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The Inequitable Effects of Teacher Layoffs: What We Know and Can Do

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Economic downturns can cause major funding shortfalls for U.S. public schools, often forcing districts to make difficult budget cuts including teacher layoffs. In this brief, we synthesize the empirical literature on the widespread teacher layoffs caused by the Great Recession. Studies find that teacher layoffs harmed student achievement and were inequitably distributed across schools, teachers, and students. Research suggests that specific elements of the layoff process can exacerbate these negative effects. Seniority-based policies disproportionately concentrate layoffs among teachers of color who are more likely to be early career teachers. These "last-in first-out" policies also disproportionately affect disadvantaged students because these students are more likely to be taught by early career teachers. The common practice of widely distributing pink slips warning about a potential job loss also appears to increase teacher churn and negatively impact teacher performance. Drawing on this evidence, we outline a set of policy recommendations to minimize the need for teacher layoffs during economic downturns and ensure that the burden of any unavoidable job cuts does not continue to be borne by students of color and students from low-income backgrounds.

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Abstract

Economic downturns can cause major funding shortfalls for U.S. public schools, often forcing districts to make difficult budget cuts including teacher layoffs. In this brief, we synthesize the empirical literature on the widespread teacher layoffs caused by the Great Recession. Studies find that teacher layoffs harmed student achievement and were inequitably distributed across schools, teachers, and students. Research suggests that specific elements of the layoff process can exacerbate these negative effects. Seniority-based policies disproportionately concentrate layoffs among teachers of color who are more likely to be early career teachers. These "last-in first-out" policies also disproportionately affect disadvantaged students because these students are more likely to be taught by early career teachers. The common practice of widely distributing pink slips warning about a potential job loss also appears to increase teacher churn and negatively impact teacher performance. Drawing on this evidence, we outline a set of policy recommendations to minimize the need for teacher layoffs during economic downturns and ensure that the burden of any unavoidable job cuts does not continue to be borne by students of color and students from low-income backgrounds.

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Economic booms and busts are an unavoidable feature of the U.S. economy. When recessions occur, the consequences for public school funding can be devastating. Spending on K-12 education makes up approximately one-fourth of states' total budgets with states providing, on average, 47 cents per dollar of total K-12 funding (Urban Instiute 2021). Budget shortfalls invariably force districts to make difficult decisions about the necessity of teacher layoffs given that instructional salaries and benefits constitute over 60% of total operational expenditures (Jackson, Wigger, and Xiong 2021).

Most recently, the immediate economic fallout from the COVID-19 pandemic led school districts to lay off over 445,000 employees in a single month, with early job losses largely concentrated among specialized instructional support personnel and service workers (Gould 2020). Most districts were able to avoid what analysts projected to be large-scale teacher layoffs (McNichol and Leachman 2020) thanks to unexpectedly strong state tax receipts and the influx of unprecedented federal aid from the Coronavirus Aid, Relief, and Economic Security (CARES) Act and the American Rescue Plan (ARP) Act. However, teacher layoff policy remains as salient as ever given the budget shortfalls that some districts still face today due to declining enrollment (Anderson 2021), the coming funding cliff when federal aid is exhausted, and the ever-present prospect of future economic downturns.

In this brief, we synthesize the empirical literature on teacher layoffs with particular attention to the consequences of layoffs for education equity. We then outline policy recommendations for minimizing layoffs and ensuring the burden of any unavoidable job cuts is not born disproportionately by students of color and students from low-income backgrounds.

Lessons from the Great Recession

The Great Recession and its consequences for K-12 education provide a sobering case study about the repercussions of teacher layoffs. The K-12 public education system lost nearly

350,000 jobs between 2008 and 2012, including over 120,000 elementary and secondary teachers (Evans, Schwab, and Wagner 2019; Griffith 2020). Several studies now show that the education funding cuts caused by the Great Recession harmed student achievement and increased educational inequality. Jackson, Wigger, and Xiong (2021) leverage differences in states' historical reliance on state-level funding to estimate the causal effect of recessionary funding cuts. They find that for every $1,000 decrease in per-pupil spending induced by the Great Recession, student achievement declined by 0.04 standard deviations (SD) and college-going rates fell by 1.2 percentage points. These negative effects were larger for Black students, increasing the Black-white test score gap by 0.06 SD per every $1,000 decrease. Shores and Steinberg (2019) exploit differences in the exposure and intensity of recessionary cuts and also find a clear relationship between larger cuts and decreased achievement. Their analyses illustrate that more severe spending cuts caused by the Great Recession decreased math scores 0.06 SD more among districts with high concentrations of Black students and 0.08 SD more among high-poverty districts compared to districts that served more white and affluent student populations (4^{th} vs. 1^{st} quartiles).

