



National Council on Teacher Quality

A resource for accurate teacher quality data and policy analysis

Facts to Know about Teacher Shortages

A Resource for Journalists

November 2018

Over the last few years, much has been written about teacher shortages, snowballing into talk of a “national teacher shortage.” There are important facts to consider when talking about teacher shortages, presented here.

The truth is that the teacher shortages experienced by many districts are neither national nor particularly new. While most districts continue to be able to fill most vacancies in areas such as elementary teaching, most face shortages of teachers in specific subjects, especially special education and STEM fields. However, these teaching areas have been a problem for decades. Rural schools struggle to keep filling their leaky buckets, as do most schools serving challenging populations. These struggles too are nothing new.

Mining limited state data with national data, **there is no evidence for an overall deficit of trained teachers**. Claims that teacher shortages have recently worsened are largely anecdotal, not based on data.

Much of the current concern derives from local problems that are magnified by reports like a 2016 [Learning Policy Institute paper](#), which used national trend data to estimate teacher supply and demand warned of a 100,000+ annual teacher shortage by 2018. In fact, recent data show that the teacher workforce is growing.

Here is what we know

There is not a national labor market for teachers in the United States. In fact, it is hard to argue that there are even 50 labor markets. There are vacancies in Detroit, Oklahoma, and parts of California. But this is not a national trend; rather it is the result of local conditions, issues, and choices. For instance, in California, [the number of available teachers statewide exceeds the number of projected openings](#), but not always in the right fields or communities. One of the most affected shortage areas—the Bay Area—has the highest cost of living in the United States, so it is no wonder it cannot hire enough teachers.

States report to the US Department of Education the shortages they are experiencing, with [nearly all states citing vacancies in math, science, and special education](#). Many fewer states have unfilled jobs in areas such as elementary education (only 13 states reported this as a shortage in 2017). Also, the perception of widespread shortages is in part an artifact of how this report

presents the issue. When a state lists a subject area as having insufficient teachers, it does not say what percentage of schools have unfilled openings in that area. Many states simply survey their districts and ask “do you have any shortages?” ***The truth is that most states don’t actually collect the numbers needed to support an assertion of shortages.***

In February 2018, NCTQ released [a report](#) looking at what states collect by way of teacher supply and demand data. While 29 states collect teacher supply data—the number of graduates from preparation programs—only eight of the 29 connect these data to district-level hiring statistics. In other words, ***few states have an idea what the demand is for new teachers or whether there’s too few, enough or too many new teachers to fill the demand.***

There are additional data that run counter to a system-wide shortage of teachers. Three notable counterpoints:

- **Our public school teacher workforce is growing.** NCES data estimate that [there were over 3.8 million public school teachers in the 2015-16 school year](#). That’s an increase of 13 percent (about 400,000 teachers) in [four years](#). It is unclear how to reconcile this rapid growth with reports of widespread shortages. Meanwhile, [the number of public school students held constant during that same period](#).¹

A recent report takes a longer view, finding that the public teacher workforce has grown by 65 percent from 1987-88 to 2015-16, while the student population has grown by only 24 percent. Instead of a shrinking teacher workforce, data show that [it is expanding](#), far outpacing increases in the number of students. More research is needed to interpret this finding - and we can expect more detailed data from NCES this winter.

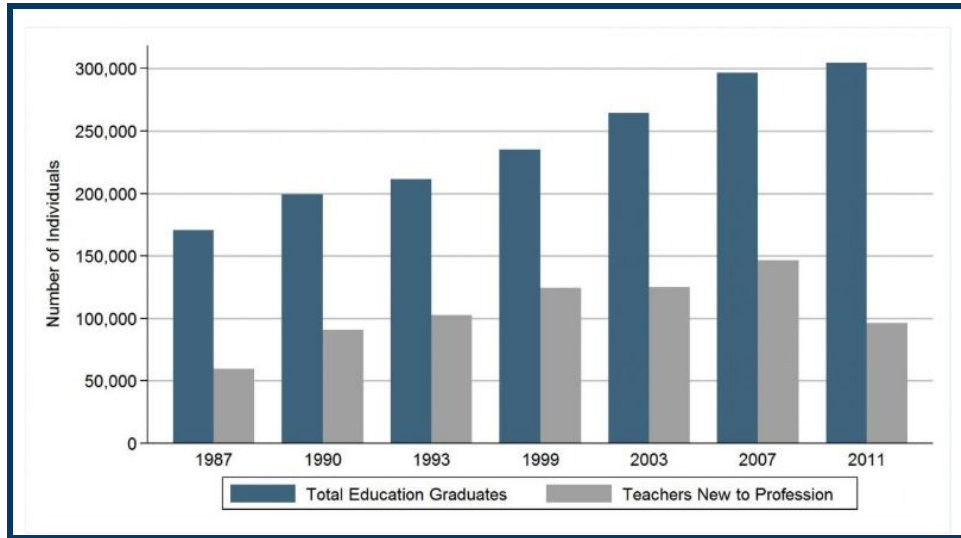
- **The push for increasingly smaller class sizes has created much of the pressure on the teacher labor markets.** An article from [The Hechinger Report](#) notes that over the past 50 years, communities across the United States have invested enormously in smaller classes. Pupil-teacher ratios declined from 22.3 in 1970 to 17.9 in 1985 and dropped to a low of 15.3 in 2008. But after the 2008 recession, local budget cuts forced class sizes to increase again, [bumping the pupil-teacher ratio up to 16.1 in 2014](#), before [falling slightly to 16.0 in 2015](#).

