only includes students who just completed their bachelor's or master's degree in that year and does not account for employment after degree completion, whereas the data for teachers represent the borrowing status of all teachers, regardless of their age and when they accrued the debt; see U.S. Department of Education, National Center for Education Statistics, *National Postsecondary Student Aid Study: 2020 Undergraduate Students* (NPSAS:UG); U.S. Department of Education, National Center for Education Statistics. *National Postsecondary Student Aid Study: 2020 Graduate Students* (NPSAS:GR). Data can be retrieved on NCES's DataLab using codes uilktf and zvphtk.
30. This information is provided for context purposes; not all education majors end up pursuing a teaching career, and not all teachers enter the profession after completing an education major.
31. With the end of the repayment pause, the Biden administration announced a temporary on-ramp period through September 30, 2024, for all borrowers, which, as it pertains to this report, includes both teachers who have had repayments paused and new teachers who are starting repayments for the first time because they completed their degree during the moratorium. During this period, borrowers are protected from having a delinquency reported to credit reporting agencies. For more information, see U.S. Department of Education. (n.d.). *Prepare for student loan repayments to restart*. <https://studentaid.gov/manage-loans/repayment/prepare-payments-restart> (accessed 10/31/23).
32. Teachers who reported making monthly repayments of \$0 are excluded from this analysis. Data for the survey were collected from October 2020 to August 2021, after the moratorium on student loan repayments went into effect; as such, teachers could have reported making \$0 monthly payments, and these amounts could thereby bias the estimates. See the Technical Appendix (Appendix B) for more details. The median monthly repayment amount is \$280, which is approximately 5.9% of the median base salary of teachers, suggesting some positive skewness and that there are some teachers who pay particularly high amounts toward their loan balance every month. In fact, more than 3% of survey respondents report paying \$1,000 or more per month, and at the 99th percentile, teachers report paying around \$1,300 per month toward their loan balance; Board of Governors of the Federal Reserve System. (2020). *Report on the economic well-being of U.S. households in 2019 – May 2020*. <https://www.federalreserve.gov/publications/2020-economic-well-being-of-us-households-in-2019-student-loans-other-education-debt.htm>
33. Depending on a teacher's contract, they may not be paid during all 12 months of the year; many teachers are not paid over the summer break. These proportions of monthly repayments to base salaries are calculated under a model that assumes that teachers are paid in regular increments over 12 months to net out the effects of variable income between the school year and summer vacation. See more details in the Technical Appendix (Appendix B).
34. The average salary for other college graduates is \$70,780, calculated using American Community Survey 2016–2020 5-Year Data for individuals with bachelor's degree or more, ages 22–64. "Other college graduates" are all other individuals with a college degree or more (in any industry and sector) and exclude teachers. Public school teachers are "elementary, middle, secondary, and special education" in industry "elementary and secondary schools" and worker class "federal, state, and local government employee." Yearly income from wages and salaries, in 2020 dollars, adjusted for state cost of living using Bureau of Economic Analysis for State Regional Price Parities (average 2016–20). To calculate the 6% statistic, teachers' average monthly repayment amount is divided by this average salary. See Carver-Thomas, D., Leung-Gagné, M., & García, E. (Forthcoming). *The state of teacher diversity*. Learning Policy Institute. The calculation of 6% is obtained from dividing \$342 by (\$70,780/12). Alternatively, adjusting 7.6% by the wage penalty also yields the same share. See Allegretto, S. (2023). *Teacher pay penalty still looms large: Trends in teacher wages and compensation through 2022*. Economic Policy Institute. <https://files.epi.org/uploads/274103.pdf>. We also note that for master's degree holders in teaching, the debt-to-earnings ratio is in line with other master's degree holders. For more information, see Delisle, J., & Cohn, J. (2022). *Master's degree debt and earnings: New federal data expose risks for students and the government*. Urban Institute.
35. Results for groups not reported in the report are available upon request. Although school characteristics, including a school's urbanicity and the percentage of its students who qualify for free or reduced-priced lunch, might not necessarily be associated with student loan borrowing or repayment, some teachers might be incentivized to teach in certain schools given the requirements of some financial supports for them. For example, the TEACH grant requires teachers to serve in a school that is labeled as low income in order to meet their service obligation.
36. Age and experience are highly correlated; however, they are not perfectly correlated. This might be because some teachers may temporarily leave teaching to pursue an advanced degree, leave for personal reasons, or enter the profession as a second career, among other reasons.