While it is difficult to isolate the degree to which layoffs directly contributed to recession-induced declines in achievement, there are strong reasons to suspect they played at least some role. Jackson, Wigger, and Xiong (2021) find that for every dollar in spending cuts during the Great Recession, districts reduced instructional spending (i.e., teacher salaries and benefits) by $0.45, on average. Substantial declines in instructional expenditures are nearly impossible without reductions-in-force (RIFs). Prior studies have also shown how teacher turnover across schools and churn within schools, both consequences of layoffs, negatively affect student achievement (Atteberry, Loeb, and Wyckoff 2017; Ronfeldt, Loeb, and Wyckoff 2013). Layoffs can also result in class size increases which have negative consequences for student

achievement (Cho, Glewwe, and Whitler 2012; Rivkin, Hanushek, and Kain 2005). Districts often concentrate teacher layoffs among specialists such as those that teach the arts. Several randomized control trials suggest that cuts to arts education would erode the important role the arts play in promoting students' social-emotional and critical thinking skills (Bowen, Greene, and Kisida 2014; Bowen and Kisida 2019; Greene et al. 2018; Kisida, Bowen, and Greene 2016).

Research has further demonstrated how the layoff process itself has detrimental effects on teachers and students. State statutes and local collective bargaining agreements often require districts to notify in early spring any teacher who may be laid off. The uncertainty of the budgeting process leads districts to send three to six times as many teachers a "pink slip" than is typically necessary. Goldhaber, Strunk and their colleagues draw on data from the Los Angeles Unified School District and Washington state to show that RIF notices, most of which do not result in an actual layoff, can increase teacher mobility across schools and lower teacher performance. (Goldhaber et al. 2016; Strunk et al. 2018). The authors argue that the threat of job loss induced substantial workplace stress, decreasing job commitment and shifting teachers' time towards alternative job searches.

Seniority-Based Layoffs

At the time of the Great Recession, the vast majority of districts used seniority as the sole determinant of teacher layoffs, often within certification area (National Council on Teacher Quality 2010). District-wide "last-in first-out" (LIFO) policies provide a simple, objective, and transparent approach for conducting layoffs. At the same time, seniority-based layoffs exacerbate the negative consequences of the layoff process through multiple channels. First, LIFO layoffs during the Great Recession resulted in substantial teacher churn as early career teachers were laid off, even if their positions were not eliminated, causing the district to reshuffle teachers across schools (Goldhaber et al. 2016). Second, seniority-based layoffs increase the total number of

layoffs (Roza 2009). Kraft's (2015) analyses of discretionary layoffs in Charlotte-Mecklenburg Schools (CMS) shows how the more holistic layoff process used by CMS, which considered multiple criteria such as performance evaluations, license status, and experience, resulted in fewer total teacher layoffs because it removed some more experienced, higher-paid teachers.

A third negative consequence of the LIFO layoff process is that it can result in the removal of some high-performing early career teachers. Although teachers improve with experience, on average (Papay and Kraft 2015), there still exists considerable variation in performance among teachers with the same level of seniority (R. Gordon, Kane, and Staiger 2006). Not surprisingly, several simulations document that less than one in five teachers targeted for layoffs under district-wide inverse-seniority policies would also be laid off under a performance-based policy (Boyd et al. 2011; Goldhaber and Theobald 2013). Analyzing actual teacher layoffs in CMS, Kraft (2015) shows that laying off an effective teacher lowered student achievement by 0.05 to 0.11 standard deviations more than laying off an ineffective teacher. Further evidence from D.C. Public Schools finds large gains in achievement (0.14 to 0.21 standard deviations) due to turnover by low-performing teachers, coupled with negative effects of turnover among high-performing teachers. Together, these studies point to the importance of considering teacher effectiveness in layoff decisions (Adnot et al. 2017).