Sufficient Tracking n = 8	Some Tracking n = 22	No Tracking n = 21
IL	AR	AL
KY	CA	AK
MD	CO	AZ
NY	CT	GA
NC	DE	ID
OH	DC	IN
TN	FL	ME
WV	HI	MS
	IA	MT
	KS	NE
	LA	NV
	MA	NH
	MI	NM
	MN	ND
	MO	OK
	NJ	PA
	OR	SD
	RI	TX
	SC	VT
	UT	VA
	WA	WY
	WI	

¹ See also: <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2017071>

- **Nationally, far more teachers graduate from preparation programs than can be hired.** Although there is some evidence that the number of teachers graduating from teacher training programs has dropped in the last few years, more than enough teachers graduated in the recent past to fill current shortages.

Production of and hiring of teachers new to the profession (Selected years)

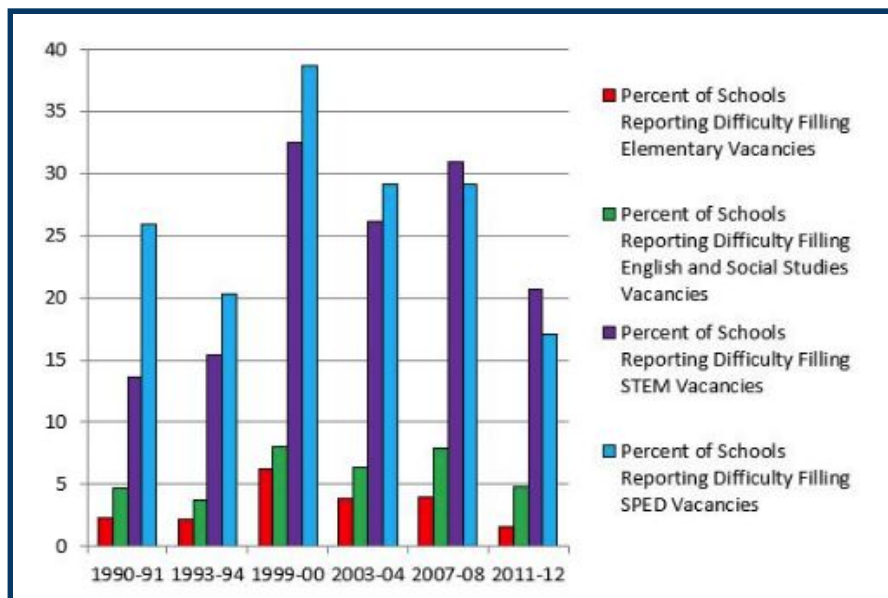


Source: [Calder Teacher Shortage Explainer, Figure 2 \(2016\)](#)

The problem is a misalignment of teachers and jobs, not a shortage of teachers.

[Research compiled by CALDER](#) shows that “the demand for STEM and SPED teachers has been far greater than the demand for Elementary, English, and Social Studies for several decades.”

Percentage of Schools Reporting Difficulty Filling Vacancies within Specific Disciplines



Source: [Calder Teacher Shortage Explainer, Figure 3 \(2016\)](#)

Similarly, CALDER reports that urban and rural schools traditionally have more trouble filling vacancies than do suburban schools.

Teachers in math and science fields can make substantially more money in non-teaching jobs.

The average full-time teacher salary in public schools in 2015 was [\\$58,064](#). By contrast, [according to Georgetown's Center on Education and the Workforce](#), workers who majored in computers, statistics, and mathematics had an average salary of \$76,000 in 2015 while those who majored in the physical sciences averaged \$65,000. So it is not surprising that schools have trouble finding and retaining teachers with these highly-paid specialties.

Setting the Record Straight

How people define a problem affects how we solve it. When states and districts acknowledge that shortages are limited to certain fields and locations, we can begin targeting solutions. If it's a system-wide solution, the solutions aren't so targeted.

To fully understand the nature of teacher supply and demand trends, it is incumbent upon the nation, states, and school districts to collect better data and put these data into an historical context. States and districts should be able to identify the number of new teachers trained in each subject, how many graduate do not end up teaching (because we know that nationwide 50 percent of candidates do not end up in teaching jobs), where candidates apply for jobs, how many vacancies are open in each subject, and where these vacancies are located.

In the absence of strong data systems that can highlight the broken points along the teacher pipeline, states and districts will continue to look for band-aids without resolving the underlying problems and the very real shortages which are not new but have gone on now for decades.

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To schedule an interview with Kate Walsh, President of NCTQ, please contact Lisa Cohen at lisa@lisacohen.org.

About the National Council on Teacher Quality: The National Council on Teacher Quality is a nonpartisan research and policy group committed to modernizing the teaching profession and based on the belief that all children deserve effective teachers. We recognize that it is not teachers who bear responsibility for their profession's many challenges, but the institutions with the greatest authority and influence over teachers. More information about NCTQ can be found on our website, www.nctq.org.