37. Starting salaries are, on average, less than \$43,000 annually. National Education Association. (2023). *NEA 2021–2022 teacher salary benchmark report: Collective Bargaining and Member Advocacy Department*. https://www.nea.org/sites/default/files/2023-04/2021-2022-teacher-salary-benchmark-report_0.pdf; Learning Policy Institute. (2023). *The state of the teacher workforce: A state-by-state analysis of the factors influencing teacher shortages, supply, demand, and equity* [Interactive map]. <https://learningpolicyinstitute.org/product/state-of-teacher-workforce-interactive>
38. This pattern holds among teachers who only have a bachelor's degree, indicating that the general increase in the number of teachers who have borrowed over time is not only driven by more teachers holding graduate degrees.
39. Furthermore, there are many reasons why experienced teachers may carry loans, including a lack of awareness of eligibility, administrative hurdles that prevent teachers from benefiting from loan cancellation programs (e.g., lack of information about TLF and PSLF, incorrect certification of loan forgiveness), default, delinquency, career (e.g., pursue additional degrees), or personal reasons (e.g., borrowing for their children, personal preferences and circumstances). See, for example, La Gorce, T. (2020, November 18). Retired, or hoping to be, and saddled with student loans. *New York Times*. <https://www.nytimes.com/2020/02/26/business/retirement-student-loan-debt.html> (accessed 10/31/23).
40. TLF was created through the Higher Education Amendments of 1998, while PSLF was created through the College Cost Reduction and Access Act of 2007. There are still significant shares of teachers holding only a bachelor's degree who owe some or all of their balances, so while it is possible that teachers could have gone back to obtain a master's degree after they started teaching and may carry additional student loan debt, these findings suggest that improvements to loan forgiveness and service scholarship programs are warranted.
41. The Department of Education made a one-time adjustment of income-driven repayment (IDR) that temporarily modified borrowers' progress toward loan forgiveness. For borrowers who choose to consolidate before the end of 2023, any IDR payments made before consolidation would count toward IDR forgiveness, and any qualifying PSLF payments made before consolidation would count as well. For more information, see <https://studentaid.gov/announcements-events/idr-account-adjustment>
42. The Department of Education has had to issue corrections to ensure the proper administration of the TEACH grant, including a set of regulations in 2020 to correct the erroneous conversions of these grants into unsubsidized Federal Direct Loans, which incorrectly added loan balances to teachers and teacher candidates who were not required to repay this subsidy. Actions taken to address these administrative issues include the Consider Teachers Act of 2021 and the Department of Education's Temporary Expansion of the PSLF. 34 CFR Parts 600, 674 et al. 85 Fed. Reg. 49798 (August 14, 2020). For issues and fixes to PSLF, see Government Accountability Office. (2018). *Public Service Loan Forgiveness: Education needs to provide better information for the loan servicer and borrowers* [GAO Publication No. 18-547]; U.S. Department of Education (2022, October 25). *Education Department announces permanent improvements to the Public Service Loan Forgiveness program and one-time payment count adjustment to bring borrowers closer to forgiveness* [Press release]. <https://www.ed.gov/news/press-releases/education-department-announces-permanent-improvements-public-service-loan-forgiveness-program-and-one-time-payment-count-adjustment-bring-borrowers-closer-forgiveness> (accessed 10/31/23).
43. In the sample used for the current analyses, the share of special education teachers with more than a bachelor's degree is larger than the average and larger than in most other fields of main teaching assignment. Additional breakdowns showed that special education teachers' mean age is not statistically significantly different from the sample mean. Results available upon request.
44. To be sure, teachers who are in other subjects, such as those in general elementary settings, may also teach selected groups of students in enrichment classes or in pull-out settings. These survey results apply only to those whose primary or main assignments are in special education classrooms.
45. Additionally, a larger share of Black teachers have advanced degrees, with a larger share of Black teachers holding a master's degree or higher compared to the mean across all teachers (65.4% compared to 60.7%). Regardless of educational attainment, however, they are also more likely to borrow and be in repayment.
46. Hanks, A., Solomon, D., & Weller, C. E. (2018). *Systemic inequality: How America's structural racism helped create the black-white wealth gap*. Center for American Progress; Kakar, V., Daniels G. E., Jr., & Petrovska, O. (2019). Does student loan debt contribute to racial wealth gaps? A decomposition analysis. *Journal of Consumer Affairs*, 53(4), 1920–1947. <https://doi.org/10.1111/joca.12271>; Scott-Clayton, J., & Li, J. (2016). *Black-white disparity in student loan debt more than triples after graduation*. Brookings Institution; Nilaj, E., Pinto, S., Steinbaum, M., & Beamer, L. (2023). *The repayment pause and the continuing crisis of non-repayment*. Jain Family Institute.