Finally, LIFO policies can undercut efforts by districts to improve teacher recruitment and selection and to diversify the teacher workforce. Seniority-based layoffs result in proportionally larger concentrations of layoffs among teachers of color because they are more likely to be early career teachers relative to white teachers. We illustrate this point using nationally representative data on the U.S. K-12 public teacher workforce from the 2015-16 National Teacher and Principal Survey (NTPS). As shown in Table 1, Black teachers comprise 6.5% of the experienced teacher workforce (4 years or more) but 8.3% of early career teachers (3

years or less). Similarly, Hispanic teachers comprise 8.2% of the experienced teacher workforce, but 11.1% of early career teachers. In contrast, white teachers make up a larger share of experienced teachers compared to early career teachers (80.8% vs. 74.3%). Comparing the proportion of teachers of a given race that are early career teachers also illustrates that teachers of color more likely to be in the early phase of their career. Using the same data, we find that 7.2% of all Hispanic teachers and 7.0% of Black teachers are early career, while only 4.9% of white teachers are early career. The disproportionate concentration of layoffs among teachers of color under LIFO is particularly concerning given mounting evidence of the large and lasting benefits students of color experience as a result of being taught by a teacher with a common racial background (Gershenson, Hansen, and Lindsay 2021).

Disproportionate Exposure to Teacher Layoffs

Research shows that students of color and students from low-income backgrounds are more likely than their white and more affluent peers to lose teachers due to layoffs. This pattern holds true across districts because: 1) districts that disproportionately serve vulnerable students rely most on state aid, and 2) state revenues from sales and income taxes are more sensitive to economic downturns than local revenues from property taxes (Evans, Schwab, and Wagner 2019; Baker, Sciarra, and Farrie 2014). The result is that districts in less affluent communities must contend with comparatively larger budget cuts and resulting layoffs (Knight, 2017).

This differential exposure to layoffs is also a pattern that holds within districts, particularly those that implement district-wide, seniority-based layoffs (Goldhaber and Theobald 2013). For example, in the first two years of the Great Recession, Black and Hispanic elementary students in Los Angeles Unified School District had 72% and 25% greater odds, respectively, of having their teacher laid off compared to their white peers (Knight and Strunk 2016). The intuition for this is straightforward. Schools that serve students of color and students from low-

income backgrounds are, on average, staffed by less experienced teachers (Peske and Haycock 2006; Goldhaber, Quince, and Theobald 2018; Clotfelter et al. 2006). This pattern of differential exposure to early career teachers is clearly evident in Table 2. Among a nationally representative sample of 8th grade students who took the 2017 National Assessment of Educational Progress (NAEP), 16.4% of Black students and 18.0% of Hispanic students were taught English language arts (ELA) by early career teachers (2 years or less) compared to only 12.1% of white students. Similarly, 14.9% of students from low-income backgrounds had early career ELA teachers compared to 11.4% of their more affluent peers.

The unequal distribution of experienced teachers across schools is due to higher rates of turnover in high-poverty schools serving students of color (Simon and Johnson 2015) as well as within-district transfer policies and patterns. Many collective bargaining agreements provide tenured teachers rights or advantages during the internal transfer process for securing open positions at other schools (Levin, Mulhern, and Schunck 2005). This further enables a pattern where experienced teachers systematically transfer away from schools with unsupportive working conditions, which also tend to serve low-income students and students of color, to supportive schools often serving more affluent, white students (Anzia and Moe 2014; Boyd et al. 2011; Johnson, Kraft, and Papay 2012). One consequence of these sorting patterns is that LIFO layoff policies end up removing less experienced teachers, sometimes in mass, from a small handful of schools. Compounding these inequities further, high-poverty districts that serve more students of color are more likely to have seniority-based layoff policies (Ingle, Willis, and Herd 2017).

The Path Forward

The Great Recession had profound and lasting negative consequences for K-12 public education born most by students of color and low-income students. K-12 employment was only

just approaching pre-recession levels after ten years of economic growth. The Great Recession caused the largest labor force decline in the history of U.S. public schools until the COVID-19 pandemic. Although the immediate future looks brighter than many analysts predicted at the onset of the COVID-19 pandemic, the long-term prospects of potential teacher layoffs remain. Below, we present a set of policy recommendations to minimize the need for layoffs and their disproportional impact on vulnerable students.

Federal Level

Create a federal stabilization fund for districts. Given the negative consequences of teacher layoffs for both student achievement and the economy as a whole, the federal government should create an education stabilization fund to help states and districts minimize cuts during economic downturns (Council of the Great City Schools 2020; N. Gordon and Reber 2020; Baker and Di Carlo 2020). These stabilization funds should be allocated with appropriate local discretion over how best to target these funds towards core personnel and operating expenses rather than overly specific prescriptions.