47. Neelakantan, U. (2023). *Black-white differences in student loan default rates among college graduates*. Federal Reserve Bank of Richmond [Economic brief No. 23-12]. https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-12
48. Baker, D. J. (2021). *Race, racism, and student loans*. U.S. Department of Education, Affordability and Student Loans Committee, as part of the Negotiated Rulemaking for Higher Education 2021–22. <https://www2.ed.gov/policy/highered/reg/hearulemaking/2021/raceandloans.pdf>; Bama, C., & Constantine, L. (2022). *'Paying from the grave': Historically Black colleges and universities (HBCU) alumni and the burden of student loan debt*. Center for Responsible Lending. <https://www.responsiblelending.org/sites/default/files/nodes/files/research-publication/crl-hbcu-paying-from-grave-nov2022.pdf>
49. For example, the degree of loan-related stress complements the evidence that shows that the levels of occupation stress, such as burnout and emotional exhaustion, are high for teachers—a pattern that the COVID-19 pandemic exacerbated. Similarly, the information on loans-related decisions to take multiple jobs builds on the evidence that a significant number of teachers take second jobs, which could be the result of a variety of factors, including pursuing professional advancement opportunities in school, covering for staff shortages, pursuing personal interests, and addressing economic needs. For reference, 17.1% of all National Teacher and Principal Survey 2020–21 respondents reported earning additional compensation from working a job outside of the school system during the school year. See Learning Policy Institute. (2023). *The state of the teacher workforce: A state-by-state analysis of the factors influencing teacher shortages, supply, demand, and equity* [Interactive map]. <https://learningpolicyinstitute.org/product/state-of-teacher-workforce-interactive>; Steiner, E. D., Doan, S., Woo, A., Gittens, A. D., Lawrence, R. A., ... Schwartz, H. L. (2022). *Restoring teacher and principal well-being is an essential step for rebuilding schools*. RAND Corporation; Darling-Hammond, L., DiNapoli, M. A., Jr., & Kini, T. (2023). *The federal role in ending teacher shortages*. Learning Policy Institute. <https://doi.org/10.54300/649.892>; Partnership for the Future of Learning. (2021). *The teaching profession playbook*; García, E., Han, E., & Weiss, E. (2022). Determinants of teacher attrition: Evidence from district–teacher matched data. *Education Policy Analysis Archives*, 30(25). <https://doi.org/10.14507/epaa.30.6642>
50. The research on teachers having multiple jobs and the ramifications for both student and teacher outcomes is mainly focused on the consequences of working multiple jobs during the school year and doing so for reasons unrelated to career advancement. For instance, teachers who work multiple jobs may have less time to plan lessons, give feedback on student work, and connect with their students' families, which can affect their attrition and effectiveness, as well as student learning. In addition, reduced time, among other factors, influences a teacher's level of job-related stress, which can also adversely impact student stress and outcomes and similarly lead to higher attrition. For research on the relationship between working multiple jobs and attrition, see García, E., & Weiss, E. (2020). *A policy agenda to address the teacher shortage in U.S. public schools: The sixth and final report in the 'Perfect Storm in the Teacher Labor Market' series*. Economic Policy Institute. <https://www.epi.org/publication/a-policy-agenda-to-address-the-teacher-shortage-in-u-s-public-schools/>. For research on the relationship between teacher stress and student outcomes, see Herman, K. C., Hickmon-Rosa, J. E., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90–100. <https://doi.org/10.1177/1098300717732066>; Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional skills vital to learning. *Phi Delta Kappan*, 94(8), 62–65. <https://doi.org/10.1177/003172171309400815>
51. The largest shares of teachers who reported having worked multiple jobs at the same time are found among teachers who identified as Black, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, and two or more races; teachers ages 18–35; and teachers in health, foreign language, and special education. The lowest proportions of teachers who ever worked multiple jobs simultaneously are among Asian teachers and teachers ages 61 and over. Results for all subgroups are available upon request from authors.
52. The responses to this variable need to be interpreted with caution, as individuals may assess or reveal stress levels differently depending on their own characteristics, their cultural background, or their school characteristics, among other factors.
53. For example, among subgroups, Black teachers (71.6%), other groups of teachers of color (including those who identified as Native Hawaiian or other Pacific Islander, American Indian or Alaska Native), teachers of English as a second language or bilingual education, teachers who were 61 years of age and older, and teachers with a master's degree or higher reported high or very high levels of stress due to student loans. In contrast, the proportion of Asian teachers (the least likely group of teachers among all racial and ethnic groups of teachers to have taken out loans) and teachers with more than 31 years of experience (who may have repaid these loans to a greater extent) who reported high levels of student loan–related stress were smaller than the average share. Results for all the subgroups are available upon request from authors.

54. García, E., Han, E., & Weiss, E. (2022). Determinants of teacher attrition: Evidence from district–teacher matched data. *Education Policy Analysis Archives*, 30(25). <https://doi.org/10.14507/epaa.30.6642>
55. As of the second quarter of fiscal year 2023, the Department of Education holds \$1.645 trillion of \$1.766 trillion, or over 93%, of outstanding student loan balances. U.S. Department of Education. (n.d.). *Federal student loan portfolio*. <https://studentaid.gov/data-center/student/portfolio> (accessed 10/31/23); Board of Governors for the Federal Reserve System. (2023, August 7). *Consumer credit outstanding (levels)*. https://www.federalreserve.gov/releases/g19/HIST/cc_hist_memo_levels.html (accessed 10/31/23).
56. “Teachers of color” as used in this sentence refers to teachers who are often under-resourced, which, as it pertains to the racial and ethnic groups in this study, include teachers who identify as American Indian or Alaska Native, Black, Hispanic, Native Hawaiian or other Pacific Islander, and two or more races. For more information on the differences between teachers of color and under-resourced teachers of color, see Carver-Thomas, D., Leung-Gagné, M., & García, E. (Forthcoming). *The state of teacher diversity* (Working title). Learning Policy Institute. See also Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Learning Policy Institute. <https://doi.org/10.54300/559.310>; Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it*. Learning Policy Institute. <https://doi.org/10.54300/454.278>; Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534. <https://doi.org/10.3102/00028312038003499>
57. Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, 41(3), 681–714. <https://doi.org/10.3102/00028312041003681>; McLeskey, J., Tyler, N. C., & Saunders Flippin, S. (2004). The supply of and demand for special education teachers: A review of research regarding the chronic shortage of special education teachers. *Journal of Special Education*, 38(1), 5–21. <https://doi.org/10.1177/00224669040380010201>; U.S. Department of Education, National Center for Education Statistics. (2009). Table 204.30: Children 3 to 21 years old served under Individuals with Disabilities Education Act (IDEA), Part B, by type of disability: Selected school years, 1976–77 through 2021–22. In U.S. Department of Education, National Center for Education Statistics (Ed.), *Digest of Education Statistics* (2022 ed.). https://nces.ed.gov/programs/digest/d22/tables/dt22_204.30.asp (accessed 10/31/23); National Center for Education Statistics. (2022). *Public and private schools reported difficulty filling teacher vacancies during the first full year of the COVID-19 pandemic*. https://nces.ed.gov/whatsnew/press_releases/12_13_2022.asp (accessed 10/31/23).
58. Podolsky, A., & Kini, T. (2016). *How effective are loan forgiveness and service scholarships for recruiting teachers?* [Policy brief]. Learning Policy Institute; Steele, J., Murnane, R., & Willett, J. (2010). Do financial incentives help low-performing schools attract and keep academically talented teachers? Evidence from California. *Journal of Policy Analysis and Management*, 29(3), 451–478. <https://doi.org/10.1002/pam.20505>
59. Adamson, F., & Darling-Hammond, L. (2011). *Speaking of salaries: What it will take to get qualified, effective teachers in all communities*. Center for American Progress. <https://eric.ed.gov/?id=ED536080>
60. One recent approach to making student loans less strenuous for borrowers is the Saving on a Valuable Education (SAVE) plan, which was announced by the Biden administration in August 2023, and makes updates to previous income-driven repayment plans. See The White House (2023, August 22). *Fact sheet: The Biden-Harris administration launches the SAVE plan, the most affordable student loan repayment plan ever to lower monthly payments for millions of borrowers* [Press release]. <https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/22/fact-sheet-the-biden-harris-administration-launches-the-save-plan-the-most-affordable-student-loan-repayment-plan-ever-to-lower-monthly-payments-for-millions-of-borrowers/>
61. This can be accomplished through congressional action, such as the Loan Forgiveness for Educators Act, as well as executive action by the U.S. Department of Education. For more details, see Loan Forgiveness for Educators Act of 2022. S. 963. 118th Congr. (2023). <https://www.congress.gov/bill/118th-congress/senate-bill/963>; Darling-Hammond, L., DiNapoli, M. A., Jr., & Kini, T. (2023). *The federal role in ending teacher shortages*. Learning Policy Institute. <https://doi.org/10.54300/649.892>
62. Instead, the program has been cut annually due to automatic spending cuts required by the Budget Control Act of 2011.
63. Darling-Hammond, L., DiNapoli, M., Jr., & Kini, T. (2023). *The federal role in ending teacher shortages*. Learning Policy Institute. <https://doi.org/10.54300/649.892>