Require states to collect data on teacher layoffs. Policymakers lack detailed information about the scale and distribution of teacher layoffs. The federal government should require states to collect and provide detailed data on the gender, race/ethnicity, grade-level, subject, and school characteristics of teachers who receive pink slips and are ultimately laid off. Such data are critical for understanding whether groups of schools, teachers, or students are disproportionately affected in the layoff process either because of LIFO policies or potential discriminatory practices under a more flexible approach.

State Level

Adopt a maintenance-of-equity approach for budget cuts. Given the larger reliance on state funding among high-poverty districts, across-the-board cuts to state education funding can

further exacerbate existing funding gaps (Corcoran and Evans 2012; de Brey et al. 2019). Any unavoidable reductions in state aid should be targeted towards more regressive state funding programs and distributed in a way to maintain more equitable total funding levels across districts.

***Move away from seniority-based layoff policies*.** LIFO layoff policies are inequitable, lead to more total job losses, and undercut efforts to recruit talented and diverse teachers. Since the Great Recession, 20 states have enacted legislation that significantly restricts the use of seniority as the primary factor in determining teacher layoffs (Dabbs 2020). All states should pass laws barring districts from using seniority as the sole criteria for layoffs, while also ensuring protections for teachers from discriminatory employment practices that often disproportionately affect female teachers (Biasi and Sarsons 2020) and teachers of color (D'amico et al. 2017; Drake, Auletto, and Cowen 2019).

District Level

Explore alternative ways to reduce personnel expenditures. Districts can reduce the need for layoffs through early retirement incentives and collective action such as wage freezes, temporary wage reductions, and furloughs (during non-instructional days) for all employees including district leadership. These approaches are not without their own negative consequences but should be on the table if core classroom teaching positions are at risk.

Communicate early and avoid unnecessary pink slips. Districts should work to reduce uncertainty about the threat of layoffs by engaging in early and transparent communication about the scope and process of potential layoffs. Every effort should be taken to accelerate the budgeting process to avoid distributing more pink slips than is absolutely necessary.

Use existing flexibilities to conduct holistic layoffs. Districts have more flexibility now than ever to avoid concentrating layoffs in schools that predominantly serve students of color and

students from low-income backgrounds. Only 30% of the largest districts in the country continue to use seniority as the primary criterion to inform the layoff process (Saenz-Armstrong 2020). These districts should continue to work with teacher unions to develop more holistic layoff procedures that both protect teachers' rights from unfair labor practices and provide flexibility to consider multiple criteria and school needs (Goldhaber and Theobald 2020).

Implement school-based rather than district-wide layoffs. Districts should explore and adopt layoff processes that distribute RIFs more equitably across schools, minimizing teacher churn. One such example is the school-based process used by CMS during the Great Recession. CMS allocated layoffs across schools based on enrollment projects, principals then identified position categories to be reduced, and finally district officials selected which teacher(s) within these categories would be RIFed at a school based on multiple criteria (Kraft 2015).

Conclusion

The burden of budget cuts and teacher layoffs need not fall disproportionately on students of color and students from low-income backgrounds. There is ample room for districts to move towards more equitable layoff practices when layoffs are unavoidable. Let's learn from the past so we do not repeat it.

Table 1. Racial Composition of U.S. K-12 Public School Teachers by Career Status

Teacher Race/Ethnicity	All Teachers	Experienced Teachers	Early Career Teachers
White	80.1%	80.8%	74.3%
Black	6.7%	6.5%	8.3%
Hispanic	8.5%	8.2%	11.1%
Asian	2.3%	2.2%	2.3%
Hawaiian/Pacific Islander	0.2%	0.2%	0.3%
Native American/Alaskan	0.4%	0.4%	0.6%
Multiple Race/Ethnicities	1.8%	1.6%	3.1%

Note: Early career teachers have three or fewer years of experience and experienced teachers have four or more years of experience.

Source: National Teacher and Principal Survey 2015-16.

Table 2. Percent of U.S. 8th grade Students Taught by Early Career Teachers in English Language Arts

Student Race/Ethnicity	Early Career Teachers
Overall	13.0%
White	12.1%
Black	16.4%
Hispanic	18.0%
Asian	24.6%
Native American/Alaskan	16.3%
Hawaiian/Pacific Islander	36.1%
FRPL Eligible	14.9%
FRPL Ineligible	11.4%

Note: Early career teachers have two or fewer years of experience. FRPL=Free or Reduced-Price Lunch. Students attend traditional and charter public schools.
Source: 2017 National Assessment of Educational Progress restricted-use files for 8th grade Reading.

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