64. Delaware Department of Education. (2023). *Educator loan repayment programs*. <https://education.delaware.gov/families/college-career-life/college-scholarship-financial-aid/financial-supports-for-delaware-educators/educator-loan-repayment-programs/> (accessed 10/31/23); Illinois Student Assistance Commission. (2023). *Illinois Teachers Loan Repayment Program*. <https://www.isac.org/students/after-college/forgiveness-programs/illinois-teachers-and-child-care-providers-loan-repayment-program.html> (accessed 10/31/23).
65. California Student Aid Commission. (2023). *Golden State Teacher Grant Program*. <https://gstg.csac.ca.gov/> (accessed 10/31/23).
66. North Carolina Teaching Fellows. (2023). *Program benefits*. <https://myapps.northcarolina.edu/ncteachingfellows/about/> (accessed 10/31/23).
67. Podolsky, A., & Kini, T. (2016). *How effective are loan forgiveness and service scholarships for recruiting teachers?* [Policy brief]. Learning Policy Institute.
68. The Department of Education has had to issue corrections to ensure the proper administration of the TEACH grant, including a set of regulations in 2020 to correct the erroneous conversions of these grants into unsubsidized Federal Direct Loans, which incorrectly added loan balances to teachers and teacher candidates who were not required to repay this subsidy. Some actions to address these administrative issues include the Consider Teachers Act of 2021 and the Department of Education's Temporary Expansion of the PSLF. 34 CFR Parts 600, 674 et al. 85 Fed. Reg. 49798 (August 14, 2020). For issues and fixes to PSLF, see Government Accountability Office. (2018). *Public Service Loan Forgiveness: Education needs to provide better information for the loan servicer and borrowers* [GAO Publication No. 18-547]; U.S. Department of Education. (2022, October 25). *Education Department announces permanent improvements to the Public Service Loan Forgiveness program and one-time payment count adjustment to bring borrowers closer to forgiveness* [Press release]. <https://www.ed.gov/news/press-releases/education-department-announces-permanent-improvements-public-service-loan-forgiveness-program-and-one-time-payment-count-adjustment-bring-borrowers-closer-forgiveness> (accessed 10/31/23).
69. Horn, C., Burnett, C., Lowery, S., & White, C. (2021). *Texas teacher workforce report*. University of Houston College of Education; Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* Consortium for Policy Research in Education; La Torre, D., Leon, S. Ong, C., Sloan, T., & Smith, T. (2021). *Diversifying California's teaching force: How teachers enter the classroom, who they serve, and if they stay*. University of California: California Teacher Education Research and Improvement Network. <https://cterin.ucop.edu/resources/cterin-briefs/policy-briefs/policy-brief-vol1no1-diversifying-ca-teaching-force.html>
70. Teacher apprenticeship models have also emerged as a possible pathway to offer an affordable route to preparation, but more research is needed to assess their effectiveness. See U.S. Department of Education. (2023, July 27). *Education, Labor Departments announce new efforts to advance teacher preparation programs and expand registered apprenticeships for educators* [Press release]. <https://www.ed.gov/news/press-releases/education-labor-departments-announce-new-efforts-to-advance-teacher-preparation-programs-and-expand-registered-apprenticeships-educators> (accessed 10/31/23). For research on teacher residencies, see Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers*. Learning Policy Institute.
71. Papay, J. P., West, M. R., Fullerton, J. B., & Kane, T. J. (2012). Does an urban teacher residency increase student achievement? Early evidence from Boston. *Educational Evaluation and Policy Analysis*, 34(4), 413–434. <https://doi.org/10.3102/O162373712454328>
72. Azar, T., Hines, E., & Scheib, C. (2020). *Teacher residencies as a vehicle to recruit teachers of color*. National Center for Teacher Residencies. In addition, some funding streams can also be used to support Grow Your Own programs and residencies; see American Institutes for Research, Center on Great Teachers and Leaders. (2023). *A funding guide for supporting a Registered Teacher Apprenticeship Program with federal and state funds*.
73. DiNapoli, M. A., Jr. (2022, February 28). The federal role in tackling teacher shortages [Blog post]. *Learning Policy Institute*. <https://learningpolicyinstitute.org/blog/federal-role-tackling-teacher-shortages>; *Tackling teacher shortages, U.S. House Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies*, 117th Congr. (2022) (testimony of Desiree Carver-Thomas). <https://docs.house.gov/meetings/AP/AP07/20220525/114831/HHRG-117-AP07-Wstate-Carver-ThomasD-20220525.pdf>
74. There is also evidence that higher teacher salaries are correlated with increased student performance at the district level. See García, E., & Han, E. S. (2022). Teachers' base salary and districts' academic performance: Evidence from national data. *SAGE Open*, 12(1). <https://doi.org/10.1177/21582440221082138>

75. Sherratt, E., Lachlan, L., & Alavi, K. (2023). *Raising the bar on teacher pay*. Center on Great Teachers and Leaders at AIR & the Teacher Salary Project. https://www.air.org/sites/default/files/2023-05/Raising_the_Bar_on_Teacher_Pay.pdf; Maryland General Assembly. HB 0448. 445th Regular Session (2023). <https://mgaleg.maryland.gov/mgaweb/Legislation/Details/hb0448?ys=2023rs>; New Mexico Legislature. SB 1. Regular Session, 55th Legislature (2022). <https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=1&year=22>; Tennessee General Assembly. SB 0281. Regular Session, 113th General Assembly (2023). <https://wapp.capitol.tn.gov/apps/BillInfo/Default.aspx?BillNumber=SB0281&ga=113>
76. Adamson, F., & Darling-Hammond, L. (2011). *Speaking of salaries: What it will take to get qualified, effective teachers in all communities*. Center for American Progress. <https://eric.ed.gov/?id=ED536080>; Darling-Hammond, L., DiNapoli, M. A., Jr., & Kini, T. (2023). *The federal role in ending teacher shortages*. Learning Policy Institute. <https://doi.org/10.54300/649.892>; Benner, M., Roth, E., Johnson, S., & Bahn, K. (2018). *How to give teachers a \$10,000 raise*. Center for American Progress.
77. Partnership for the Future of Learning. (2021). Competitive and equitable compensation. In *Teaching profession playbook*. <https://www.teachingplaybook.org/digital/chapter-5-compensation>
78. The term “high-need, advanced credentials” refers to advanced credentials in high-need subject areas.
79. Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it*. Learning Policy Institute. <https://doi.org/10.54300/454.278>
80. These investments, which can reach teachers who are pursuing high-need, advanced credentials outside of institutions of higher education, could be coupled with other federal financial supports, such as the TEACH Grant, which can only be used for credentials awarded by an institution of higher education.
81. See, for example, Jang, S. T., & Horn, A. S. (2017). *The effectiveness of the National Board for Professional Teaching Standards (NBPTS) certification program*. Midwestern Higher Education Compact. https://www.mhec.org/sites/default/files/resources/teacherprep3_20170301_0.pdf; Goldhaber, D., & Anthony, E. (2007). Can teacher quality be effectively assessed? National Board Certification as a signal of effective teaching. *Review of Economics and Statistics*, 89(1), 134–150. <https://doi.org/10.1162/rest.89.1.134>; Cowan, J., & Goldhaber, D. (2016). National Board Certification and teacher effectiveness: Evidence from Washington state. *Journal of Research on Educational Effectiveness*, 9(3), 233–258. <https://doi.org/10.1080/19345747.2015.1099768>
82. National Board for Professional Teaching Standards. (2021). *State financial incentives for National Board Certification*. <https://www.nbpts.org/wp-content/uploads/2021/03/State-Incentives-Chart.pdf> (accessed 10/31/23).
83. National Board for Professional Teaching Standards. (2022). *Policy change for certification requirements*. <https://www.nbpts.org/certification/policy-change-for-certification-requirements/> (accessed 10/31/23).
84. National Center for Education Statistics. (n.d.). *National Teacher and Principal Survey*. <https://nces.ed.gov/surveys/ntps/> (accessed 10/31/23).
85. For more details on the survey, refer to *NCES Handbook of Survey Methods, National Teacher and Principal Survey (NTPS)*, <https://nces.ed.gov/StatProg/handbook/pdf/ntps.pdf>, and to the NCES NTPS website, <https://nces.ed.gov/surveys/ntps/>.
86. Learning Policy Institute. (2023). *The state of the teacher workforce: A state-by-state analysis of the factors influencing teacher shortages, supply, demand, and equity* [Interactive map]. <https://learningpolicyinstitute.org/product/state-of-teacher-workforce-interactive>
87. The survey also asks a similar question regarding “whether your student loan debt has influenced your employment plans and decisions in any of the following ways: Take a less desirable job because of your student loan debt?” This variable is excluded from the analysis due to difficulty in its interpretation: That job could have been taken at any time during teachers’ preparation, their early careers, or their overall career as teachers, and it could even include their current appointments.
88. About 10% of respondents skip the questions about the month and year of survey completion, but for the remaining respondents, about 10% completed the survey in 2020, and the rest completed it in 2021.
89. For details on the timeline of the freeze extensions, see Custer, B. D., & Azoulay, E. (2022). *Timeline: Federal student loans during the COVID-19 pandemic*. Center for American Progress. <https://www.americanprogress.org/article/timeline-federal-student-loans-during-the-covid-19-pandemic/> (accessed 10/31/23).
90. Hershcopf, M., Puckett Blais, M., Taylor, E. D., & Pelika, S. (2021). *Student loan debt among educators: A national crisis*. National Education Association. <https://www.nea.org/sites/default/files/2021-07/Student%20Loan%20Debt%20among%20Educators.pdf>

About the Authors

Emma García is a Principal Researcher at the Learning Policy Institute (LPI). She works with the Early Childhood Education, Educator Quality, and Equitable Resources and Access teams. She has extensive research experience in the fields of economics of education, education policy, and quantitative methods, having held multiple research and consulting positions at various national and international institutions. She also serves as an adjunct professor at Georgetown University's McCourt School of Public Policy. García received a PhD in Economics and Education from Teachers College, Columbia University; an MA in Quantitative Methods in the Social Sciences from Columbia University; and a BA in Economics from Pompeu Fabra University.

Wesley Wei is a Research and Policy Associate at LPI. His research centers on improving educator quality and bolstering the teaching pipeline through quantitative analyses of national administrative data and qualitative case studies. He is also a member of the Federal Policy team, where he focuses on improving equitable access and affordability in the teaching profession. Prior to joining LPI, he worked as a graduate research assistant at Vanderbilt Law School and as a consultant to Jefferson County Public Schools in Kentucky. Wei holds an MPP in Education Policy from Vanderbilt University and a BS with highest honors in Human and Organizational Development from Vanderbilt University.

Susan Kemper Patrick is a Senior Researcher at LPI who serves on the Educator Quality team. After working in schools as a middle school teacher and volunteer coordinator, she now researches inequities in the learning opportunities available to both students and their teachers. In her work, she uses both qualitative and quantitative methods to better capture and understand the experiences of educators and the implementation of policies meant to support their development. Prior to joining LPI, she served as a postdoctoral researcher for the Tennessee Education Research Alliance, a research–practice partnership between the Tennessee Department of Education and Vanderbilt University. She received a PhD in Educational Leadership in Policy from Vanderbilt University; an MEd in Learning, Diversity, and Urban Studies from Vanderbilt University; and a BA in African and African American Studies from Duke University.

Melanie Leung-Gagné is a Researcher at LPI. She is a quantitative researcher focused on school discipline and the educator workforce. Her analyses combine complex survey data sets to identify high-leverage opportunities for federal and state policy interventions that will improve education quality and equity. Her specific issue areas include discipline disparities, school climate, teacher shortages, teacher diversity, principal professional learning, and curricular access. Prior to joining LPI, she worked as an education journalist in Hong Kong and as an education researcher in India and the United Arab Emirates. She was also an English and music teacher at an elementary school for migrant workers' children in mainland China. Leung-Gagné holds an MA in International Education Policy Analysis from Stanford University and a BSc in Journalism and Communication from the Chinese University of Hong Kong.

Michael A. DiNapoli Jr. serves as Deputy Director of Federal Policy for LPI. During his nearly 8 years on Capitol Hill, he worked on education policy for two members of the Senate Health, Education, Labor, and Pensions (HELP) Committee, Senators Bernie Sanders and Tammy Baldwin. DiNapoli served as the lead education staffer for Sen. Sanders in his role as Ranking Member of the Senate Budget Committee and as a senior member of the Senate HELP Committee. He began his career as a classroom teacher in New York City and later served as the Director of City and Federal Legislative Affairs for the city's Department of Education.



1530 Page Mill Road, Suite 250
Palo Alto, CA 94304
p: 650.332.9797

1100 17th Street, NW, Suite 200
Washington, DC 20036
p: 202.830.0079

[@LPI_Learning](#) | learningpolicyinstitute.org

The Learning Policy Institute conducts and communicates independent, high-quality research to improve education policy and practice. Working with policymakers, researchers, educators, community groups, and others, the Institute seeks to advance evidence-based policies that support empowering and equitable learning for each and every child. Nonprofit and nonpartisan, the Institute connects policymakers and stakeholders at the local, state, and federal levels with the evidence, ideas, and actions needed to strengthen the education system from preschool through college and career readiness.